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The role of Turkish percussion in the history and development of the orchestral percussion section

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**THE ROLE OF TURKISH PERCUSSION IN THE HISTORY AND
DEVELOPMENT OF THE ORCHESTRAL PERCUSSION SECTION**

A Monograph

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
Requirements for the degree of
Doctor of Musical Arts

In
The School of Music
The College of Music and Dramatic Arts

by
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ABSTRACT

The fascination of eighteenth century Western composers with the Eastern percussion instruments of the Turks was the impetus behind the initial use of percussion instruments in the orchestra. Consequently, the era beginning in the late eighteenth-century when percussion instruments were first included deserves reexamination.

The objectives of this monograph include the examination of the manner in which composers first utilized Turkish percussion (excluding kettledrums) in the orchestra. This study then investigates the subsequent history of these instruments and manner in which composers utilized them, leading to their recognition as musical instruments in their own right. The findings of this study provide a resource for both performers and conductors who seek to recreate authentic performances of music from that era.

Research methods included the examination of existing primary and largely secondary sources that included musical scores and newspaper articles of the period. The organology of these instruments and their performance practices were studied, aided by iconographical evidence of the instruments and their performance.

Salient findings of this study were that the percussion instruments first incorporated into the late eighteenth-century and early nineteenth-century orchestra consisted of the bass drum, cymbals, and triangle. The Turkish crescent and tambourine was also occasionally added. Some of these instruments entered the orchestra with a specialized performance practice. The bass drum, for example, was struck by one hand on the side of the drum's head with a wooden beater; the other hand struck the opposite head with a switch most often made of twigs, called a *ruthe*. Orchestral composers such as Haydn, Mozart, and Beethoven were among the first to incorporate Turkish percussion instruments, using them as a homogeneous

group that produced a characteristic tone color through the simultaneous playing of each instrument, reminiscent of their use in military bands. Each Turkish percussion instrument experienced changes in design that resulted in a more independent use of each instrument. Nineteenth-century composers such as Berlioz wrote parts for percussion and timpani integral to the harmonic and textural structure of their orchestral compositions. Percussion instruments have since become a frequent focal point of orchestration.

CHAPTER 1

DESCRIPTION AND INTRODUCTION OF THE STUDY

Importance of the Study

Of all the musical instruments in the standard symphony orchestra, it is those of the percussion section which, by comparison with the others, have been constantly neglected and mistreated by composers and arrangers alike.¹

This study is intended to assist the symphonic percussionist and the conductor in understanding the history and use of percussion instruments, which led to their entry into the late eighteenth-century and early nineteenth-century orchestra. The result offers a concise source of information concerning not only a description of Turkish percussion instruments and their performance, but also the rise and development of these instruments in the orchestra which provided the foundation for the modern expanded orchestral percussion section.

Objectives of the Study

There are three fundamental objectives of this monograph:

1. To investigate the manner through which composers first utilized Turkish percussion (excluding kettledrums) in the orchestra.
2. To examine the subsequent history of these instruments and the manner in which composers utilized them, leading to their recognition as musical instruments in their own right.
3. To provide a resource for both performers and conductors who seek to recreate authentic performances of music from that era.

These objectives were realized through the following chapter outline:

Chapter I. Description and Introduction of the Study

¹ Edgar B. Gangware, *The History and Use of Percussion Instruments in Orchestration*, diss. (Evanston: Northwestern University, 1962), ii.

Chapter II.	Percussion Instruments of Turkish Music
Chapter III.	Original Entry of Turkish Percussion Instruments Into the Orchestra
Chapter IV.	The Subsequent History and Use of Turkish Percussion Instruments In the Orchestra
Chapter V.	Summary and Conclusions

Procedures of the Study

Iconographical evidence and available books and articles were used to briefly discuss the origin of each Turkish percussion instrument first employed by European composers. Brief references to other percussion instruments cited in selected musical examples were also included. Musical scores and newspaper articles of the period were combined with other available sources to examine aspects surrounding the original entry of Turkish percussion into the late eighteenth-century and early nineteenth-century orchestra.

Historical writings and treatises concerning orchestral instrumentation, orchestration, and the evolution of percussion practice and execution were studied. Selected musical scores illustrated the inclusion of Turkish percussion instruments by composers in the orchestra.

Limitations of the Study

This document examined the original entry of Turkish percussion and the subsequent history of percussion instruments, specific to the orchestra. The evolution of the use of percussion in the military band or modern wind ensemble is outside the scope of this study. While the existence and implementation of percussion instruments additional to the scope of this study is acknowledged, percussion instruments beyond those instruments traceable to the original entry of percussion instruments into the eighteenth-century European orchestra such as melodic percussion instruments, gongs, Latin American instruments, and various drums are

not addressed in the monograph because their inclusion in the orchestra succeeds that of the Turkish percussion instruments.

This monograph cites known orchestral repertoire in which Turkish percussion, or stylistic features defining so-called “Turkish Music,” is a distinct compositional element. “Turkish Music” will, for the purposes of this study, be defined by the use of Turkish percussion in military bands which led to the original inclusion of percussion instruments (excluding kettledrums) in the late eighteenth century and early nineteenth century orchestra. The purpose of this study is not to examine all possible instances where Turkish percussion instruments are found in an orchestral work, but to select available works that contribute toward the acceptance of the percussion section in the orchestra. Additional musical examples were selected to represent the development of these instruments following their original entry, which has led to their function as independent members of the modern orchestral percussion section.

TABLE 1
DEFINITION OF TERMS

This list illustrates the names of Turkish percussion instruments translated in English, German, Italian, and French. Related instruments and implements are also included.²

<u>English</u>	<u>German</u>	<u>Italian</u>	<u>French</u>
Bass Drum	die Grosse Trommel	la grancassa or gran cassa	la grosse caisse
Cymbals (pair or à 2)	die (türkischen) Becken	i piatti (a due)	les cymbales

² Karl Peinkofer and Fritz Tannigel, *Handbook of Percussion Instruments*, trans. Kurt and Else Stone (New York: Schott Press of Belwin Mills Publishing Corp., 1969), 10-16.

Finger Cymbals (Antique Cymbals) (Crotales)	die Fingerzimbeln die Krotalen	i crotali i cimbali	les crotales
Kettledrums (Timpani)	die Pauken die Kesselpauken	i timpani	les timbales
Stick	Schlagel Stock	Bacchetta	Baguette – Mailloche
Strike (beat)	Schlage	Colpite	Frappez (Blouser)
Switch	Rute (Ruthe)	Verga	Verge
Tabor	Tambourin die provenzalische – Trommel	Tamburo di -- Provenza il tamburo -- provenzale	Tambourin de – Provence le tambourin (provençal)
Tambourine	die Schellentrommel das Tamburin	il tamburello (basco) il tamburino il tamburo basco	le tambour— de basque
Triangle	der Triangel	il triangolo	le triangle
Turkish Crescent (Belltree) (Jingling Johnny)	der Schellenbaum	l'albero di sonagli la barra di -- sospensione –	le chapeau -- chinois

All other foreign terms encountered in this monograph were defined in the context of their related use. Standard definitions of research terms were also used unless otherwise indicated in the text.

During the first half of the eighteenth century, within their illustrious corps of Janissaries, a noticeably exotic group of wind and percussion instruments used by the Turks became the object of considerable European interest. This fascination with Eastern musical practices was not only the impetus behind the eventual use of these percussion instruments by Western composers, but was arguably the origin of the percussion section in the modern orchestra.

Before the influence of Turkish instruments, the kettledrum was the only member of the percussion family with Eastern roots to have gained acceptance in the orchestra. However, European interest in so-called Turkish Music (*mehter*³), significantly characterized by its heavy emphasis on percussion, soon progressed beyond mere admiration, resulting in a flood of new European compositions *alla turka*.⁴

The Janissary Corps was created in 1326 as the official royal guard of the Ottoman Turk rulers. Spanning a five hundred year existence, the Janissaries were greatly feared and respected. Throughout the centuries, growing musical interest within the Corps manifested itself in a group of instrumental performers specifically trained to assist this select group of fighters. Only the absolute cessation of the Corps could indicate that the colors were either lost or furled in retreat, signifying the battle was over.⁵ Thus, the Janissary Band was born with the objective of developing martial music to its most effective state. This music attracted the attention of Europe's armies, and by the second decade of the eighteenth century, August II of Poland had acquired a complete Turkish military band – a gift from the Sultan of Turkey.⁶

Not to be outdone by her southern neighbor, the Empress Anne of Prussia sent for a comparable band from Constantinople in 1725. This band played treble and tenor shawms

³ The bands of the janissaries were called *mehter*, a term used also for some Ottoman state officials and thus taken to mean not just the bands but the individual musicians as well. *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie, 3rd ed., s.v. "Janissary music," by Michael Pirker.

⁴ *Alla Turka* is an Italian term, referring to the style of music played by eighteenth-century Turkish military bands. *Harper's Dictionary of Music* (New York: Harper and Row, Publishers, 1972), 386.

⁵ Henry George Farmer, *Handel's Kettledrums And Other Papers On Military Music*. (London: Robert Stockwell LTD., 1965), 41.

⁶ James L. Moore, "How Turkish Janizary Band Music Started Our Modern Percussion Section," *Percussive Notes* (1965): 7.

(*zurna*), fifes (*ney*), a pair of kettledrums (*kos*), bass drums (*daval* - carried at the player's waist, heads to the side and struck with a double-headed stick on one head and a switch on the other), two pairs of small cymbals (*zil*), one large pair of cymbals, and a triangle (large, most likely with metal rings strung on the base which jingled when the instrument was struck). As Turkish music spread westward, Austria and France joined the craze. By century's end, England too had included bass drums, cymbals, and tambourines in the Royal Artillery Band. Turkish crescents were added to these bands by 1805.⁷

While the Turkish influence was first felt in the military band, it soon found its way into the orchestral scores of Western composers when Turkish instruments caught their eyes and ears in the mid 1760s. As one historian said, "It was . . . this so-called 'Turkish Music' that opened the eyes of the great composers, beginning with Mozart and Beethoven, to the possibilities of a new tone color and fresh rhythmic devices in the wider realm of orchestra music."⁸ In the narrowest sense, the Europeans considered Turkish percussion as the combination of bass drum, cymbals, and triangle. This was evidenced in the significant early works noted for the incorporation of Turkish influences. The music played by these instruments, before their inclusion in the orchestra, was not written down. Even after the entry of Turkish percussion instruments into the orchestral ensemble, not every work composed *alla turka* had printed percussion parts provided by the composer. Consequently, most information about Turkish music concerns the instruments on which it was played.⁹

⁷ Harrison Powley, *Encyclopedia of Percussion*, s.v. "Janissary Music" ed. John H. Beck.

⁸ Ibid., 46.

⁹ *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie, 3rd ed., s.v. "Janissary music," by Michael Pirker.

The trend to incorporate percussion instruments as a section in the orchestra was slow to develop. The nineteenth century and the first quarter of the twentieth century, however, represent a key period of maturation and modification necessary for each of the Turkish percussion instruments. These refinements inspired composers to realize new potential for their orchestral use, weaning these instruments from their past standard usage and introducing each to a variable degree of independence.¹⁰

With the twentieth century has come the incorporation of many varied percussion instruments into the works of numerous orchestral composers. The status of percussion in today's orchestra follows years of only modest acceptance in the orchestra. Reexamining the age of the inclusion of percussion instruments in the late eighteenth-century and early nineteenth-century European orchestra will benefit those who seek to recreate authentic performances of music from that era. It may also reshape our views of the subsequent evolution of the modern orchestral percussion section.

¹⁰ Gangware, *The History and Use of Percussion Instruments in Orchestration*, 255-56.

CHAPTER 2

PERCUSSION INSTRUMENTS OF TURKISH MUSIC

The percussion instruments used in Turkish music included the bass drum, cymbals, triangle, Turkish crescent, kettledrums, and, on occasion, the tambourine. Each of these instruments, except for the Turkish crescent, differed somewhat from the modern orchestral version. This document will examine the entry of the bass drum, cymbals, triangle, Turkish crescent, and tambourine into the orchestra. Kettledrums will not be discussed in this study.

The bass drum dates back to the Sumerians as documented in artwork from the latter half of the third millennium, B.C. which depicted an enormous drum five or six feet in diameter. An early sixteenth-century Venetian painting by Carpaccio shows a Turkish musician playing a drum almost exactly the same shape and size as the modern military bass drum. With the introduction of Turkish Janissary music into the courts of Europe, a large drum requiring a new playing technique entered Western music. This Turkish drum, known as the *daval*, became an important instrument in Janissary music by the middle of the eighteenth century.¹

¹ Gangware, *The History and use of Percussion Instruments n Orchestration*, 7; Geary H. Larrick, "Percussion: Its Status from Antiquity to the Modern Era," *Percussive Notes* (1968): 44; Peinkofer and Tannigel, *Handbook of Percussion Instruments*, 94; *The New Grove Dictionary of Music and Musicians*, 2nd ed., (2001), s.v. "Bass Drum," and "Janissary Music."



Figure 1. Turkish bass drum. Reprinted from James Blades, *Percussion Instruments and Their History* (London: Faber and Faber Limited, 1984), 209

Figure 1 represents the Turkish bass drum as it appeared during the sixteenth century. As it was known until the nineteenth century, this bass drum was most similar to the drum used by the British and French military armies. Many sources note the dimensions of the bass drum, or “long drum” as it had been termed by the English, to be greater in depth from head

to head than it was in diameter. Unlike the modern orchestral bass drum with its large heads and relatively thin, cylindrical body, other accounts record the dimensions of the Turkish bass drum to be generally equal in ratio of diameter to depth. With heads on both sides of the drum, the skin heads were tuned by rope-tension. The rope or cord passed through holes on the counter-hoops and across the shell in a “V” formation, and was tightened by leather braces. This type of tuning system produced a powerfully low sound of indefinite pitch.

During its military use, the bass drum was often carried on the back of one person and played by someone else marching behind. In other cases, as seen in Figure 2, two different types of beaters were used.

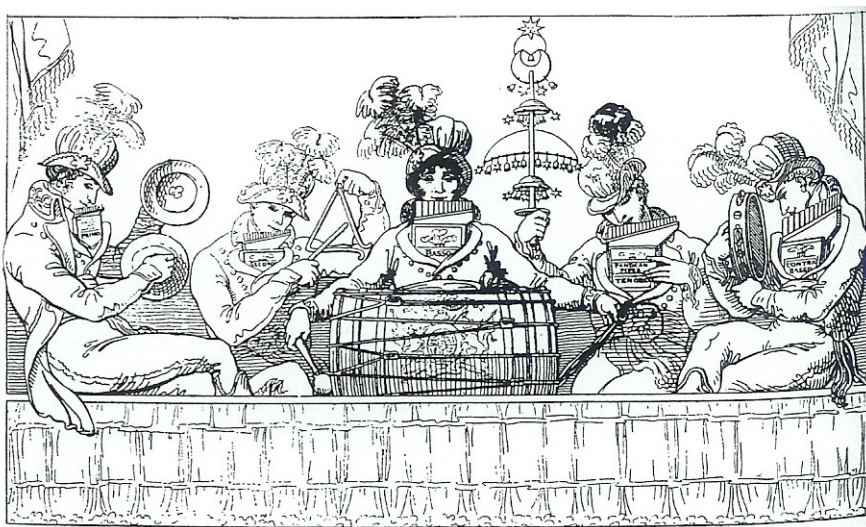


Figure 2. Long drum with beaters. Reprinted from James Blades, *Percussion Instruments and Their History* (London: Faber and Faber Limited, 1984), 128

One hand struck the head with a wooden stick and the other struck the opposite head with a switch most often made of twigs, called a *ruthe*.² The drummer would play the beat to aid in proper marching with the stick, and then play a supplemental measured pulse with the switch

² Other names for the *ruthe* include switch, *rute* (German), *verga* (Italian), or *verge* (French).

that was often doubled on the triangle. Prior to the bass drum's entry into the orchestra, its playing position often involved the placing of sling ropes over one's head that allowed the drum to rest comfortably over the abdomen. A wooden beater sounded the accented beats and the ruthe sounded the unaccented beats on the other head, consistent with the original Turkish playing technique. When parts were extant, this "stick and switch" method of play was indicated through the use of down and up stems, corresponding respectively to the beater (down stems) and switch (up stems).³ Musical examples notating this performance practice are included in Chapter 3.

As mentioned in the previous paragraph, the style of play required of the Turkish bass drummer was unique. In addition to the traditional beater usually played by the right hand, he would supplement this sound with the ruthe in his left hand. The beater and the ruthe were customarily assigned to separate heads of the drum. The player could strike the ruthe directly onto the drum's head, or strike both the head and the rim of the drum simultaneously. The latter style of play created a rim shot effect that produced a high pitched "tock" sound which contrasted the low "boom" of the wooden beater.⁴ The location on the bass drum struck by the ruthe was determined by the timbre of sound desired. The ruthe was most likely made of bound bundles of switches, birch branches, or strips of split bamboo, as determined by the strength of sound desired.⁵

³ Michael Bayard, "Timpani Clinic: The Neo-Janizaries," *Percussive Notes* (1987): 37; Moore, "How Turkish Janizary Band Music Started Our Modern Percussion Section," 10; Nicholas Ormrod, "The Ruthe in Authentic Performance," *Percussive Notes* (1995): 65; *The New Grove Dictionary of Music and Musicians*, 2nd ed., (2001), s.v. "Bass Drum."

⁴ Michael Rosen, "Terms Used in Percussion: Die Rute," *Percussive Notes* (1979): 49.

⁵ Peinkofer and Tannigel, *Handbook of Percussion Instruments*, 138.

The cymbal received its name from its shape. Karl Peinkofer takes thorough notice of this in *Handbook of Percussion Instruments* by translating the word “cymbal” from the Greek *kýmbre*, meaning cup or bowl. The German name *Becken* is synonymous with the German word for a shallow bowl, as is the Italian *piatti* with the word for (dinner) plate.

Cymbals are of ancient origin as evidenced by two types of cymbals referred to in the fifth verse of Psalm 150 in the Old Testament of The Holy Bible. “Praise Him upon the loud cymbals (*mesiltayim*); praise Him upon the high-sounding cymbals (*selselim*).”⁶ Making their way from the Middle East via the Roman Empire, cymbals have been found in the early civilizations of Egypt, Greece, Rome, India, Indonesia, and China. Their size and forms varied from region to region, and include the small finger-type (also known today as antique cymbals or crotales), the inverted-funnel type, and the flatter soup-plate type. The largest and loudest cymbals were used historically as designations of war. Smaller cymbals were used in the temples of worship and as ornaments of adornment. Each of these types of cymbals is found in European history, but the inverted-funnel type of cymbal does not survive in the present-day percussion family.⁷

Cymbals (*zil*) were heavily used in the *mehter* beginning as early as the fourteenth century. The modern history of cymbals began in the early seventeenth century when an alchemist of Constantinople named Avedis discovered a still secret process to produce cymbals with extraordinarily clear and powerful sound. He was given the name “Zildjian,”

⁶ Ps. 105:5 KJB (King James Bible); *The New Grove Dictionary of Music and Musicians*, 2nd ed., (2001), s.v. “Cymbals.”

⁷ Gangware, *The History and Use of Percussion Instruments in Orchestration*, 113-116.

the Turkish word for “cymbalsmith.” These became the cymbals used in the Turkish bands that spread throughout Europe and eventually captured the interest of European composers.⁸

Cymbals were made of copper, bronze, brass, and occasionally silver. As seen in Figure 2 and Figure 3, eighteenth-century European cymbals were generally smaller and denser than cymbals used today, though larger and thinner than those used in the Middle Ages.⁹ In the Classical era, cymbals were between 15 inches and 20 inches in diameter.¹⁰ The center of the cymbal has a drilled circular hole through which a leather loop is drawn allowing each hand to hold one cymbal, and the two to be struck together. The center of the Turkish cymbal, known as either the bell or the cup, was noticeably raised and proportionally large in comparison to modern models. The earliest Turkish cymbals sounded a distinct attack with little sustain, perhaps because of the repeated frenzy of crashes customary in music composed *alla turka*.¹¹

⁸ Gangware, *The History and Use of Percussion Instruments in Orchestration*, 20-21, 113; Ben F. Miller, “A Brief History of the Cymbal from Antiquity to the Renaissance,” *Percussive Notes* (1974): 46, 50; Walter C. Schneider, “Percussion Instruments of the Middle Ages,” *Percussive Notes* (1978): 111; *The New Grove Dictionary of Music and Musicians* (2001), s.v. “Cymbals.”

⁹ Medieval cymbals appear to be quite thick, approximately 5 to 10 inches in size.

¹⁰ Peinkofer and Tannigel, *Handbook of Percussion Instruments*, 120.

¹¹ Bayard, “Timpani Clinic: The Neo-Janizaries,” 36; David Levine, “Percussion Instruments and Performance Practices in Beethoven’s Music,” *Percussive Notes* (1977): 1.



Figure 3. Cymbals similar to those used in the Turkish percussion section. Reprinted from James Blades and Jeremy Montagu, *Early Percussion Instruments From the Middle Ages to the Baroque* (London: Oxford University Press, 1976), 16

Styles of performance were much the same for eighteenth-century cymbals as they are today. They could be held vertically and played by striking one against the other, or held with one plate resting above the lower hand and the other plate hanging below the upper hand, suggesting a horizontal striking motion. There was little asked of the Turkish cymbal player with regard to sonority of sound, since the aim of the first composers to write for Turkish percussion was to simply transplant the marching “battery” sound of the military band into the orchestral composition. Cymbal crashes were scored to produce a consistent, full-bodied burst of color, and were used in combination with the other Turkish percussion instruments.

The initial borrowing of Turkish percussion players for the orchestra from military bands may help to explain historical evidence that the designation for bass drum in some orchestrations implied the simultaneous use of cymbals. Some researchers maintain this was standard practice unless either the bass drum or cymbals was scored to play alone. This

opinion will be further discussed in Chapter 3. When Turkish percussion was first added to the opera orchestra, parts for bass drum and cymbals were sometimes performed by one player, requiring a special mounting of the lower cymbal to the top of the bass drum's shell. This new performance practice, though necessary in smaller cities where there were not always enough capable percussionists to play both parts, has complicated modern day efforts to authentically perform the music of composers such as Rossini. Several such works preceding the full acceptance of the Turkish percussion section into the orchestra will be discussed later in this study. Cymbals were always crashed in pairs until the Romantic era when the use of a single cymbal, struck with beaters, became an acceptable cymbal technique in the orchestra.

An early mention of the triangle is found in a tenth-century manuscript.¹² It is later depicted in the King Wenceslaus IV Bible from the late fourteenth century. There are many instances from the fifteenth to the seventeenth centuries where the triangle was used either for simple decorative purposes or among a group of musical instruments. The Crusades re-introduced the instrument to Europe from the East where it was used for centuries to supplement the tone of other percussion instruments and/or in combination with a small wind instrument known as the pipe. The Hamburg Opera House owned a triangle in 1710 and seven years later two triangles were purchased for the Dresden Opera House, resulting from its early orchestral use.¹³

¹² This source cites no other specific information regarding the triangle in this manuscript. *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie, 3rd ed., s.v. "Triangle," by James Blades and James Holland.

¹³ Owen Clark, "Percussion in the Opera Orchestra of the 17th and 18th Centuries," *Percussive Notes* (1966): 11, quoting Mitchell Peters, "The Sistrum and the Triangle," *The Percussionist* vol. 2, No. 1 and 2.

The ancient sistrum, a primitive type of Egyptian rattle, is considered a prototype of the triangle.¹⁴ The handle of the sistrum was attached to a horseshoe-shaped frame made of bronze or copper. Thin wires holding multiple metal discs linked the sides of the frame.

Figure 4 illustrates the sistrum.

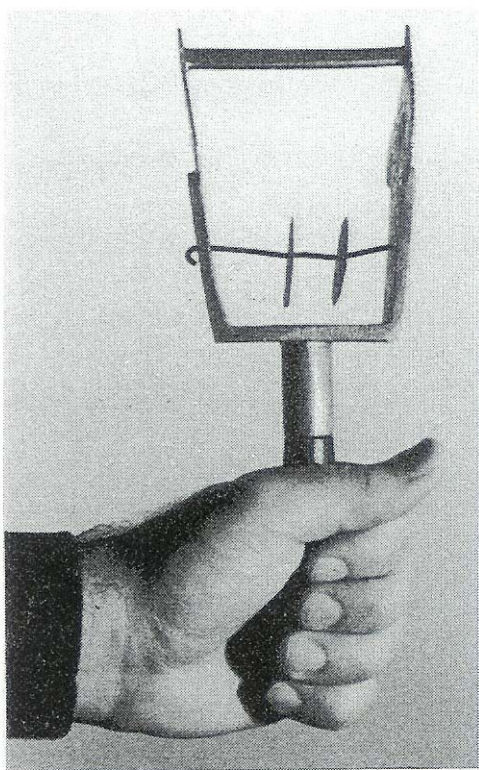


Figure 4. The sistrum. Reprinted from Joseph Adato and George Judy, *The Percussionist's Dictionary: Translations, Descriptions and Photographs of Percussion Instruments from Around the World* (Melville: Belwin Mills Publishing Corp., 1984), 56

In its medieval form the triangle maintained the jingling discs of the sistrum; three or more discs hung from the lower, horizontal bar. Ironically, the triangle was not always triangular when it first appeared in the fifteenth century. Paintings of that era as seen in Figure 5 depict a trapezoidal form resembling a medieval stirrup.

¹⁴ James Blades, *Percussion Instruments and Their History* (London: Faber and Faber Limited, 1984), 162.



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Figure 5. Triangle similar to one used in the Turkish percussion section. Reprinted from James Blades and Jeremy Montagu, *Early Percussion Instruments From the Middle Ages to the Baroque* (London: Oxford University Press, 1976), 11

Also, the triangle could have an open or closed end. A triangle with no opening between two of its sides produced a definite pitch, distinguishing its sound from the indefinite pitch of today's accepted open-ended model. Unlike the sistrum, whose sound was generated by vigorously shaking its handle, sound from the triangle required striking one of its sides with a thin rod made of steel, iron, brass, or wood. Though some pictorial accounts show the top angle of the triangle's steel bar twisted into a loop through which the thumb of the performer passes, the triangle is most often suspended by wire or string connected to the underside of the instrument's top angle. Triangles are historically shown in various sizes, with some as large

as fourteen inches on a side. Prior to its inclusion in the orchestra, its primary function was decorative, supplementing the natural tone of the other instruments with a rattling or jingling sound much like the Turkish crescent.¹⁶

Known by many different names including *le chapeau chinois* and “Jingling Johnny,” the Turkish crescent consisted of a wooden pole topped by one or more metal crescents with horsetail plumes of different colors hanging from the sides. Tiers of bells and jingles were suspended from lavish ornaments so that when the pole was held vertically and shaken or twisted, a rich mixture of bright colors and metallic tones resulted.

The predecessor of the Turkish crescent was originally carried as a staff by the shaman, the religious leader of the natives of northern Asia, who believed that good and evil spirits pervade the world and can be summoned or heard through inspired priests acting as mediums.¹⁷ It was believed that the tinkling of its jingling discs could chase away evil spirits. In China, the staff was raised to signal the start of ceremonial music throughout the Chou dynasty (1122-255 B.C.). As the instrument moved westward, the Turkish crescent symbol was added to adorn the top of the staff as a distinguishing icon. Janissary bands maintained multiple crescent players, including one governor of the ensemble who carried his crescent at the head of the band to assist in keeping the marching rhythm. The leader also led in dance-like behavior that added a lively visual element to the band. By the time of Turkey’s conquest in Europe the Turkish crescent had become the insignia of the highest dignitaries. It was gradually revised with additional bells and mingled with other instruments in the military

¹⁶ James Blades, *Percussion Instruments and Their History*, (London: Faber and Faber Limited, 1984), 191; Gordon B. Peters, “Treatise On Percussion” (M.A. thesis, University of Rochester, 1962), 104-06; Curt Sachs, *The History of Musical Instruments*, (New York: W. W. Norton and Company, Inc., 1940), 437; *The New Grove Dictionary of Music and Musicians* (2001), s.v. “Triangle.”

¹⁷ *The American Heritage Dictionary*, 2nd ed., s.v. “Shamanism.”

band as seen in Figure 6. The novel, picturesque crescent was essential in the widespread appeal of Turkish music.¹⁸

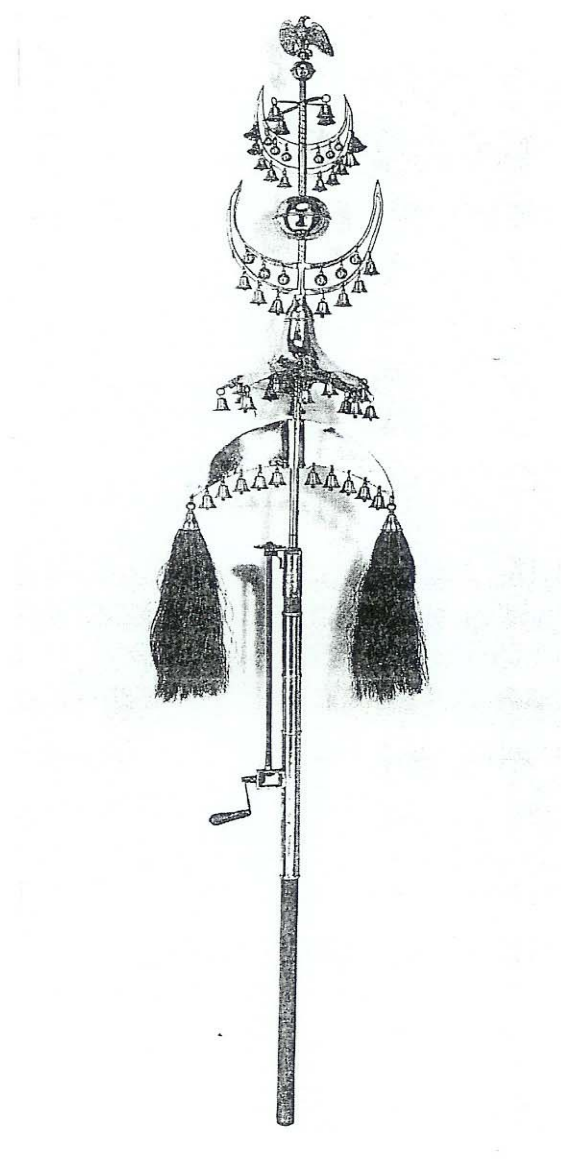


Figure 6. The Turkish crescent. Reprinted from *The New Grove Dictionary of Music and Musicians* (2001), s.v. “Turkish crescent”

¹⁸ Thomas N. Akins, “The Use of Percussion in the Wind Bands of Britain in the Eighteenth Century,” *Percussive Notes* (1969): 90; Peters, *Treatise on Percussion*, 97-98; Sachs, *The History of Musical Instruments*, 437-38.

Interestingly, the symbolism behind the instrument's appearance seems as significant as its musical contribution to the ensemble of Turkish percussion instruments. For instance, the quantity of plumes indicated the military rank of each band's ambitious leader. Also, one of the numerous crescents in each Janissary band was reserved to carry inside its bells the names of the soldiers within that unit.¹⁹

The tambourine is a small single-headed frame drum with round metal discs called jingles hung loosely in openings around a shallow wooden shell. Tambourines historically appear four different ways: (1) with small brass bells attached, (2) with metal discs called jingles, (3) with a snare across the head with either pellet bells or jingles, and (4) as a circular frame without its drum head. The Turkish model from the eighteenth-century had several sets of jingles arranged in pairs, but no snare across the diameter of its frame. Medieval iconography as seen in Figure 7 sometimes shows a thin snare running either above or below the head.²⁰

The tambourine dates back to antiquity. Highlights of its colorful history include mention in the Old Testament and its use by medieval minstrels and Spanish gypsies. It is still popular today in Italy as a folk and dance instrument. The Sumerians, Assyrians, Egyptians, Hebrews, Romans, and the Arabs used some form of the tambourine.

¹⁹ Bayard, "Timpani Clinic: The Neo-Janizaries," 35; Peters, *Treatise on Percussion*, 97.

²⁰ Blades, *Percussion Instruments and Their History*, 196-97; James Blades and Jeremy Montagu, *Early Percussion Instruments from the Middle Ages to the Baroque* (London: Oxford University Press, 1976), 14-18; Gangware, *The History and Use of Percussion Instruments in Orchestration*, 9-10, 116-17, 21, 25, 35-36, 41-42, 56-59; Peinkofer and Tannigel, *Handbook of Percussion Instruments*, 97, 100-02; Schneider, "Percussion Instruments of the Middle Ages," *Percussive Notes* (1978): 109; *The New Grove Dictionary of Music and Musicians* (2001), s.v. "Tambourine."



Figure 7. The tambourine. Reprinted from James Blades and Jeremy Montagu, *Early Percussion Instruments From the Middle Ages to the Baroque* (London: Oxford University Press, 1976), 14

Also in existence were other drums played without sticks such as the timbrel and various frame drums. The Romans sometimes added little bells or metal discs to the sides of these small drums, resulting in occasional confusion between the tambourine and its non-jingling relatives. With the apparently widespread use of the tambourine, it is probable that Europeans first noticed this instrument from its use by the Arabs. The tambourine thrived throughout the Middle Ages in all parts of Europe, but was noticeably absent during the Baroque and Classical periods. Known also as the timbrel, it found its place in the eighteenth-century military bands following years of existence as a folk instrument.²¹

²¹ Ibid.

CHAPTER 3

ORIGINAL ENTRY OF TURKISH PERCUSSION INTO THE ORCHESTRA

Sound-producing apparatus devoid of definite pitch belongs to the initial attempts of primitive men to assist vocal expression of emotional feeling, to accompany religious orgies, or to encourage their warriors on the march. The modern orchestra includes the best of these primitive species, transformed into perfected types of genuine artistic value, and has also drawn into requisition various instruments originating in countries that are far apart. Most commonly used are the bass drum, the cymbals, and the triangle . . . Their mission is primarily to suggest “local” coloring or to emphasize rhythm for dancing.¹

Thanks to composers such as Gluck, Haydn, Mozart, and Beethoven, one can glean some idea of how the Turkish ensemble of percussion instruments must have sounded to European ears in the eighteenth century if allowances are made for the substitution of modern instruments. As noted in the above quotation, the intent of such composers in their musical compositions *alla turka* was to imitate local color, that is, to vividly recreate for the listeners the authentic sounds of Turkish percussion as heard in military bands. At first, the term “Turkish music” meant any or all of the various instruments borrowed from the Janissary bands. Ultimately the term became synonymous with the use of the bass drum, cymbals, triangle, and sometimes the tambourine.

The appeal of these instruments is evidenced by the desire of musicians to have the sound of the Turkish music at their disposal in other ensemble settings outside the orchestra. In 1710, a percussion pedal recreating the low “boom” of a drum was added to the organ in the Salisbury Cathedral. Soon afterward a cymbalstern resembling the sound of the Turkish crescent was added to the organ in the church at Weingarten. This feature was then adapted

¹ Louis Adalphe Coerne, *The Evolution of Modern Orchestration* (New York: The Macmillan Company, 1908), 14.

to the pianoforte as an optional attachment to the pedal struck with the left foot, allowing a pianist to supplement solo or chamber works with the color of the Turkish music. Wolfgang A. Mozart (*Sonata in A Major*, 1778), Leopold Mozart (*A Turkish Piece*, pre-1787), and Muzio Clementi (*Twelve Waltzes for the Pianoforte* with accompaniment for tambourine and triangle, 1796), are some of the composers who included this attachment that became known as the Turkish pedal in works for the pianoforte during the late eighteenth century. Such innovations not only increased European awareness and the popularity of Turkish music, but also may have made a decided impression on orchestral composers during that period.²

The orchestral works of the eighteenth century were available for purchase in separate parts or by basic sets. With an eye to affordability, the quantity of parts was kept low, and separate parts for woodwinds, horns, trumpets, and drums were commonly available in manuscript rather than in engraved copies. Often the title page of a musical work would note the availability of parts for double bass, trumpet, and drums for supplemental purchase. These parts were provided only by direct contact with the manuscript copyist. Even when percussion parts were extant, they sometimes included only skeletal notations, leaving an incomplete impression of how the work may have sounded when performed by the larger orchestras of that era.³ This practice strengthens the opinion of certain researchers who believe the designation of bass drum also implied the simultaneous playing of other percussion instruments such as cymbals in situations where no single percussion instrument was scored to play alone.

² Francis W. Galpin, *European Musical Instruments*, (London: Williams and Norgate, Ltd., 1946), 68. quoted in Gangware, *The History and Use of Percussion Instruments in Orchestration*, 198.

³ Moore, "How Turkish Janizary Band Music Started Our Modern Percussion Section," 11-12.

The bass drum, cymbals, and triangle entered the eighteenth-century orchestra as a homogeneous group, producing a characteristic tone color through the simultaneous performance of the instruments. This new percussion section was used quite independently from the kettledrums (or timpani) which by this time had already carved their niche in the orchestra. Turkish percussion instruments were routinely grouped together in stage and pit arrangements, just as they had been in Turkish and European military bands. Though the arrangement of seating for each instrumental section varied from orchestra to orchestra, some similarities were found within the placement of players in assorted theaters and/or concert-rooms. The size, depth, and shape of the pit or stage on which the orchestra performed ultimately dictated much of the instrumental layout. Nevertheless, many seating charts for orchestras of this period reveal that Turkish percussion and kettledrums were not yet considered a cohesive unit within the orchestra, as they are routinely seen in the modern orchestra. For example, a plan for the seating of the *La Scala* Orchestra in Milan (1825) as seen in Figure 8 clearly shows that Turkish instruments and kettledrums were placed in the back of the orchestra at opposing ends.

The seating arrangement of the *San Carlo* orchestra in Naples (1818) bears a likeness to the one in Milan. In his book entitled *The Orchestra from Beethoven to Berlioz*, Adam Carse notes the comment of a long time German resident of Naples, named only as Kandler, who described the orchestra at *San Carlo* as “most distinguished” among the many opera orchestras in Italy. Historical evidence supporting the far-reaching influence of the orchestra at *San Carlo* validates his opinion. A sketch replicating the seating arrangement of the *San Carlo* orchestra was highlighted as part of an article published several years later in a well-circulated German musical periodical.

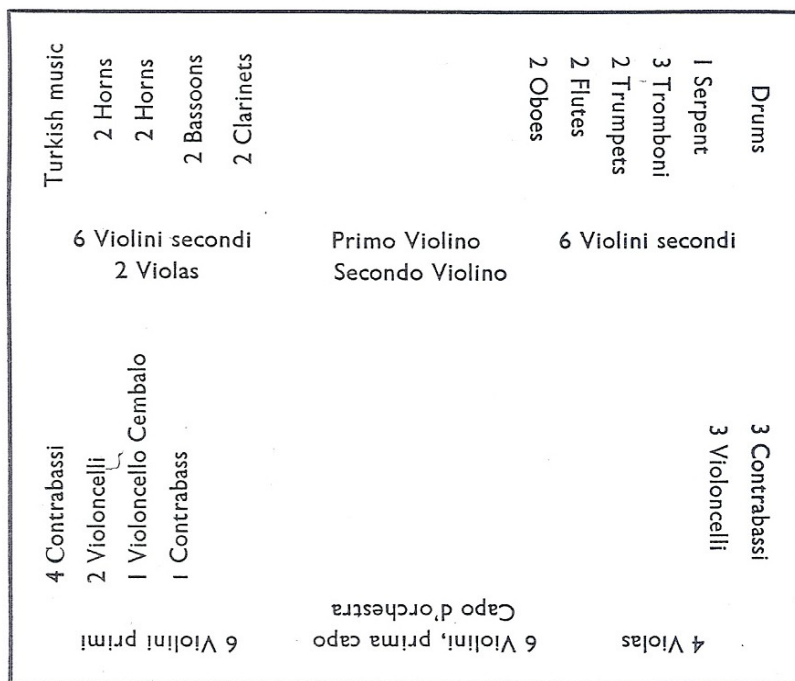
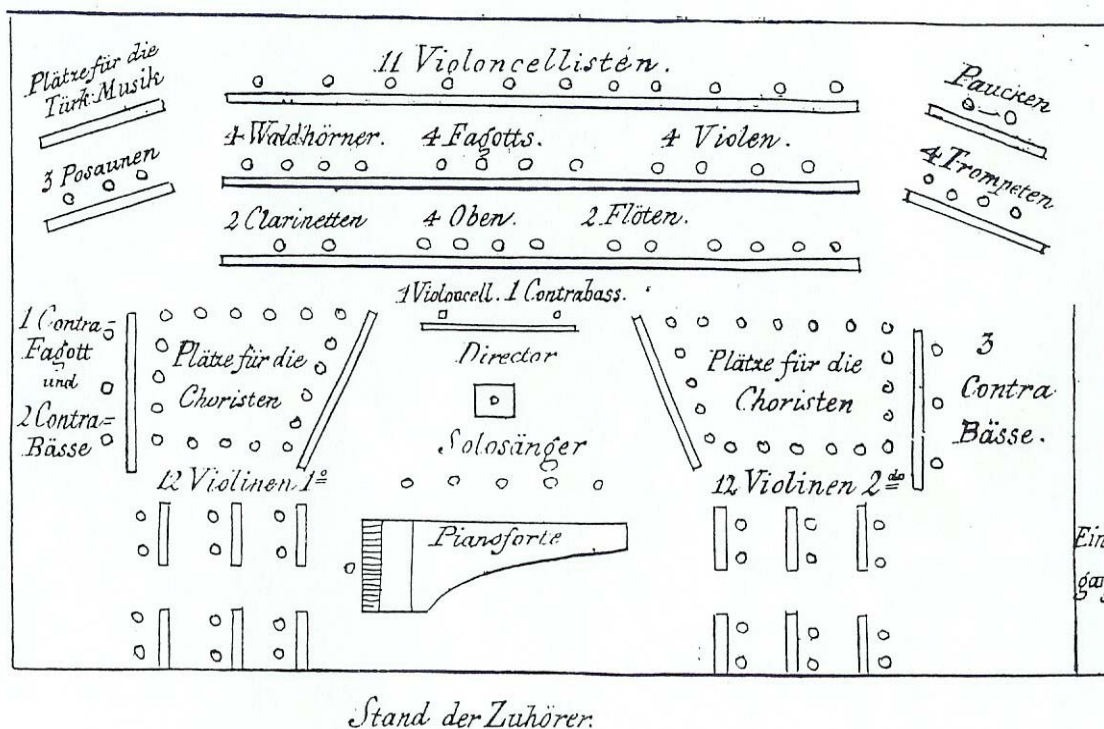
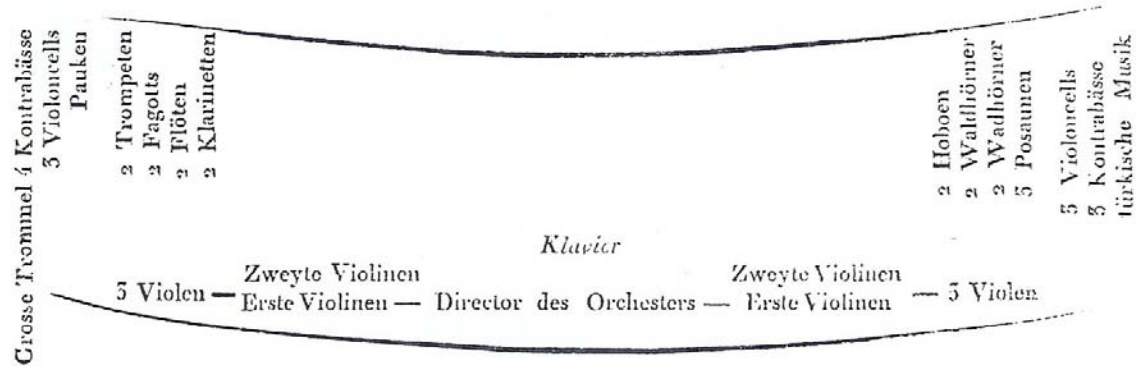


Figure 8. *La Scala* seating arrangement. Reprinted from Adam Carse, *The Orchestra From Beethoven to Berlioz: A History of the Orchestra in the First Half of the Nineteenth Century, and of the Development of Orchestral Baton-Conducting* (New York: Broude Brothers, 1949), 474

In the *San Carlo* plan, however, the Turkish music does not include the bass drum. That instrument is clearly identified opposite the other Turkish percussion instruments, close to the timpani, in an obvious attempt to position the instrument near the contrabasses. Even at this early date, the percussion instruments within the Turkish group were being accorded some individuality, and could function not only as a homogeneous group, but in combination with other orchestral instruments.⁴ Yet another seating arrangement used by one of the large orchestras in Paris was published by the same German journal in 1810 (Figure 10).

⁴ Adam Carse, *The Orchestra From Beethoven to Berlioz: A History of the Orchestra in the First Half of the Nineteenth Century, and of the Development of Orchestral Baton-Conducting*. (New York: Broude Brothers, 1949), 272, 472-75; *Musical Times* (Germany). "Orchestra for the Large Concerts and the Large Chorus in Paris," (August 1810): 46; "Orchestra of the New Great Theater San Carlo in Naples," (July 1818): 27-28.



Early works that precede the use of a full Turkish percussion section,⁵ yet set the stage for compositions to be more fully discussed in this study include Strungk's opera *Esther* (bass drum, cymbals, 1680), Freschi's opera *Berenice* (cymbals, 1680), André Modeste Grétry's operas *La fausse magie* (cymbals, triangle, 1775), *Lucille* (triangle, 1783) and *La Caravane du Caire* (triangle, tambourine, 1783), Christopher Gluck's opera *Echo and Narcissus* (tambourine, 1779), Wolfgang A. Mozart's "Turkish March" from *Piano Sonata in A*, K331 (bass drum, cymbals, 1778) and *German Dances*, K571 (cymbals, tambourine, sleigh bells, 1787), and Francois Boieldieu's opera *Le Calife de Bagdad* (triangles, 1800). Each of these compositions uses one or more Turkish percussion instruments. Most notable within these compositions is Strungk's experimental use of Turkish cymbals and Freschi's use of the bass drum and cymbals in their opera orchestras, both in 1680. Further distinctions include Grétry's first orchestral use of the triangle in operas such as *La fausse magie* and *Lucile*. Christoph Willibald Gluck, in *Echo and Narcissus* (1779), and Grétry, in *La Caravane du Caire*, included an improvised part for tambourine.

Composers maintained a consistent usage of Turkish percussion instruments during the initial period of their use: a strongly marked downbeat, fast, repeated-note pulsations on the triangle, and cymbals that reinforced the strong tonic accent, along with the bass drum. When the Turkish crescent was used, it also reinforced the tonic accent. Composers generally reserved the use of percussion (and trumpets) for the loudest movement in a composition, meaning the first and last movements of a symphony, or the overture and finale of an opera.⁶

⁵ bass drum, cymbals, triangle, and sometimes the tambourine.

⁶ Carse, *The Orchestra in the XVIIIth Century* (Cambridge: W. Heffer and Sons Ltd., 1940), 139.

Eighteenth and early nineteenth century works representing the first orchestral compositions to incorporate the bass drum, cymbals, and triangle include Gluck's operas *Le Cade dupé* (1761), *La recontre imprévue*, *The Pilgrims of Mecca* (both 1764), and *Iphigénia en Aulide* (1774), Mozart's *Die Entführung as dem Serial* (1782), Franz Joseph Haydn's "Military" Symphony No. 100 (1794), Ludwig Von Beethoven's *De Ruinen von Athens* (1812), *Wellington's Victory* (1813), and the last movement of Symphony No. 9 (1823), Gioacchino Rossini's *L' Italiana in Algeri* (1813), *Il Barbiere di Siviglia* Overture (1816), and *La Gazza Ladra* (1817), and Franz Schubert's *Des Teufels Lustschloss, D. 84* (1814). Brief excerpts from several of these works are illustrated in the following musical examples.⁷

No. 64.

Iphigenia in Tauride.—GLUCK.

Allegro. Col. Vo. 1mo.

Piccolo Flutes.

Oboe and Clar. in C.

Violins.

Violas.

Drum.

Cymbals.

Basses.

Figure 11. Gluck's use of cymbals in *Iphigénia en Aulide*. Reprinted from Hector Berlioz, *Treatise On Instrumentation*, Revised by Richard Strauss. Translated by Theodore Front. (New York: Edwin F. Kalmus, 1948), 226

⁷ Although several of the compositions listed include snare drum, the domestication of this instrument is not part of the "Turkish movement," and it is not part of this study.

Gluck's use of cymbals for special effects in *Iphigénia en Aulide* (Figure 11) excited the often-critical Hector Berlioz. He wrote, "Never has there been a finer effect of cymbals produced, than in the chorus of Scythians: 'Les dieux,' in Gluck's *Iphigénia en Aulide*."⁸ Here the cymbals play a steady quarter note rhythm that accents the eighth note pattern played by the bass drum and string basses. Gluck later scored cymbals with snare drums to create a barbaric tone symbolic of the central character, Iphigénia, who must cut the throat of her murderous brother. In a letter sent from Paris in 1822, Berlioz wrote to his sister, Nanci:

Short of actually fainting, I couldn't have felt stronger emotions that I did seeing Gluck's masterpiece *Iphigénia en Aulide*. . . I defy the most insensitive human being not to be profoundly moved . . .⁹

In the above musical excerpt from Berlioz's *A Treatise Upon Modern Instrumentation and Orchestration* (1858), the bass drum part is written in notational shorthand that is still seen today in some printed percussion parts. A slash is placed on the stem of a note, or series of notes, denoting the composer's intent to divide the duration of the original note into repeated eighth notes whose composite value is equal in length to that of the printed note. A second slash on a note's stem would indicate repeated sixteenth notes were intended.¹⁰ In this instance, a single slash printed on each half note denotes a steady eighth note rhythm to be played on the bass drum. This example marked "Allegro" shows only downward stemmed notes, suggesting that Gluck most likely desired the use of two wooden beaters in place of a single beater and a ruthe. Berlioz is equally impressed by Gluck's individualistic use of the

⁸ Hector Berlioz, *A Treatise Upon Modern Instrumentation and Orchestration*, 2d ed., trans. Mary Cowden Clarke (London: J. Alfred Novello, 1858), 226.

⁹ Macdonald, Hugh, ed., *Selected Letters of Berlioz*. Translated by Roger Nichols. (New York: W. W. Norton and Company, 1995), 5-6.

¹⁰ A tremolo, sometimes called a trill or roll, is denoted by three slashes on a note. Such notation was not common in this era.

triangle as seen in Figure 12. Though scored predictably to play an eighth note pattern, Gluck's experimental use of the triangle in combination with strings, bassoon, and horns rather than the expected bass drum and cymbals marks a significant departure from the triangle's previous role in Turkish music.

No. 66. *Iphigenia in Tauride.*—GLUCK.

Rather animated.

The musical score for Figure 12 is for No. 66, 'Iphigenia in Tauride' by Gluck. It is marked 'Rather animated.' and 'Col Basso.' The score includes parts for Violins, Violas, Horns in D, Triangle, Bassoon, and Bass. The triangle part is marked 'Col Basso' and plays a steady eighth-note pattern. The bassoon and bass parts also play eighth-note patterns, while the strings provide harmonic support.

Figure 12. Gluck's use of triangle in *Iphigénia en Aulide*. Reprinted from Hector Berlioz, *Treatise On Instrumentation*, Revised by Richard Strauss. Translated by Theodore Front. (New York: Edwin F. Kalmus, 1948), 229

Mozart, in *Die Entführung aus dem Serail*, and Haydn, in the “Military” Symphony, were both careful to reproduce the performance practices of the bass drummers of the period who struck one head of the instrument with a beater and the other head with the ruthe.¹¹ Downward stems denote the notes played by the beater; notes to be played by the ruthe are shown with upward stems. In Figure 13, the parts for the bass drum and cymbals are generally the same, scored to be played by both instruments simultaneously. When parts for bass drum and cymbals differ, the cymbals play quarter notes to accentuate the eighth-note

¹¹ The ruthe could be used to strike the shell of the drum rather than the head.

“stick and switch” passages of the bass drum. The triangle maintains its characteristic time-keeping function from start to finish, playing in one passage for more than 42 bars in common meter. The execution of this part may have required mounting the triangle and striking it with two identical beaters. Musically, Mozart’s *Die Entführung as dem Serail* (*The Abduction of the Seraglio*) represents the orchestral influence of Turkish music at its height. Mozart’s use of Turkish percussion in this work was essential in reflecting the political hostility between Austria and other nations in the late eighteenth century.¹² It remains in the repertory of major opera companies throughout the world.

The image displays two pages of a musical score for Mozart's *Die Entführung as dem Serail*. The left page contains measures 1 through 42, and the right page contains measures 43 through 84. The score is written for a large orchestra, including Fl. picc., Ob., Cl., Fag., Cor., Tr., Timp., T. gr., Triang., and Ptt. The triangle part is particularly prominent, playing a steady eighth-note pattern. The percussion parts include the bass drum (Timp.) and cymbals (T. gr.). The score is printed in G major and 2/4 time. The publisher's name, Ernst Eulenburg, is visible at the bottom of both pages.

Figure 13. *Die Entführung as dem Serail* by Mozart. Reprinted from score, (Leipzig: Ernst Eulenburg, 1900z)

¹² *The New Grove Dictionary of Music and Musicians*, 2nd ed., (2001), s.v. “Janissary Music,” by Michael Pirker.

Turkish instruments earned Haydn's Symphony No. 100 the distinction "Military." As demonstrated in Figure 14 from movement II marked "Allegretto," Haydn's percussion parts *alla turka* are simplistic, clear, and seemingly transplanted directly from the military band. The bass drum part indicates the use of the ruthe (stems up) on the beats that fall between strikes of the wooden beater on the initial beat of each measure (stems down). Cymbals also emphasize accented beats, while the triangle chimes a steady, repeated pulse. In the edition shown below, each half note has one slash on its stem, meaning that the triangle is to play steady eighth notes.¹³

Haydn also used the Turkish percussion instruments in the final movement of his "Military" symphony as shown in Figure 15. So essential were the Turkish percussion instruments to Haydn's orchestration that he adapted their idiomatic usage to accommodate the new, compound meter that replaces the duple time signature in movement II. The bass drum and cymbals continue to accent the strong beats in each measure; strokes of the bass drum are alternated between the beater (stems down) and the ruthe (stems up). The triangle repeats a predictably steady pulse, now in 6/8. The triangle's unchanging eighth-note rhythm is fully notated in the measure beginning its use before appearing thereafter in abbreviated notation.

¹³ The same excerpt in an earlier edition of Haydn's work (New York: E. F. Kalmus, 1932) shows both timpani and triangle playing repeated sixteenth notes. The cymbals, rather than accenting each strong beat, most often play only the first beat of each measure along with the beater of the bass drum (stems down). This investigator believes the excerpt shown from Dover Publications, Inc., is more historically accurate by comparison with other musical examples studied. Reasons for this conclusion include the practical challenge of the player to repeatedly play sixteenth notes on the triangle with clarity. Also, it is characteristic for the triangle to repeat a steady pulse of eighth notes simultaneously with the bass drum's quarter note rhythm in compositions *alla turka*.



Figure 14. “Military” Symphony No. 100 (movement II) by Haydn. Originally Published by Ernst Eulenburg Ltd., London. Reprinted from score, (New York: Dover Publications, Inc., 1985)

Gradually the use of Turkish percussion instruments by orchestral composers grew from mere imitators of Turkish music into a more valued commodity. The “Turkish March” of Beethoven’s *Die Ruinen von Athens* (*The Ruin of Athens*) is a good example of how the basic Turkish instruments were used to add color and weight to the music. It calls for as many “noisy” instruments as were available. These instructions are believed to have allowed for the use of other percussion instruments including tambourine and castanets, but only bass drum, cymbals, and triangle are acknowledged in the score. The cymbals and the bass drum have identical yet independently notated parts that share the same line in the score. The cymbal part was read high on the shared stave with stems written upward; the bass drum part was notated low on the stave with downward stems.



Figure 15 “Military” Symphony No. 100 (movement IV) by Haydn. Originally Published by Ernst Eulenburg Ltd., London. Reprinted from score, (New York: Dover Publications, Inc., 1985)

The absence of upward stems on the bass drum line indicates Beethoven’s apparent desire to strike the bass drum with only a beater. As seen in Figure 16, Beethoven uses both the percussion and brass instruments rhythmically to accompany the Arabian melody played by the woodwinds.

In the finale of Symphony No. 9, Beethoven once again employed the homogeneous Turkish percussion section (see Figure 17). Appearing only in movement IV, the use of percussion to conclude the work was a part of Beethoven’s earliest sketches.¹⁴ Written in compound meter (6/8), the bass drum and bassoons softly accent the second strong beat of each measure to begin the portion of the movement marked “Alla Marcia.” Clarinets and trumpets enter the rhythmic texture before the first melodic phrase is begun in measure 343.

¹⁴ Blades, *Percussion Instruments and Their History*, 267.

Turkish March

Marcia alla turca

Incidental music for Auguste von Kotzebue's festival play

Die Ruinen von Athen

Op. 118 (1811)

Vivace.

Flauto piccolo. *pp*

Oboi. *pp*

Clarinetti in B. *pp*

Fagotti. *pp*

Contrafagotto *pp*

Corni in B. *pp*

Trombe in B. *pp*

Triangolo. *pp*

Piatti e Tamburo grande. *pp*

Violino I. *pp*

Violino II. *pp*

Viola. *pp*

Violoncello. *pp*

Basso. *pp*

Figure 16. *Die Ruinen von Athens* by Beethoven. Originally Published by Breitkopf & Härtel, Leipzig. Reprinted from score, (Mineola: Dover Publications, Inc., 1999)

By the middle of the first melodic phrase, cymbals and triangle join the orchestration, mostly doubling the bass drum and bassoons that now accent both strong beats in each measure. The bass drum, cymbals, and triangle are each given their own line in the score until the end of the symphony (marked “Prestissimo”), where the cymbals and bass drum are scored together. There are no indications suggesting the *ruthe* was to be used in striking the bass drum. By the time of Beethoven’s last symphony in 1824, Turkish percussion instruments had developed into accepted members of the orchestra.¹⁵

Examples of the early use of Turkish percussion instruments in the orchestra illustrate their effectiveness in creating dramatic effects. As previously mentioned in this chapter, use of Turkish percussion instruments was sometimes intended by the composer even in the absence of their specific mention in the score. In a dissertation entitled *The History of Percussion Instruments in Orchestration*, Edgar Gangware includes the commentary of a nineteenth-century French historian named Francois Gavaert who outlined several such illustrations. According to Gavaert, Grétry included a written instruction for the use of cymbals, triangles, and similar instruments in the “Bohemian March” of his opera, *La fausse magie* (*The Magic Flute*, 1775), yet parts for these instruments are not written down. As previously mentioned, Beethoven gave only general instructions for as many “noisy” instruments as were available to accompany the authentically Arabian melody in *De Ruinen von Athens* (*The Ruin of Athens*), composed in 1812.

¹⁵ *New Grove Dictionary of Music and Musicians*, s.v. “Janissary Music,” “Bass Drum,” Cymbals.”

Prestissimo. (♩: 132)

375

Piccolo

2 Flauti.

2 Oboi.

2 Clarinetti in A

2 Fagotti

Contrafagotto.

4 Corni in D

2 Trombe in D

Alto e Tenore
3 Tromboni
Basso

Timpani in D-A

Triangolo

Gr. Cassa e Piatti

Violino I.

Violino II.

Viola.

Soprano

Alto

Tenore

Basso

Violoncello e Contrabasso.

Seid umschlungen,
Seid umschlungen,
Seid umschlungen,
Seid umschlungen,

Figure 17. Symphony No. 9 (movement IV) by Beethoven. Reprinted from score, (New York: Edwin F. Kalmus, 1900z)

Rossini's intended use of percussion in his opera orchestras remains a particular point of controversy. He composed some thirty-six operas in just nineteen years before retiring at age thirty-seven. The speed with which he produced his scores often resulted in his use of *spartitini*, a type of compositional appendix where the remainder of parts beyond what would fit on the staves of a page was gathered in a “mini score” at the end of a work. Though Rossini did not include percussion in all his compositions, parts for those works involving Turkish percussion were most often relegated to *spartitini*.¹⁶ Two particularly troublesome works are his comic operas, *L' Italiana in Algeri* (*The Italian Girl in Algiers*, 1813), and *Il Barbiere di Siviglia* (*The Barber of Seville*, 1816).

Figure 18. Overture to *L'Italiana in Algeri* by Rossini. Reprinted from score, (Pesaro: Fondazione Rossini, 1989)

¹⁶ Nicholas Ormrod, “Authentic Performance Practice in Rossini Opera,” *Percussive Notes* (February 1996): 48.

As seen in Figure 18 from Rossini's overture to *L' Italiana in Algeri*, the published score reserves a solitary staff for percussion which bears the description *Gran Cassa e Banda Turka* (*Gr.C. and B.T.*). Such a vague designation for "Turkish Band" leaves doubt as to the specific instruments intended by Rossini. As seen in the above example, each of the involved percussion instruments read from the same repeated quarter note, notated with an upward stem. Most sources agree that *Banda Turka* safely infers the joining of cymbals and triangle to the beat of the bass drum. The supplemental use of the Turkish crescent, tambourine, tenor drum, and/or small bells (*campanella*), however, is a matter of considerable debate. Though no mention of these other instruments exists in the score, Luigi Picchianti wrote in 1830 that the Turkish cymbals and Turkish crescent were always to be played in conjunction with the bass drum's rhythm "in such a way as to create a harmonious and excellent blend."¹⁷

Rossini indicates in the *spartitini* that a single performer is to play in the quiet sections, suggesting that the louder instruments such as cymbals and Turkish triangle would leave the bass drum to play alone at these points. Speaking of Rossini's orchestration in *L' Italiana in Algeri*, Berlioz was critical of "that infernal bass drum" pounding senselessly on the accented beat of each bar.¹⁸ Documents from archives dating back to early performances of Rossini's works in Venice and Milan suggest that the availability of reliable and competent percussionists may have played a decided role in determining the quantity of percussion instruments included in each performance. Instruments from the *Banda Turka* may have also been intended for use in the *stretta* of the Act I finale, but the majority of sources researched in this study agree Rossini abandoned any original plans to use percussion beyond the

¹⁷ Michael Rosen, "Rossini Revisited." *Percussive Notes* (April 1999): 60.

¹⁸ Ormrod, "Authentic Performance Practice in Rossini Opera," 50.

overture of this opera. (Rossini's intentions regarding the timpani in *L' Italiana in Algeri* are also ambiguous. Though the original manuscript includes a part for timpani in the finale of Act I, it is absent in many editions. Timpani receives no mention in the overture.)

Figure 19. Overture to *Il barbiere di Siviglia* by Rossini. Reprinted from score, (Pesaro: Fondazione Rossini, 1989)

Figure 19 depicts an excerpt from the overture of Rossini's masterpiece, *Il Barbiere di Siviglia*. Only timpani and bass drum are shown in the printed score. Written in common meter, the bass drum is to be played by the beater and ruthe in a style faithful to its military heritage. Its quarter note rhythm is divided between the beater and ruthe in two ways. First, the beater plays the downbeat followed by the striking of the ruthe on the remaining beats in each measure. The steady quarter note rhythm is then divided by alternating strokes between

the beater and the ruthe as the timpani plays a steady eighth note pattern that is rhythmically reminiscent of the pattern often assigned to the triangle.

Questions regarding Rossini's intended use of percussion in this work begin with his scoring for bass drum in the overture, and continue into the two-act opera. It is not clear whether the part scored for bass drum in the overture was to be doubled by cymbals. If this was Rossini's intent, the cymbals would most likely reinforce each strong beat played by the bass drum beater (stems down). One player could have performed the playing of the bass drum and cymbals by attaching the lower cymbal to the top of the bass drum's shell. The opera itself is scored for bass drum (potentially joined by cymbals), and *sistro*, the predecessor to our modern orchestra bells. Though it is possible that Rossini desired bells, there is no key signature given on the percussion stave as would be expected for an instrument capable of producing definite pitches. It is likely that in characteristic haste, Rossini misspelled his actual intent to score for the sistrum (*sistri*). In this case, the Turkish triangle with its jingling discs suspended from the lower horizontal bar would not only offer a sound in keeping with the sistrum, but also give added opportunity for dynamic contrast.¹⁹ Renato Meucci, Professor of History of Musical Instruments at the University of Parma and a specialist in the music of Rossini, states:

As regards the "sistro," it is no doubt the name of triangle, and the use of the plural, *sistri*, in "Barbiere" may have had a more general sense, such as for example, triangle and jingling johnnie. The tradition of a glockenspiel being used for a sistro dates back only to the end of the 19th century!²⁰

¹⁹ Ibid., 51-52.

²⁰ Rosen, "Rossini Revisited." 60.

The “Gipsy March” of Carl Maria Von Weber’s *Preciosa* (1820) includes a rhythmic figure on a single stave played by triangle and tambourine.²¹ The historian Gaveart maintains, however, that a tabor and cymbals were to be used as well. Since it is not practical for cymbals to play the fast, tremolo-type rhythm seen in Figure 20, it is plausible the cymbal part was to be improvised “ad libitum.”

²¹ Although the word “tamburino” seen in parenthesis in the included excerpt may sometimes indicate the use of a drum, the instrumentation list preceding the score in the edition studied is clear that the triangle and the tambourine is intended. Use of the tambourine in this work is also confirmed in the text of several sources examined including *Percussion Instruments and Their History* by James Blades (London: Faber and Faber Limited, 1984), 291.

CHAPTER 4

SUBSEQUENT HISTORY AND USE OF TURKISH PERCUSSION INSTRUMENTS IN THE ORCHESTRA

The positive result of the Turkish influence on the orchestras of the nineteenth century was that percussion instruments as an entire section were then accorded a place in instrumental music ensembles. Not only the timpani, but now a variety of percussion instruments of numerous timbres were available for composers to use in various ways.¹

The nineteenth century and the first quarter of the twentieth century represent a segment of time necessary for the maturation of the Turkish percussion instruments accepted into the orchestra. It was during this period that each of the standard instruments of the percussion section was gradually weaned from its past standard usage and introduced to a variable degree of independence. With the exception of the Turkish crescent, every member of the Turkish percussion section included in the orchestra was to undergo changes during this period of time that led composers to see the bass drum, cymbals, triangle, and tambourine more autonomously. These instruments were given solos of different types, and were accorded some individuality, functioning not only as a homogeneous group, but also in combination with other orchestral instruments.²

The bass drum, seen in Figure 21, gradually began to assume a more modern appearance by the beginning of the nineteenth century. Berlioz refers to two forms of the bass drum: a deep, two-headed instrument known as the long drum in which the depth of the shell was greater than the diameter of the heads, and a shallow Turkish drum of larger diameter, also with two playable heads.

¹ Gangware, *The History and Use of Percussion Instruments in Orchestration*, 206.

² Ibid., 256-57.



Figure 21. Modern orchestral bass drum. Reprinted from Karl Peinkofer and Fritz Tannigel, *Handbook of Percussion Instruments*, Translated by Kurt and Else Stone. (New York: Schott Press of Belwin-Mills Publishing Corp., 1976) 95

Even after its inclusion into the orchestra, the latter form was known as the Turkish bass drum until the beginning of the nineteenth century. The orchestral model ranged in diameter from approximately 30 inches to 40 inches; the depth of the shell around 20 inches. Later in the century a tensioning screw mechanism was added, enabling finer tuning of the drum and a more sonorous, full sound with good carrying power. The bass drum is almost always double-headed.

The “stick and switch” style incorporating the playing of both a beater and a ruthe was ultimately replaced by the use of two identical beaters. The most common beaters remained wooden, covered with felt. Also called mallets, these beaters produced a deep, rich tone from the drum. When only one beater was needed, the open hand could control the length of a note’s resonance by muffling the head with the hand or forearm. Positioning of the drum

changed from its origin playing position upon its entry into the orchestra with the introduction of the cradle, a circular metal axis connected to the outer shell of the drum by tensioned ropes. The cradle was mounted on a secure, stationary base that allowed the rotation of the bass drum to any angle desired by the player. Unlike the beater and ruthe that played on separate heads, both beaters could play on the same head to produce one distinct tone. The drum was struck in the center for a succession of short notes to minimize its natural reverberation; the bass drum was struck several inches from the center of the head for general playing. These refinements to the bass drum's shape, size, stature, and sound distinguished it from its initial use in the eighteenth-century orchestra as influenced by the military bands.

In his *Treatise Upon Modern Instrumentation and Orchestration* (1858), Berlioz was openly critical, if not hostile, to what he considered an abusive use of the bass drum by many composers prior to the mid-nineteenth century:

But to write it as it has been written for fifteen years past, in all full pieces, in all finales, in the slightest chorus, in dance-tunes, even in cavatinas, is the height of folly; and (to call things by their right names) of brute stupidity: and the rather, because composers, in general, have not even the excuse of an original rhythm, which they might be supposed to have wished to display and render predominant over the accessory rhythm; nothing of the kind; they strike senselessly the accented parts of each bar, they overwhelm the orchestra, they overpower the voices; there is no longer either melody, harmony, design, or expression; hardly does the prevailing key remain distinguishable! And then they innocently think they have produced an *energetic* instrumentation, and have written something very fine!³

Some years before writing this Berlioz included a noteworthy part for bass drum in his *Symphonie Fantastique* (1830). According to the program notes often distributed to the audience when this symphony was performed, Berlioz sought to musically portray various

³ Berlioz, *Treatise Upon Modern Instrumentation and Orchestration*, 226.

situations in the life of a young musician.⁴ In the last movement entitled “Dream of a Witches’ Sabbath,” the bass drum was to be played erect like a military drum with sponge-headed beaters. Authentic textual notes by Berlioz accompanying the score studied reveal his intent for two players to simultaneously play on the same head of the drum to create a much lower tone than was available from the lowest range of the timpani. Though the two sets of timpani were muffled with a cloth on each drum, Berlioz preferred that sponge-headed sticks be used in place of a cloth on the bass drum. Once updated into its nineteenth-century model, sustaining the bass drum’s sound beyond the length of a single note became a practical method of playing the instrument that composers, including Berlioz, added to their arsenal. The tremolo, or roll, was produced like a roll on the timpani, with single beats alternated from hand to hand. In Figure 22, the bass drum and timpani help to create a somber, sometimes frightful mood, as the young musician envisions ghosts and monsters at his funeral.

In the *Grande Messe des Morts* (1837), Berlioz writes for the bass drum, without cymbals, played with drumsticks that alternate on each side of the drum's heads (see Figure 23). Berlioz indicates in the first page of the score that the bass drum is to sound a B flat pitch as noted by the key signature seen on the stave where the part is written. Also known as his *Requiem*, this gigantic work includes one hundred and forty players, four brass choirs, four tam-tams, ten pairs of cymbals, a tuned tenor drum, bass drum, and sixteen kettledrums.⁵ Berlioz experimented with a variety of bass drum beaters, giving constant instructions in his scores for the use of soft, hard, or sponge-headed sticks for timpani, cymbals, and the bass drum. He routinely provided his own beaters for the players to use.

⁴ Hector Berlioz, *Symphonie Fantastique*, Op. 14. (New York: W. W. Norton and Company, 1971), 23-25.

⁵ Donald J. Grout, *A History of Western Music*, 4th ed. (New York: W. W. Norton and Company, 1988), 676.

Plutes.
Hautboy
Clar.

Met. j = 60.
Slower.

cres. molto.

cres. molto.

cres. molto.

Divis.

cres. molto.

ff

Trumpet in F.

Divis.

Trumpet in Eb.

cres. molto.

cres. molto.

ff

Together.

cres. molto.

Divis.

ff

cres. molto.

Divis.

cres. molto.

Sticks of sponge.

Sticks of sponge.

Sticks of sponge.

Sticks of sponge.

Sticks of sponge.

Sticks of sponge.

Sticks of sponge.

Strike with the two drumsticks alternatively on each side.

The Tam-tam and the Cymbals count.

dim.

Slower.

Et . . i - te - ram ven - tu-ru-s est cum

Figure 23. *Grande Messe des Morts* by Berlioz. Reprinted from Hector Berlioz, *A Treatise Upon Modern Instrumentation and Orchestration*, 2d ed. Translated by Mary Cowden Clarke. (London: J. Alfred Novello, 1858), 209

Years after Berlioz composed for two players to play simultaneously on one drum in his *Requiem*, Bela Bartók reverted back to a similar playing style widely seen during his travels researching folk music of the Orient and Europe.⁶ In *The Miraculous Mandarin* (1919), both sides of the bass drum were played with small sticks and mallets, reminiscent of the “stick and switch” performance practice from the bass drum’s military use.

Like Berlioz and Bartok, Gustav Mahler in his compositions scored for a wide array of percussion instruments such as tambourine, cowbells, chimes, glockenspiel, and celeste. It is interesting to note, however, that only the bass drum, cymbals, triangle, and gong (in addition to timpani) appear in each of his nine symphonies. In his Third Symphony (1895), Mahler combines the bass drum and cymbal parts to be played by one performer, instructing that the shell of the bass drum be struck with a *ruthe*. In both his Symphony No. 6 (1904) and Symphony No. 7 (1905), Mahler scored for the bass drum to be struck with the beater and *ruthe*.⁷

The subtle, yet effective use of the bass drum roll is also evidenced in *L'Apprenti-Sorcier* by Paul Dukas (*The Sorcerer's Apprentice*, 1897). As seen in Figure 24, Dukas instructs the player to roll on one head of the drum with a double-headed beater. A rapid oscillating movement of the wrist of one hand brings both heads of the stick into contact with the drumhead to produce the single-handed roll.⁸

⁶ Peinkofer, *Handbook of Percussion Instruments*, 96.

⁷ Blades, *Percussion Instruments and Their History*, 328; Reginald Smith Brindle, *Contemporary Percussion*. (London: Oxford University Press, 1975), 236-37.

⁸ *The New Grove Dictionary of Music and Musicians*, 2nd ed., (2001), s.v. “Bass Drum.”



Figure 24. *L'Apprenti-Sorcier* by Dukas. Reprinted from Edgar Brand Gangware, Jr., "The History and Use of Percussion Instruments in Orchestration," Ph.D. diss., (Northwestern University, 1962) 217

Igor Stravinsky's use of the bass drum in the finale to Part One of *Le sacre du printemps* (*The Rite of Spring*, 1913) is considered one of the instrument's finest moments.⁹

In Figure 25, Stravinsky ends part one with a rhythmically exploding crescendo of triplets for the bass drum (and brass) to play simultaneously against the sixteenth-note rhythm scored for the timpani and strings.

Stravinsky also included a passage in Part Two requiring the bass drum to be played near its edge with a wooden stick. In Figure 26, the bass drum and timpani are chosen from a large percussion section (including cymbals, triangle, tambourine, tam-tam, and guiro) to share an intricate rhythm that drives the work to its feverish conclusion.

⁹ Igor Stravinsky, *Le sacre du printemps*, (New York: Dover Publications, Inc., 1989).

ПОЦЕЛУЙ ЗЕМЛИ
(Старейший - Мудрейший)
THE KISS OF THE EARTH
(The Oldest and Wisest One)

Лento $\text{♩} = 42$

ВЫПЛЯСЫВАНИЕ ЗЕМЛИ
THE DANCING OUT OF THE EARTH

72 **Prestissimo** $\text{♩} = 168$

The score is divided into two main sections. The first section, 'ПОЦЕЛУЙ ЗЕМЛИ' (The Kiss of the Earth), is marked 'Лento' with a tempo of $\text{♩} = 42$. It features a variety of instruments including Piccolo, Flute, Flute in C, Oboe, Cor Anglais, Piccolo Clarinet, Clarinet in Bb, Clarinet in Bb, Bassoon, Contrabassoon, Horn, Trumpet in C, Trombone, Timpani, Gong, and Tuba. The second section, 'ВЫПЛЯСЫВАНИЕ ЗЕМЛИ' (The Dancing Out of the Earth), is marked '72 Prestissimo' with a tempo of $\text{♩} = 168$. This section includes a large string ensemble (Violins I and II, Violas, Cellos, and Double Basses) and a woodwind section. The score is written in Russian and English, with dynamic markings such as *ppp*, *pp*, *p*, *f*, *ff*, *sf*, *sfz*, *molto*, and *senza sord.* (without mutes). The key signature is one sharp (F#).

Figure 25. *Le sacre du printemps* by Stravinsky (example 1). Originally Published by Izdatel'stvo "Muzyka" (State Music Publishing House), Moscow. Reprinted from score, (New York: Dover Publications, Inc., 1989)

Since the initial entry of Turkish percussion into the orchestra, composers have consistently used cymbals to implement color, create climactic impact, and to achieve exotic effects. There was little consideration for playing technique in the late eighteenth-century orchestra, as the incorporation of cymbals in compositions was overwhelmingly defined by the basic striking of one plate against the other with an oblique movement. It is surmised that the player would hold each cymbal in the air to allow the sound to ring freely, and then damp them against his chest to cease their sound. With the Romantic era, however, the interest of composers in a wider range of cymbal sounds and effects emerged. As composers began to experiment with the use of cymbals, they were eventually pardoned from their previous pairing with the bass drum. The result was an expanded palette of sound capabilities and playing techniques for the cymbal including the suspended cymbal roll. By holding or “suspending” one of the two cymbals that were previously struck together, the player could strike the sides of the cymbal plate repeatedly with the mallets to create a sound whose duration and volume was easier to control. This performance technique is best known today as a two-stick roll. Whereas crashing to accent strong beats had defined the cymbal’s use in early orchestral works as influenced by the Turkish music, rolling allowed the tone from a single cymbal to be maintained, increased, or decreased as desired by the composer. The suspended cymbal’s sound was gradually damped or instantaneously choked by the fingers or hands. Harder mallets produced a brighter tone and a more distinct sound with each stroke of the mallet upon the plate; softer mallets yielded less sound upon each stroke of the beater, blending into a sustained tone produced by the vibrating of the cymbal. According to James Blades in *Percussion Instruments and Their History*, Berlioz is believed to be the first composer to clearly indicate that a single cymbal be struck with drumsticks. Blades believes

it was through the abundant and innovative scoring by Berlioz and Richard Wagner that cymbals achieved their position of importance in the nineteenth-century orchestra.

The effect created by rubbing the plates together with a rapid rotary movement is known today as a two-plate roll. This roll, supposedly employed by Wagner, was uneven in its sound as compared to the controlled tone achievable with the two-stick roll. It was also possible to produce a hissing effect by the quick swishing of one plate across the other, known as *strisciato*.¹⁰ An effect seldom demanded, the *strisciato* is scored by Leoncavallo in *I Pagliacci*, and by Dallapiccola in *The Prisoner*.

In *Romeo et Juliette* (*Romeo and Juliet*, 1839), Berlioz introduced the gentle tinkle of smaller pitched plates he called antique cymbals into the orchestra. Seen in Figure 27, these cymbals were played in pairs by striking their edges together, Berlioz included two separate pairs tuned a fifth apart to echo the melody scored for woodwinds, as seen in Figure 28.

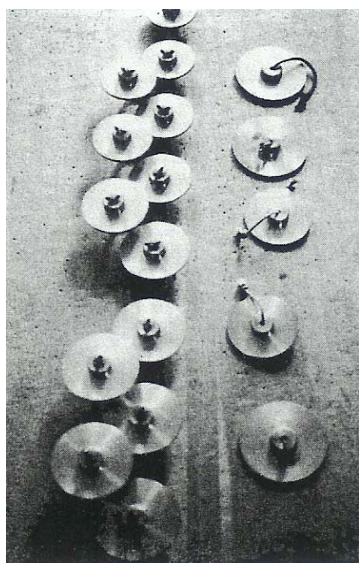


Figure 27. Antique cymbals. Reprinted from Joseph Adato and George Judy, *The Percussionist's Dictionary: Translations, Descriptions and Photographs of Percussion Instruments from Around the World*, (Melville: Belwin Mills Publishing Corp., 1984), 44

¹⁰ Brindle, *Contemporary Percussion*, 80-81; Peinkofer, *Handbook of Percussion Instruments*, 121.

Figure 28. *Romeo et Juliette* by Berlioz. Reprinted from score, (London: Edition Eulenburg Ltd., 1900z)

Debussy captured the mystic atmosphere of a dream with the antique cymbals in *L'après-midi d'un faune* (1894), where he combined them with the flute to play only ten notes. Stravinsky combined two pitched cymbals with a bell (*cloche*) in *Les Noces* (*The Wedding*, 1912). In *Le sacre du printemps* (1913), he scored antique cymbals with the triangle to play quarter notes as the timpani strikes two separate pitches in an alternating eighth note rhythm.¹¹

Striking the cymbal near its center (bell) produced a more bell-like sonority. In Figure 29 from *La Mer* (1905), Claude Debussy included a cymbal part significant to the overall

¹¹ Peinkofer, *Handbook of Percussion Instruments*, 61,199.

color of his composition. He calls for a suspended cymbal in place of the customary pair of cymbals. In addition to climactic crashes, Debussy created new sounds through measured rolls, grace notes, even the scraping of a metal rod against the cymbal to generate a scratching sound.¹²

Some cymbal manufacturers today label the instruments into three categories: French, Viennese, and Germanic. Such distinctions, however, did not exist until the modern era. The heavy cymbals used in Turkish music and adapted from the military band into the orchestra in the eighteenth century are best described today as Viennese cymbals. Their plates are slightly saucer-shaped with a central dome or cupola. The thickness of Viennese cymbals allows for both high and low overtones to be heard when they are crashed together. By the Romantic era, an even heavier model gained acceptance, establishing the Germanic sound as we know it today. A French model of cymbals emerged with Berlioz, whose works demanded a shimmering tone suitable for combination with any instrument or group of instruments in the orchestra. Their bright splash of color blended especially well with strings or brass. French cymbals are lightweight and produce an immediate sound upon impact. They have very few sustaining characteristics. Today's orchestral percussionist employs the use of cymbals from each of these three schools.¹³

The evolution of the triangle from its origins in Turkish music was undeniably dramatic. The loosely strung, metal rings attached to its lower, horizontal side were removed, producing a clearer and more brilliant “tingling” sound in place of sustained “jingling.” A

¹² Ibid., 210.

¹³ Leonard A. DiMuzio, “Cymbal Vibrations,” *Percussive Notes* (1975): 24.

slight opening at one angle became standard as the instrument matured following its acceptance into the orchestra, defining the triangle as an instrument of indefinite pitch.

The image shows a page of a musical score for 'La Mer' by Debussy, specifically page 15. The score is written in French and includes various orchestral parts. The instruments listed on the left are: 6^{es} Fl., 1^{re} Fl., Fl^{ut}, Cor A., Cl., Bass, Cors, Tromp., 1^{er} et 2^e Tromb., 3^e Tromb. et Tuba, Timb., Cymb., Tam-Tam, 1^{re} et 2^e Harpes, and a string section at the bottom. The score includes dynamic markings such as *f*, *piu f*, *ff*, *p*, and *pp*. It also features tempo markings 'Retenu' and 'a Tempo'. The music is written in a complex, impressionistic style with many slurs and ties. The page number '15' is in a box at the top left.

Figure 29. *La Mer* by Debussy. Reproduced from early French editions. Reprinted from score, (New York: Dover Publications, Inc., 1983)

Smaller triangles were used to achieve a higher, brighter tone; larger triangles produced a lower, heartier resonance. The greater the thickness of the metal, the higher and more distinguishable are its overtones. The thickness and force of the steel beater that strikes the triangle determines its volume.

When the triangle was first used as part of the orchestral percussion section, it served a “time-keeping” function as it had done for years in military bands. Gluck’s experimental use of the triangle as the single Turkish percussion instrument scored in combination with strings, bassoon, and horns in *Iphigénia en Aulide* (1774) called only for the playing of a characteristically steady eighth-note rhythm. Although the implementation of the triangle remained limited, nineteenth-century composers such as Robert Schumann in his Symphony No. 1 (1841) chose the triangle’s unique orchestral tone to introduce an unsteady, less-traditional rhythm. This can be seen in Figure 30.



Figure 30. Symphony No. 1 by Schumann. Reprinted from Edgar Brand Gangware, Jr., “The History and Use of Percussion Instruments in Orchestration,” Ph.D. diss., (Northwestern University, 1962), 209a

While still accenting the strong beats of the texture shared by flute, violin, viola, and cello, its use was no longer predictable. The first composer to utilize the triangle in a solo capacity was Franz Listz, as seen in his *Piano Concerto No. 1* (1855). Often subtitled “The Triangle Concerto” because of the instrument’s soloistic usage, the triangle has a short four-note rhythmic solo, unaccompanied, repeated several times as the statement to which the string section replies. Listz’s innovation, shown in Figure 31, marks the turning point from the triangle’s military history to a more aesthetic usage.¹⁴



Figure 31. *Piano Concerto No. 1* by Listz. Reprinted from Edgar Brand Gangware, Jr., “The History and Use of Percussion Instruments in Orchestration,” Ph.D. diss., (Northwestern University, 1962), 209b

Triangle rolls are played inside the upper angle of the instrument by striking both sides of the instrument back and forth rapidly, with a loose wrist. Wagner included the tremolo in the overture to *Die Meistersinger* (1862-67), as did Edvard Grieg in *Peer Gynt* (1875), and

¹⁴ Gangware, *The History and Use of Percussion Instruments in Orchestration*, 207-09; Gordon B. Peters, “The Sistrum and the Triangle,” 55.

Nikolai Rimsky-Korsakov in his *Capriccio espagnol* (1887) and *Scheherazade* (1888). An excerpt from this last work cited is shown in Figure 32.

158

K

Triang.
Pia' ti.
Cassa.

pizz.
pizz.

K

Figure 32. *Scheherazade* by Rimsky-Korsakov (triangle). Originally Published by M. P. Belaieff, Leipzig. Reprinted from score, (New York: Dover Publications, Inc., 1984)

In his Symphony No. 4 in E Minor, Op. 98 (1886), Johannes Brahms used the triangle both rhythmically and sonorously (Figure 33). In the third movement marked “Allegro giocoso,” the triangle rolls in unison with the high-voiced sections of the orchestra that are answered in alternate measures by lower-voiced instruments. The half-note rhythm scored for tutti orchestra then divides into quarter notes which are played by the woodwinds, brass, and lower strings, fueled by a driving sequence of eighth and sixteenth notes shared by the upper strings, timpani, and triangle. This passage could be played while suspending the instrument in the player’s hand, although mounting the triangle and striking it with two matching beaters may also assist in the execution of this excerpt.

Much like its initial use in Turkish music, the tambourine has remained an effective occasional member of the orchestral percussion section. It has been used by nineteenth-century and twentieth-century composers including Wagner (*Das Liebesverbot* 1834), Berlioz (*Roman Carnival* 1844), Bizet (*Carmen* 1875), Peter Ilich Tchaikovsky (*Capriccio italien* 1880, and *Nutcracker Ballet* 1892), Rimsky-Korsakov (*Scheherazade* 1888), and Stravinsky (*The Firebird* 1910, and *Petrouchka* 1911). Numerous methods of playing the tambourine allow composers a wide range of possible uses beyond its Turkish role of supplying color.¹⁵

¹⁵ Blades, *Percussion Instruments and Their History*, 385-86; Gangware, *The History and Use of Percussion Instruments in Orchestration*, 212-14; Peinkofer and Tannigel, *Handbook of Percussion Instruments*, 100-01.

I

317

gr.Fl. *ff sempre*

kl.Fl. *ff sempre*

Ob. *ff sempre*

Klar. (C) *ff sempre*

Fag. *ff sempre*

K.Fag. *ff sempre*

(F) Hr. *ff sempre*

(C) Hr. *ff sempre*

Trpt. (C) *ff sempre*

Pk. *ff sempre*

Trgl. *ff sempre*

1.Viol. *ff sempre*

2.Viol. *ff sempre*

Br. *ff sempre*

Vcl. *ff sempre*

K.B. *ff sempre*

Figure 33. Symphony No. 4 (movement III) by Brahms. Originally Published by Breitkopf & Härtel, Leipzig. Reprinted from score, (New York: Dover Publications, Inc., 1974)

The tambourine's head may be struck with knuckles, fingertips, palm, closed fist, or the knee. In the dance entitled "Trepak" from Tchaikovsky's *Nutcracker Ballet* (Figure 34) the performer executes an intricate rhythm by striking the tambourine back and forth between the knee and hand. The tambourine is held upside down so that its single head is closest to the knee. The fingers strike underneath the head inside the instrument. In the movement from *Scheherazade* entitled "The Young Prince and Princess," Rimsky-Korsakov chooses for the tambourine to play a strong, repeated pulse. This pulse is accompanied, but not copied by the triangle, cymbals, and drum.

For softer passages, a player strikes the rim of the tambourine with the fingertips or with mallets. The striking of the instrument with two mallets in an alternating pattern may require the placement of the tambourine on a flat stand. Covering the stand with a soft cloth or towel prevents undesirable sounds from the tambourine when it is struck. This playing method may also be used for passages involving a rapid succession of notes.

As on the other percussion instruments, maintaining a desired length of sound is achieved on the tambourine by rolling. The standard roll involves shaking the instrument from its regularly held vertical position, allowing the sound from its jingles to sustain. The tambourine roll is notated by three slashes on the stem of the rolled note. The length of the roll is determined by the written value of the note. Unlike the suspended cymbal roll, the shaking movement required to generate the jingling of the metal discs (located along the sides of the tambourine's shell) limits its dynamic range. The standard roll is ill suited for soft passages.

Triang. *p*

Tbrino. *pp*

Tamb. *pp*

Piatti. *pp*

dim.

divisi

pizz.

pp

pizz.

pp

unis.

parco

p

unis.

Figure 34. *Scheherazade* by Rimsky-Korsakov (tambourine). Originally Published by M. P. Belaieff, Leipzig. Reprinted from score, (New York: Dover Publications, Inc., 1984)

A more virtuosic method of rolling involves a player rubbing his moistened thumb around the rim of the tambourine's head. This friction roll allows for a softer sounding roll, but one more technically challenging to execute consistently. Extended durations of the thumb roll are also difficult to sustain since the player must simultaneously press into the head of the instrument while circling around the tambourine's rim to generate sound from the metal jingles. Figure 35 from Stravinsky's *The Firebird* (1910) demonstrates the friction roll.



Figure 35. *The Firebird* by Stravinsky. Reprinted from Edgar Brand Gangware, Jr., "The History and Use of Percussion Instruments in Orchestration," Ph.D. diss., (Northwestern University, 1962), 214

Stravinsky employs both the standard roll and the friction roll in Figure 36 from *Petrouchka* ("Gypsies and a Rake Vendor").

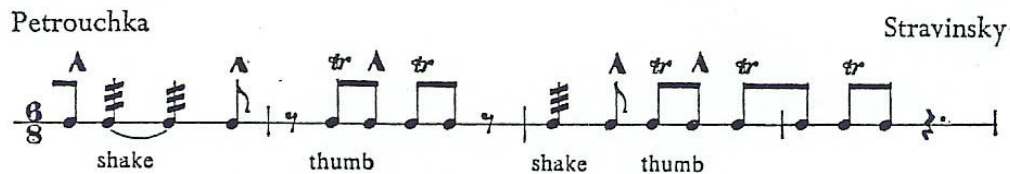


Figure 36. *Petrouchka* by Stravinsky. Reproduced by Boosey & Hawkes, Ltd. Reprinted from James Blades, *Percussion Instruments and Their History*, (London: Faber and Faber Limited, 1984), 386

The Turkish crescent is only briefly mentioned by Berlioz in his *Treatise On Modern Instrumentation and Orchestration* as an instrument adding brilliance to “lively pieces, and pompous marches in military music.” It is included as *pavillon chinois* in his *Symphonie funébre et triomphale*.¹⁶ There were no orchestral compositions found during this study, however, to indicate the instrument survived beyond its role in the eighteenth-century homogeneous Turkish percussion section.

¹⁶ Blades, *Percussion Instruments and Their History*, 266.

CHAPTER 5

SUMMARY AND CONCLUSIONS

The major findings of this study are summarized below. They are grouped into two categories, historical and performance practice.

1. The percussion instruments first incorporated into the late eighteenth-century and early nineteenth-century orchestra consisted of the bass drum, cymbals, and triangle. The tambourine and Turkish crescent were also occasionally added.

2. At first, the term “Turkish music” meant the style of music played by the Janissary band, a name originally associated with a select group of instrumental performers specifically trained to assist an elite corps of fighters created by Turkish rulers in the fourteenth century. This military music attracted the attention of Europe’s armies, and ultimately found its way into the orchestral scores of Western composers. Eventually, the term became synonymous with the use of the bass drum, cymbals, triangle, and sometimes the tambourine in the late eighteenth century and early nineteenth century orchestra.

3. Upon their entrance into the late eighteenth-century and early nineteenth-century orchestra, the bass drum, cymbals, and triangle formed a homogeneous group that produced a characteristic tone color through the simultaneous performance of the instruments. This new percussion section was used quite independently from the kettledrums (or timpani). Seating charts for orchestras of this period reveal that the Turkish percussion and kettledrums were not considered a cohesive unit within the orchestra at that time, as they are routinely seen in the modern orchestra.

4. When the bass drum entered the orchestra, it did so with a specialized performance practice. One hand struck a side of the drum’s head with a wooden beater; the other struck

the opposite head with a switch most often made of twigs, called a *ruthe*. Downward stems denoted the notes played by the beater; notes played by the switch were shown with upward stems. The *ruthe* often played on the unaccented beats that fell between strikes of the wooden beater on strong beats. This method of playing remains essential in modern-day attempts to recreate authentically accurate performances of many late eighteenth-century and early nineteenth-century orchestral works.

5. The designation of bass drum in late eighteenth-century and early nineteenth-century orchestral scores sometimes implied the simultaneous playing of other percussion instruments, particularly the cymbals. Remembering that it was the homogeneous group of Turkish percussion instruments as performed by the military bands that originally fascinated Western composers, some researchers maintain that it was standard practice for the cymbals to accompany the bass drum unless either the bass drum or cymbals was scored to play alone. In smaller cities where there was not always enough capable percussionists, it was sometimes necessary for the bass drum and cymbals to be performed by one player through the mounting of one cymbal to the top of the bass drum's shell. The player would strike the held cymbal against the mounted cymbal simultaneous to the playing of the bass drum. Such performance practices have complicated modern day efforts to authentically perform the music of composers including Rossini.

6. Orchestral composers such as Haydn and Mozart were among the first to incorporate Turkish percussion instruments, using them as a homogeneous group. Beethoven began incorporating percussion in his compositions as a valued textural component. Berlioz went further by writing parts for percussion and timpani integral to the harmonic and textural structure of his works.

7. Following their acceptance into the orchestra, Turkish percussion instruments experienced changes in design that resulted in a less homogeneous, more independent use of these instruments by composers. With the exception of the Turkish crescent, composers began to see the bass drum, cymbals, triangle, and tambourine more autonomously.

8. Especially significant are the contributions of Hector Berlioz to the development and use of percussion instruments by nineteenth-century, twentieth century, and modern-day percussionists and composers alike. In *A Treatise Upon Modern Instrumentation and Orchestration*, Berlioz devotes more space to the discussion of percussion instruments and their use than any other section of the orchestra. His attack of early nineteenth-century performance practices including the use of the bass drum only as an accent to mark the strong beat of each bar, and the playing by a single performer of both the bass drum and cymbals, helped to create a more aesthetic, less idiomatic perception of these instruments by orchestral composers. It was Berlioz who suggested conservatory instruction for serious percussionists. His literary contributions, innovative use of percussion instruments in his own compositions, and visionary ideas were crucial to the advancement of percussion in the orchestra.

9. The incorporation of Turkish percussion instruments first implemented by orchestral composers in the late eighteenth century and early nineteenth-century is the foundation from which the modern orchestral percussion section evolved. In the years following their acceptance, percussion instruments have in many instances become a focal point of orchestration.

Based on this study, this writer suggests the following topics for future research:

1. Further examination regarding the performance practice of playing the bass drum and crash cymbals by one performer is an interesting topic for future study.

2. With rare exception, percussionists were considered incompetent and rarely necessary in the orchestra until Berlioz and his contemporaries began writing parts for percussion and timpani integral to the harmonic and textural structure of their compositions. The impact of Hector Berlioz in reshaping the view of how percussion instruments could be utilized in the orchestra also deserves serious examination.

BIBLIOGRAPHY

Musical Scores

- Beethoven, Ludwig Van. *Die Ruinen von Athens*. Mineola: Dover Publications, Inc., 1999.
- _____. Symphony No. 9, Op. 125. New York: Edwin F. Kalmus, 1900z.
- _____. Symphony No. 9, Op. 125. New York: Dover Publications, Inc., 1976.
- _____. *Wellingtons Sieg* ("The Battle of Victoria"), Op. 91. New York: Dover Publications, Inc., 1976.
- Berlioz, Hector. *Romeo et Juliette*, Op. 17. London: Edition Eulenburg Ltd., 1900z.
- _____. *Symphonie Fantastique*, Op. 14. New York: W. W. Norton and Company, 1971.
- Brahms, Johannes, Symphony No. 4 in E Minor, Op. 98. New York: Dover Publications, Inc., 1974.
- Debussy, Claude. *La Mer*. New York: Dover Publications, Inc., 1983.
- Dukas, Paul. *L'Apprenti-Sorcier*. As reproduced in Edgar Gangware Jr., "The History and Use of Percussion Instruments in Orchestration." Ph.D. diss., Northwestern University, 1962.
- Haydn, Franz Joseph. "Military" Symphony No. 100, G Major. New York: E. F. Kalmus, 1932.
- Haydn, Franz Joseph. "Military" Symphony No. 100, G Major. New York: Dover Publication, Inc., 1985.
- Liszt, Franz. *Piano Concerto No. 1 in E flat Major*. As reproduced in Edgar Gangware Jr., "The History and Use of Percussion Instruments in Orchestration." Ph.D. diss., Northwestern University, 1962.
- Mozart, Wolfgang Amadeus. *Die Entführung aus dem Serail* K. 384: Overture. Leipzig: Ernst Eulenburg, 1900z.
- _____. *Turkish March* from Piano Sonata in A Major K. 331. Bryn Mawr: Theodore Presser Company, 1956.
- Rimsky, Korsakov, Nikolay. *Scheherazade*. New York: Dover Publications, Inc., 1984.

Rossini, Gioacchino. *Il barbiere di Siviglia*: Overture. Pesaro: Fondazione Rossini, 1989.

_____. *La Gazza Ladra*: Overture. Pesaro: Fondazione Rossini, 1989.

_____. *L' Italiana in Algeri*: Overture. Pesaro: Fondazione Rossini, 1989.

_____. *Robert Bruce*: Overture. Pesaro: Fondazione Rossini, 1989.

Schumann, Robert. "Spring" Symphony No. 1, Op. 38. As reproduced in Edgar Gangware, Jr., "The History and Use of Percussion Instruments in Orchestration." Ph.D. diss., Northwestern University, 1962.

Stravinsky, Igor. *Petrouchka*. As reproduced in James Blades, *Percussion Instruments and Their History*. London: Faber and Faber Limited, 1984.

_____. *Le sacre du printemps*. New York: Dover Publications, Inc., 1989.

_____. *The Firebird*. As reproduced in Edgar Gangware, Jr., "The History and Use of Percussion Instruments in Orchestration." Ph.D. diss., Northwestern University, 1962.

_____. *The Firebird*. New York: Dover Publications, Inc., 1989.

Weber, Carl Maria Von. *Preciosa*: Overture. New York: Dover Publications, Inc., 1986.

Books and Dissertations

Adato, Joseph, and George Judy. *The Percussionist's Dictionary: Translations, Descriptions and Photographs of Percussion Instruments from Around the World*. Melville: Belwin Mills Publishing Corp., 1984.

Adkins, H. E. *Treatise on the Military Band*. London: Boosey and Hawkes, 1931.

Arbeau, Thoinot. *Orchesography*. Translated by Mary Stewart Evans. New York: Dover Publications, Inc., 1967.

Beck, John H., ed. *Encyclopedia of Percussion*. New York: Garland Publishing, Inc., 1995.

Benvenga, Nancy. "Timpani and the Timpanist's Art: Musical and Technical Developments in the Nineteenth and Twentieth Centuries." Goteborg, Sweden: Gothenburg University, 1979.

Berlioz, Hector. *A Life of Love and Music: The Memoirs of Hector Berlioz 1803-1865*. Translated and Edited by David Cairns. London: The Folio Society, 1969.

- _____. *A Treatise Upon Modern Instrumentation and Orchestration*, 2d ed. Translated by Mary Cowden Clarke. London: J. Alfred Novello, 1858.
- _____. *Treatise On Instrumentation*. Revised by Richard Strauss. Translated by Theodore Front. New York: Edwin F. Kalmus, 1948.
- Blades, James, and Jeremy Montagu. *Early Percussion Instruments From the Middle Ages to the Baroque*. London: Oxford University Press, 1976.
- Blades, James. *Percussion Instruments and Their History*. London: Faber and Faber Limited, 1984.
- Brindle, Reginald Smith. *Contemporary Percussion*. London: Oxford University Press, 1975.
- Burney, Charles. *An Account of the Musical Performance in Westminster Abbey*. Payne, London, 1785.
- Caba, G. Craig. *United States Military Drums 1745-1865: A Pictorial Survey*. Harrisburg: Civil War Antiquities LTD., 1977.
- Camus, Raoul F. *Military Music of the American Revolution*. Chapel Hill: University of North Carolina Press, 1976.
- Carse, Adam. *Eighteenth Century Symphonies: A Short History*. London: Augener, 1951.
- _____. *Musical Wind Instruments: A History of the Wind Instruments Used in European Orchestras and Wind-Bands from the Later Middle Ages up to the Present Time*. London: Macmillan and Company, Limited, 1939.
- _____. *The History of Orchestration*. New York: Dover Publications, 1964.
- _____. *The Orchestra in the XVIIIth Century*. Cambridge: W. Heffer and Sons Ltd., 1940.
- _____. *The Orchestra From Beethoven to Berlioz: A History of the Orchestra in the First Half of the Nineteenth Century, and of the Development of Orchestral Baton-Conducting*. New York: Broude Brothers, 1949.
- Coerne, Louis Adolphe. *The Evolution of the Modern Orchestra*. New York: The Macmillan Company, 1908.
- Daniels, David. *Orchestral Music: A Handbook*, 2nd ed. Landham: The Scarecrow Press, Inc, 1982.

Duckles, Vincent H., and Michael A. Keller. *Music Reference and Research Materials*, 4th ed., rev. New York: Schirmer Books, 1994.

Farmer, Henry George. *Handel's Kettledrums and Other Papers on Military Music*. London, Robert Stockwell LTD., 1965.

_____. *Turkish Musical Instruments in the Seventeenth Century*. Glasgow, 1937.

Gangware, Edgar Brand, Jr. "The History and Use of Percussion Instruments in Orchestration." Ph.D. diss., Northwestern University, 1962.

Girsberger, Russ. *A Practical Guide to Percussion Terminology*. Edited by Anthony J. Cirone. Ft. Lauderdale: Meredith Music Publications, 1998.

Gauthreaux, Guy Gregoire II. "Orchestral Snare Drum Performance: An Historical Study." D.M.A. monograph, Louisiana State University, 1989.

Grout, Donald J. *A History of Western Music*, 4th ed. New York: W. W. Norton and Company, 1988.

Hamm, Charles. *Music in the New World*. New York: W. W. Norton and Company, Inc., 1983.

Kaprey, J. A. *Military Music*. London: Boosey and Company, 1984.

Korzun, Jonathan Nicholas. "The Orchestral Transcriptions for Band of J. P. Sousa: A Description and Analysis." D.M.A. diss., University of Illinois/ Urbana-Champaign, 1994.

Koury, Daniel James. "The Orchestra in the Nineteenth Century: Physical Aspects of Its Performance Practice." D.M.A. diss., Boston University Graduate School, 1981.

Macdonald, Hugh, ed. *Selected Letters of Berlioz*. Translated by Roger Nichols. New York: W. W. Norton and Company, 1995.

Montagu, Jeremy. *Making Early Percussion Instruments*. Early Music Series. London: Oxford University Press, 1976.

Peinkofer, Karl, and Fritz Tannigel. *Handbook of Percussion Instruments*. Translated by Kurt and Else Stone. New York: Schott Press of Belwin-Mills Publishing Corp., 1976.

Peters, Gordon B. "Treatise On Percussion," M.A. thesis, University of Rochester, 1962.

Randel, Don, ed. *The New Harvard Dictionary Of Music* (Cambridge: The Belknap Press of Harvard University Press, 1986), s.v. "Janissary Music."

- Ritchey, Ralph C. "A Study of the Factors Which have Influenced the Evolution of the Orchestra Instrumentation." Master's Thesis, Northwestern University. 1941.
- Sachs, Curt. *The History of Musical Instruments*. New York: W. W. Norton and Co., 1940.
- Scholes, Percy A., ed. *An Eighteenth-Century Music Tour In Central Europe and the Netherlands*. vol. 2, *Dr. Burney's Musical Tours in Europe*. London: Oxford University Press, 1959.
- Stedman, Preston. *The Symphony*. Englewood Cliffs: Prentice-Hall, Inc., 1979.
- "Tabourot". *Historic Percussion – A Survey*. Austin: The Tactus Press, 1994.
- _____. *Royall Drummes & Martiall Musick*. Austin: The Tactus Press, 1993.
- Tanner, Peter Hyde. "Timpani and Percussion Writing in the Works of Hector Berlioz." DMA. diss., The Catholic University of America, 1967.
- Whitwell, David. *A Concise History of the Wind Band*. Northridge: Winds, 1985.
- _____. *A New History of Wind Music*. Evanston: Instrumentalist Co., 1980.
- _____. *Band Music of the French Revolution (1789-1799)*. Tutzing: Hans Schneider, 1979.
- _____. *Wind Band and Wind Ensemble Literature of the Nineteenth Century*. Northridge: Winds, 1982.

Articles

- Akins, Thomas N. "The Use of Percussion In the Wind Bands of Britain in the Eighteenth Century." *Percussive Notes* (March 1969): 90-94.
- Bayard, Michael. "Timpani Clinic: The Neo-Janizaries." *Percussive Notes* (1987): 35-37.
- Bowles, Edmund A. "Nineteenth-Century Innovations in the Use and Construction of the Timpani." *Percussive Notes* (1982): 6-75.
- Cirone, Anthony. "Interpreting the Symphonic Percussion Part." *Percussive Notes* (October 1995): 52.
- Clark, Owen. "Percussion In the Opera Orchestra of The 17th and 18th Centuries." *Percussive Notes* (1966): 11-14.

- Corkhill, David. "The Unique Function of Cymbals." *Percussive Notes* (June 2001): 50-52.
- DiMuzio, Leonard A. "Cymbal Vibrations." *Percussive Notes* (1975): 24.
- Grover, Neil, and Garwood Whaley. "Triangle Techniques." *Percussive Notes* (October 1997): 72-73.
- Hamon, Beth. "Percussion Instruments in the 16th Century Ottoman Empire." *Percussive Notes* (April 2001): 59-64.
- Hong, Sherman. "Percussion In the Orchestra: 1750-1850." *Percussive Notes* (1971): 115-129.
- Johnson, Warren. "Techniques of Orchestral Cymbal Playing." *Percussive Notes* (Summer 1975): 153-56.
- Larrick, Geary H. "Percussion: Its Status from Antiquity to the Modern Era." *Percussive Notes* (December 1968): 42-49.
- Levine, David. "Percussion Instruments and Performance Practices in Beethoven's Music." *Percussive Notes* (Fall 1977): 1-6.
- Matthey, Jean-Louis. "Crash Cymbals." Translated by Michael Rosen. *Percussive Notes* (June 1994): 56-59
- Miller, Ben F. "A Brief History of the Cymbal from Antiquity to the Renaissance." *Percussive Notes* (Winter 1974): 46-51.
- Moore, James L. "How Turkish Janizary Band Music Started Our Modern Percussion Section." *Percussive Notes* (September 1965): 7-13.
- Musikalische Zeitung* (Germany). "Orchestra for the Large Concerts and the Large Chorus in Paris." (August 1810): 46.
- _____, "Orchestra of the New Great Theater St. Carlo in Naples." (July 1818): 27-28.
- Navin, Thomas R. "World's Leading Cymbal Maker: Avedis Zildjian Company." *Percussive Notes* (1965): 3-5.
- Obelkevich, Mary Rowen. "Turkish Effect in the Land of the Sun King." *The Musical Quarterly* LXIII, (July 1977): 367.
- Ormrod, Nicolas. "Authentic Performance Practice in Rossini Opera." *Percussive Notes* (February 1996): 48-53.

_____. "The Ruthe in Authentic Performance." *Percussive Notes* (June 1995): 65-67.

Peters, Gordon B. "The Sistrum and the Triangle." *Percussive Notes* (April 1966): 54-55

Rosen, Michael. "Rossini Revisited." *Percussive Notes* (April 1999): 60-61.

_____, "Terms Used in Percussion: Die Rute." *Percussive Notes* (1979): 49-50.

Schneider, Walter C. "Percussion Instruments of the Middle Ages." *Percussive Notes* (1978): 106-17.

Vincent, David W. "Even A Bass Drummer Should Be a Musician." *Percussive Notes* (Winter 1978): 88-91.

APPENDIX

CHRONOLOGICAL LISTING OF MUSICAL COMPOSITIONS STUDIED

1680	Strungk	opera, <i>Ester</i>	bass drum, cymbals
	Freschi	opera, <i>Berenice</i>	cymbals
1706	Marias	opera, <i>Alcione</i>	snare drum
1761	Gluck	opera, <i>Le Cade dupé</i>	bass drum, cymbals, triangle
1764		opera, <i>La recontre imprévue</i>	bass drum, cymbals, triangle
	Gluck	opera, <i>The Pilgrims of Mecca</i>	bass, drum, cymbals, triangle
1775	Grétry	opera, <i>La fausse magie</i>	triangle, [cymbals, not written]
1778	Mozart	“Turkish March” from <i>Piano Sonata in AM, K331</i>	bass drum, cymbals
1779	Gluck	opera, <i>Iphigénia en Aulide</i>	bass drum, cymbals, triangle, snare drum
		opera, <i>Echo & Narcissus</i>	tambourine
	Grétry	opera, <i>Lucile</i>	triangle
1782	Mozart	<i>Die Entführung aus dem Serial</i>	bass drum, cymbals, triangle
1783	Grétry	opera, <i>La Caravane du Caire</i>	triangle, tambourine
1787	Mozart	<i>German Dances, K571</i>	cymbals, tambourine, tuned sleigh bells
1794	Haydn	<i>Military Symphony #100</i>	bass drum, cymbals, triangle
1800	Boieldieu	opera, <i>Le Calife de Bagdad</i>	2 triangles
1812	Beethoven	<i>Die Ruinen von Athen</i>	bass drum, cymbals, triangle, tambourine (castagnets + others not written)
1813		<i>Wellington’s Victory</i> “The Battle of Victoria”	bass drum, cymbals, triangle, side drums, ratchets
1813	Rossini	<i>L’ Italiana in Algeri</i>	“Banda Turka”
1816	Rossini	<i>Il barbiere di Siviglia: Overture</i>	bass drum, cymbals
1817	Rossini	<i>La Gazza Ladra</i>	timpani + 4
1820	Weber	<i>Preciosa</i>	triangle, cymbal, tambourine, snare drum [cym. part not written]
1823	Beethoven	<i>Symphony No. 9 (IV)</i>	bass drum, cymbals, triangle
1829	Rossini	<i>William Tell Overture</i>	timpani + 3
1830	Berlioz	<i>Symphonie Fantastique, Op. 14</i>	bass drum, snare drum, cymbals, bells
1834	Wagner	<i>Das Liebesverbot</i>	tambourine
1837	Berlioz	<i>Grande Messe des Morts (Requiem)</i>	bass drum, cymbals, tam-tams
1838	Glinka	<i>Russlan & Ludmilla</i>	tambourine
1839	Berlioz	<i>Romeo & Juliet</i>	bass drum, cymbal, triangle, tambourine

1841	Schumann	“Spring” <i>Symphony No. 1</i> , Op. 38	triangle
1842	Wagner	<i>Rienzi</i>	tenor drum
1844	Berlioz	<i>Roman Carnival</i>	tambourine
1855	Listz	<i>Piano Concerto in E flat</i>	triangle
1857	Wagner	<i>The Rhinegold</i>	18 anvils – 3 sizes
		<i>The Valkyrie</i>	tenor drum
1861		<i>Tannhäuser</i>	tambourine, castagnets
1867		<i>Die Meistersinger</i>	triangle
1875	Bizet	<i>Carmen</i>	castagnets
	Grieg	<i>Peer Gynt</i>	triangle
1878	Dvorak	<i>Slavonic Dances</i> , Op. 46	bass drum, cymbals, triangle
1880	Tchaikovsky	<i>Capriccio italien</i>	tambourine
1886	Brahms	<i>Symphony No. 4</i> in E Minor, Op. 98	triangle
1887	Rimsky-Kors.	<i>Capriccio espanol</i>	triangle, cymbals, tambourine, snare drum, tam-tam
1888		<i>Scheherazade</i>	triangle, cymbals, tambourine, snare drum, tam-tam
1892	Tchaikovsky	“Trepak” from <i>Nutcracker Suite</i>	cymbals, tambourine
		<i>Casse Noisette</i> from <i>Nutcracker...</i>	tambourine
1894	Mahler	<i>Symphony No. 1</i>	cymbals
		<i>Symphony No. 3</i>	bass drum, cymbals, triangle, tambourine, chimes, gong, glockenspiel
	Debussy	<i>L’après-midi d’un faune</i>	crotales
1897	Dukas	<i>L’Apprenti-Sorcier</i>	bass drum + 3
1899	Elgar	‘ <i>Enigma</i> ’ <i>Variations</i> , No. 11	triangle
1901	Rakhmaninov	<i>Piano Concerto</i> , No. 2	bass drum, cymbals
1901-5	Mahler	<i>Symphony No. 6</i>	[used Berlioz “ideal”]
1902		<i>The Dream of Gerontius</i>	bass drum, cymbals, gong, side drum
1903		<i>The Apostles</i>	gong, fingers cymbals
1904	Mahler	<i>Symphony No. 6</i>	bass drum, cymbals, triangle, tambourine, celeste, chimes, glockenspiel
1905	Mahler	<i>Symphony No. 7</i>	bass drum, cymbals, triangle, tambourine, chimes, gong, glockenspiel
	Debussy	<i>La Mer</i>	suspended cymbal, tam-tam, glockenspiel, triangle, bass drum,
1907		<i>Wand of Youth</i> , Suite II	xylo, tambourine, chimes
1910	Mahler	<i>Symphony No. 10</i>	bass drum, cymbals
	Stravinsky	<i>The Firebird</i>	tambourine

1911	Stravinsky	<i>Petrouchka</i>	xylo., bells, cymbals, tambourine bass drum = 1 player
1912		<i>Les Noces</i>	crotales, xylophone + percussion ensemble
1913		<i>Le sacre du printemps</i>	bass drum, cymbals, triangle tambourine, tam-tam, guiro
1918	Stravinsky	<i>L'histoire du soldat</i>	1 player – 6 instruments
1919	Bartók	<i>The Miraculous Mandarin</i>	bass drum, glockenspiel
1937	Bartók	<i>Sonata for 2 Pianos & Percussion</i>	2 triangles

VITA

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