Timpani: New Suggestions for Excerpt Practice Based on A Survey of Literature

By

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Faculty of Music
University of Toronto

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Abstract

This dissertation examines and critiques timpani instruction literature with a focus on timpani technique. It begins with an historical account of the origins of modern timpani. What follows is a look at the development of technique through documented timpani instruction beginning with Johann Ernst Altenburg’s treatise from 1795. Based on material examined in a literature survey of instructional texts from the twentieth and twenty-first centuries, an examination of basic timpani technique and symphonic repertoire is presented in relation to discussions with four professional timpanists. Ian Bernard (Former Principal Timpanist of the National Arts Centre Orchestra), Tom Greenleaves (Leipzig Gewandhaus Orchestra), Brian Jones (Dallas Symphony Orchestra) and Benedickt Leithner (Deutsche Oper Berlin) all comment on timpani instruction literature, discuss ways it could be enhanced, and share their opinions on technique. Conclusions are drawn challenging the efficacy of timpani instructional literature with particular emphasis on lacunae. In a brief appendix, selected material from violin and
trumpet literature is discussed in relation to timpani literature. A second appendix offers new suggestions for technical development related to orchestral timpani parts.
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INTRODUCTION

1.1 Thesis

The impetus for this dissertation comes from a desire to document ideas generated during many years studying, practicing and performing symphonic timpani repertoire as well as playing etudes and exercises found in many instructional texts. An examination of the content of these texts has resulted in a personal need to challenge the efficacy of the way in which timpani technique is explained and presented through instruction books. To reiterate this point, it is the transfer of technical information from the timpanist to the text that is questioned, not necessarily the validity of ideas. Identifying lacunae has allowed suggestions for new directions in timpani instruction. The result is the suggestion of new practice methods, including original exercises, with a very specific focus on symphonic repertoire.

1.2. Chapter Synopsis

This dissertation begins with a history of the non-western origins of timpani and how the instrument came to be used in the western classical musical world. Chapter One is an account of timpani technique with reference to documentation of timpani instruction, mostly in the form of treatises. These describe techniques that originated in the disciplines of court timpanists and military drummers. Johann Ernst Altenburg is an important author as his Trumpeters’ and Kettledrummers’ Art, from 1795, is the first known published account of timpani pedagogy. From this starting point, the origin of
documented timpani instruction is traced including articles focusing on timpani technique and history. It is evident in this chapter that timpani technique has, since its origins, been largely an oral tradition and remains so to this day. Historical accounts show that timpani technique was a highly secretive art form dating back to the renaissance. In the baroque period the use of timpani as an orchestral instrument flourished moving away from its former role signaling soldiers on the battlefield or as a fixture of aristocratic court music.

Chapter Two is an exhaustive survey of timpani methods and manuals\textsuperscript{1} mainly from the twentieth and twenty-first centuries that are widely used today by students and teachers.\textsuperscript{2} Overviews of the most relevant content from a large number of sources is compared and critiqued. Lacunae are identified that allow new directions for pedagogy, directly related to orchestral timpani parts.

Chapter Three is a study of basic timpani technique within the instruction books observed in Chapter Two. The surveyed literature is discussed in relation to information gathered from interviews with various timpanists from major orchestras in Canada, the United States and Germany. Included are thoughts by the interviewees about the validity of widely used timpani instruction books.

Chapter Four summarizes findings and draws conclusions based on the information presented in Chapters Two and Three. The content of the sources cited throughout is

\textsuperscript{1} From this point onward, to avoid excessive repetition, there will be an intermingling of terminology to refer to sources. The following will be used to denote similar texts: Method; Manual; Instructional Text; Instruction Book; Method Book.

\textsuperscript{2} Texts that predate the twentieth century will also be observed but to a smaller extent.
reviewed and challenged. The validity of instruction books is discussed in relation to opinions expressed by the professional timpanists that were interviewed for this study.

Appendix A is a brief look at important instructional texts from the violin and trumpet catalogue. Specific information on technique from these books is compared to similar material found in the timpani texts cited in this study. Possibilities are considered in the application of violin and trumpet method to timpani instruction.

The exercises in Appendix B are technical and do not get into specifics of sound. The reason for this is that I do not believe that concepts of sound can be properly described in prose despite many authors’ attempts to do so. Instead, I feel that this is better achieved through a combination of listening to recordings, playing for experienced timpanists, and personal experimentation. Because sound, and its variations through different stroke types, is so personal, I do not presume to address this issue in writing. Appendix B is a documentation of personal practices that have helped me achieve results in preparing orchestral timpani parts.

The main objective of this dissertation is to determine what texts are successful in providing timpanists with the tools to prepare timpani parts from the symphonic repertoire. The development of timpani technique is in large part due to the challenges presented by orchestral composers through the ages. It can therefore be assumed that the publication of timpani instruction books is done with orchestral playing in mind. To clarify, it is rare that timpanists choose careers as solo performers in the same way other
instrumentalists might do so, though there are exceptions. Based on the inclusion of orchestral timpani parts, and references to them, in many instruction books, I conclude that a technical foundation for the preparation of symphonic music is the primary goal of these texts whether or not it is always clearly stated by the authors. Therefore, in an appendix, I suggest an approach to practicing and include original exercises that are directly related to specific timpani excerpts based on what I have concluded is missing from the current literature.

1.3 Methodology

The research for this dissertation began with an exhaustive survey of timpani methods and manuals. Having gathered information from as many sources as possible, it became clear that there was no evidence of exercises that directly corresponded to the technique associated with orchestral timpani parts. There are a multitude of etudes based loosely on orchestral repertoire but the original source was often difficult to identify. It also became clear that a lot of the information presented in these texts was not well organized. Furthermore, the difficulty in describing certain concepts in a text, particularly with regard to how sound is achieved through technique, became apparent. Therefore, it was necessary to interview prominent timpanists to support my findings in the literature survey. The process for finding willing participants proved to be a challenge. My goal was to interview a cross-section of players and styles.\(^3\) Ian Bernard was the first interview. His lineage follows the pioneering style of the American timpanist Saul Goodman and Canadian timpanist Louis Charbonneau. Timpanists Tom Greenleaves and

\(^3\) Benjamin Harms was consulted only to address ancient treatises and technique.
Benedickt Leithner studied with Rainer Seegers of the Berlin Philharmonic. Both Greenleaves and Leithner had teachers prior to this: Greenleaves from an English school of playing and Leithner from a German one. Brian Jones was the final interviewee and is from an American school of playing. As these interviews were supplemental to the research, I felt this was an adequate variety of opinions from various timpani styles. In retrospect, I feel that the subjects chosen reflect an adequate representation of differences in style and method.

Through these interviews, it became clear that three (Ian Bernard, Brian Jones and Tom Greenleaves) out of the four timpanists interviewed did not strongly advocate the use of instruction books. Benedickt Leithner, on the other hand, was in favour of two books in particular. The fact that three out of four timpanists did not show much enthusiasm for the use of instruction books lead me to reflect on my own use of them, resulting in a critical analysis of their content.

### 1.4. The Need for this Research

In analyzing the texts chosen for this study in a critical way, it became clear that I wanted to provide an example of exercises to convey what has worked for me in preparing orchestral excerpts. I was not able to find exercises of this type in any of the literature that I studied. Rather than a method book covering all aspects of timpani technique it is a suggested way of practicing. My contribution does not include music theory as do some of the complete methods. It does not describe stroke types or sound concepts. It does not provide either extended original etudes or those that are based on orchestral excerpts. My
exercises are the result of the difficulties I have faced preparing orchestral excerpts and the techniques that I used to overcome these challenges. This has been the most successful way for me to develop the technique needed to perform certain orchestral timpani parts. By providing original exercises in this dissertation, a proposed contribution is made to further study of the symphonic timpani repertoire.
The history of timpani is long and complicated. The origin of technique and its
development up to the twentieth century is the focus of this chapter. The prehistory of
the instrument in the non-western world will be kept brief.

Of Saracenic\textsuperscript{4} origin, timpani developed from ancient drums called \textit{Naqquara}. From the
fourteenth to the seventeenth century, the French, Italians and British all employed
similar instruments with variations of the Arabic name respectively, \textit{Nacaires} (Fr.),
\textit{Naccheroni} (It.) and \textit{Nakers} (En.). However, there is evidence of the existence of similar
instruments earlier than this described in \textit{Percussion Instruments and Their History} by
James Blades:

In a description of the crusade of Louis IX, which took place between 1248 and 1254,
Jean Sire de Joinville writes of tabours called Nacaires. (1970:223)

It is difficult to say with any great certainty when Nakers and Timpani (Kettledrums)
became distinct instruments. Most likely, they existed simultaneously, for a time, as did
instruments in the string family such as gamba and cello.\textsuperscript{5} Eventually, timpani became

\textsuperscript{4} There are varying theories as to the origin of these instruments with Arabic being the
most common. For an opposing account see Kirby Percival \textit{The Kettle-Drums}, and his
argument for Oriental origin.

\textsuperscript{5} Contrary to many of the historical documents cited here, John Michael Cooper disputes
the direct relationship of Nakers to Timpani other than the fact that they are both drums
with a similar shape. (1988:6) Historical documentation of the relationship between
the favored instrument as manufacturing advancements took place and the demand for a different sound emerged. This was the result of a growing need for a better sound in ensembles and orchestras. Evidence of manufacturing advancements can be found in Blades:

From the start of the sixteenth century a major development is apparent – screw tensioning. Hans Burgkmair (The Skill of Music, c. 1550) illustrates a kettle-drum equipped with this method of controlling pressure on the vellum. Here the instrument, a sizable one, is associated with an orchestral ensemble. (1970:230)

There are varying opinions as to when these drums were introduced to Europe. Percival Kirby (1930) believes that the Moors introduced nakers to Spain but James Blades and Edmund A. Bowles (2002) believe that the instruments made their way into Europe during the Crusades, through Hungary, with the Turks. According to Bowles, nakers are frequently mentioned in the literature of the time.

Bowles cites a multitude of historical documents describing the use of kettledrums as early as the Third Crusade from 1190 – 1191. Blades, Bowles and Kirby all agree that, in this period of history, timpani were not used strictly for entertainment. They were also used for martial music, ceremonies and other non-musical occasions.

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nakers and timpani can be found in Pierre Trichet’s Traite des Instruments de Musique from 1630.

6 An extensive account of manufacturing developments can be found in Nancy Benvenga’s Timpani and the Timpanist’s Art.
One non-musical use of timpani-like drums was for hunting. According to Johann Ernst Altenburg (1795), drums were used to “beat loudly on to make the eagles fly so that they [hunters] can shoot them” (1795:121). Early timpani must also have been used for praise and religious ceremonies based on a large number of paintings that portray angels playing on timpani-like drums. Many examples are reproduced in Bowles. One (2009:158) shows the sculpture of an angel timpanist from St. Thomas Church in Prague ca. 1700.

Altenburg describes various settings in which timpani were used:

(1) on feast days, (2) after the victory, as Jeptha’s daughter used it [kettle drum] as she went towards her father, (3) on all kinds of convocations and at banquets, (4) at dances, where they were played antiphonally, [the dancers standing] in rows, (5) for the praise of God. (1795:121)

Over time, nakers appeared more frequently in musical circles. Aristocratic courts in German-speaking areas almost always employed a nakerer. In England, according to Bowles, Henry VIII instructed Sir Thomas Seymour to find and hire those who own, manufacture and play the *Taborynes* (kettledrums) (2002:361).

During the fifteenth and sixteenth centuries, timpanists were mainly employed as court musicians. As early as the sixteenth century⁸ mounted kettledrummers were employed by the cavalry to provide not only drill and battle cues but also inspiration and encouragement through music. Titcomb provides a description:

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⁷ The original German text was translated to English by Edward Tarr in 1974 – Nashville TN

⁸ Tabourot indicates records from Scandinavia of earlier employed court timpanists dating back to the Oldenburg dynasty beginning in 1448 (1997:36)
The charge for the kettledrums is nothing but a very great noise produced by animated rolls which go from the right kettledrum to the left and from the left to the right with some detached strokes; as this noise constitutes exactly the underlying bass for the trumpets, it suffices that the kettledrummer have a good ear to fulfill this aim. (1952:434)

The status of the timpanist, employed as court musician, up to and during the baroque period was very high. According to Altenburg the financial benefits of a kettledrummer are as follows:

(1) that he receives double pay, rides his own horse in some services, and for this reason in particular receives the extra money ration; (2) that at the ransom of prisoners more is paid for a kettledrummer than for a common soldier; (3) that he is free from all personal taxes; (4) that a kettledrummer’s estate is inherited either by his nearest relatives or by his colleagues, or else it devolves to the local treasury. (1795:127)

The years between the sixteenth and nineteenth centuries were a golden age for kettledrummers. They enjoyed the highest social and financial status of any musician. What is more, the instruments themselves were prized possessions almost considered more valuable than a player’s life reflected in this quote provided by timpanist and historian, Benjamin Harms (1988): “The timpanist must be a man of courage who would rather die on the field of combat than let his instrument be captured” (Alain Manesson Mallet, Les Travaux de Mars ou l’Art de la guerre, Paris, 1691 quoted in Harms, 1988:29).
High social and financial ranking together with the timpanist’s art form - considered of great importance - drove these musicians to form an exclusive and highly secretive guild to preserve their craft. The information concealed within the guild was only divulged to a select few apprentices over the years of its existence creating a mystique surrounding early timpani technique that exists to this day. During these times technique was learned by rote, imparted from master to apprentice, and mostly performed by memory. Because of the secrecy of its practitioners very little documentation of timpani technique exists prior to the late eighteenth century.

Fortunately, there are historical accounts that allude to what kettledrummers may have been using as a technical foundation to a largely improvisatory style of playing. The bulk of information is found in the treatises of Altenburg and Jean-Georges Kastner (1845). Musical manuscripts of André and Jacques Philidor give insight into drum beatings used in baroque times. The former was librarian to Louis XIV at the Royal Library in Versailles. Titcomb offers the opinion that the manuscripts left by the Philidor brothers are the most accurate extant examples of early timpani technique. Manuscripts can be found in their publications from 1705. According to Blades, there is an earlier document by a French historian named Blaze describing a solo march played by the Philidors in 1665. (1970:241) Other evidence within the collection of the Philidor brothers includes solo timpani pieces by Claude Bablon who was the Timbalier des Plaisirs (court timpanist) to Louis XIV.

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9 Other treatises are discussed in Chapter Three
10 It is Benjamin Harms’ contention that these would have been composed earlier, sometime in the 1680s.
The secret techniques withheld from those outside the guild have been termed
Schlagmanieren – a German word that translates roughly as manners of hitting.\(^{11}\) Apart
from accounts of timpani technique in general instrument treatises by Johann Phillip Eisel
(1738), Daniel Speer (1687), and Sebastian Virdung (1511)\(^{12}\) the earliest, and most
detailed account of ancient timpani beatings is found in Altenburg’s treatise.\(^{13}\) Altenburg
refers to Schlagmanieren as “manifold beatings and artful strokes” (1795:124). He goes
on to say the following:

> A skillfull kettledrummer can hold his listeners’ attention for quite some time. He
is able to replace by diverse kinds of beatings whatever these instruments lack
with respect to the number of tones [that can be produced thereon.
Kettledrummers usually perform their stroking – now loud, now soft, now slow,
now fast with artful figures, turns and movements of their bodies. (1795:124)

From this description, we can conclude that the secretive techniques or, Schlagmanieren,
were a means of embellishing basic timpani beatings, or compositions, by adding
ornamental strokes and choreographic body movements. Harms belief is that cross-
stickings and double cross-stickings would have made up much of the extraneous bodily
movements employed by timpanists using Schlagmanieren. Although not clearly defined

\(^{11}\) In Edward Tarr’s translation of Altenburg’s text, he says the following regarding
Schlagmanieren: These terms cannot all be adequately translated into English since we
are dealing with an old, specifically German way of playing for which there is no modern
English equivalent, either in the manner of playing or in the resultant terminology.
(1974:124)

\(^{12}\) A more thorough account of these and other general musical treatises can be found in
John Michael Cooper’s Performance Practices and Literature of the Timpani in German
Concerted Music of the Late Renaissance and the Baroque: Historical and Musical
Perspectives.

\(^{13}\) Some of Altenburg’s examples are transcribed from an anonymous article from 1768
as such in Altenburg’s manual, in looking at similar terms in the section dedicated to
trumpet technique there are clearer definitions. These are: Setzmanieren (compositional
ornaments) and Spielmanieren (performance ornaments).

The terms Einfache Zungen (single-tonguing) and Doppel Zungen (double-tonguing), to
describe trumpet technique, are applied by Altenburg to kettledrum technique. Under his
heading, The Kinds of Beatings14 [for kettledrum] the trumpet terms above translate as
Single Strokings and Double Strokings. Zungen or, Tonguing, translates to English as
Stroking. Altenburg also uses terminology that is unique to the timpani such as: Tragende
(dragging) Strokings; Gerissene (single, double and rapid); Kreuzschlage (single and
double cross-stroking); Wirbel (roll) and Roulement (short roll). (1795:124/125).

Titcomb comments on the relationship of timpani technique to trumpet technique:

Early developments in technique come from drummer matching trumpet
articulations. So great, furthermore, was the rapport between trumpets and
kettledrums that the main drum patterns became known as tonguing strokes or
Zungenschläge15, and the kettledrummer was said to pound out single tonguing,
double tonguing, legato tonguing and so forth. (1952:440).

Altenburg’s section on trumpet technique is extensive compared to the timpani portion.
Prior to this manual, timpani technique was committed to memory by the kettledrummer
and, when needed, would be used in conjunction with trumpets in an improvisatory

14 As per Tarr’s translation.
15 This is a redundancy as Zungen, when referring to kettledrums, and Schlag have the
same meaning of beating or stroke.
manner. Combining and ornamenting patterns from a large repertoire was required of the kettledrummer, ad libitum, to support the trumpets on the battlefield as described by Titcomb quoting Arbeau’s *Orchesographie* from 1589:

The kettledrummer was required to know the trumpet signals and marches by heart and to possess a keen and acute ear, whereby he could make the best of the complete freedom given to his fantasy in executing his accompaniments. (Arbeau in Titcomb, 1952:417)

Considering the secretive aspect of the trumpet and kettledrum guilds, some speculations come to mind. As all performances would have occurred in public forums (on feast days; in battle; for religious ceremonies and other celebrations) it is difficult to imagine how much secrecy could have been sustained. In all of these instances, the technical displays by the kettledrummer would have been revealed to spectators. Tabourot makes an interesting observation to this end:

This is not to say the imperial musicians’ guilds did not attempt to make it [technique] esoteric. But a commonsense look at the success of things like Prohibition, book-banning and the like will show how ineffectual this probably was. (1997:37)

Regarding technique, Harms provides stylistic examples of timpani beatings such as:

(1) Flourishes before a note; (2) rolls involving one or both drums in various configurations; (3) improvised embellishments to simple rhythmic patterns; and (4) an obligatory improvisation on the next-to-last measure of a piece; concluding with (5) an extensive flourish into the final note. (2008:32)
Further examples of timpani ornamentation can be found in Speer, translated by Howey: “He [kettledrummer] must always perform a good, long roll before the final cadence. Afterwards, he must hit the C kettledrum on the last and strongest beat just as the trumpets stop” (1971:170).

In my experience this practice is often currently applied in performances of baroque music. One example is Handel’s *Messiah* in which the timpanist embellishes the final cadence at the end of choruses where there is a part written. I have often been asked to add an improvisatory flourish concluding with a long roll.

Jean-George Kastner’s, *Méthode Complète et Raisonnée de Timbales* from 1845, shows examples of beatings similar to Altenburg with less emphasis on the relationship to trumpets. Although he confirms that, at the time of his publication the timpanist is a member of the orchestra, he also supports studying ancient technique. Kastner’s technical examples illustrate a series of beatings that directly correspond to Altenburg. Some, in fact, are taken directly from Altenburg’s musical examples. However, Kastner expands on these examples providing the basic rhythmic figure from which embellishments may be employed.
Kastner lists a series of new terms for various techniques under the heading *Art de Blouser*. The new terms found in Kastner’s method are discussed in detail in Chapter Three.

Blades, Bowles and Jeremny Montagu (2002) challenge the belief that the introduction of timpani to the orchestra is credited to Jean-Baptiste Lully in his opera *Thésée* from 1675. (1970:236) While it is certainly the first work affording a separate part in a composer’s score, there is evidence of timpani parts dating from much earlier. Jeremy Montagu comments on this:

> It is certainly dangerous to say that any one composer was the first to do anything, for one can never know what may be hidden until another researcher reveals its presence. However, from what music we have, it seems as though Lully was the leader in the introduction of the timpani as regular members of the orchestra, though even in his case it is still difficult to be certain just when and to what extent he used them. (2002:74)

Bowles believes that timpani most likely were used as early as 1607 in Monteverdi’s *Orfeo* despite the fact that there is no scored timpani part. Titcomb supposes that, although not included in the score, the bass part was often the only music the timpanist would have to work from. (1952:436) This conclusion is based on findings in historical documents. For example, Blades provides a transcription of the stage directions from Ben Johnson’s *The Golden Age Restored* that reads as follows: “The Evils enter for the antimasque and dance to two drums” (1970:236). Other evidence includes fragments of

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16 Defined in *Centre National de Ressources Textuelles et Lexicales*, the term Blouser simply means *Play*. Therefore, *Art de Blouser* translates to *Art of Playing*. 

16
written timpani parts as in Nicolas Hasse’s *Auffzug 2 Clarinde und Heerpauken* from 1656. James Blades suggests *Psyche ed Amore* (1565) by Monteverdi as one of the earliest uses of timpani in the orchestra. He claims that two drums are prescribed in the intermedia\(^{17}\) that may have been kettledrums (1970:236). In the case of Hasse, Titcomb offers the following that suggests timpanists were improvising their parts: “All that remains are the two clarin parts – no timpani part giving rise to the assumption that 1) either the part is lost or 2) that it was left up to the drummer to improvise” (1952:446). \(^{18}\)

It was after Lully’s formal scoring of timpani as an integrated part of the orchestra that the trend began. Other baroque composers such as Bieber, Schmelzer, Bach and Handel subsequently included timpani as a commonly scored instrument. As a result, it took on a more formalized position in indoor orchestral settings, as opposed to its previous place in outdoor court concerts\(^{19}\), and has remained there ever since.

In western classical music, from the seventeenth to the nineteenth century, there has been a very close relationship between the timpani and the trumpets. The pairing of these instruments in the orchestra is carried over from times when they were both employed for military purposes. In martial situations, this combination of instruments was commonplace most likely beginning in the late 1400s. Reference to this appears in

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\(^{17}\) This appears to be an Americanization of *Intermède* and *Intermedio* that is, according to *The New Grove Dictionary of Music & Musicians, Volume 9*, “Music and dance inserted between the acts of a larger production at the Opera and sometimes at the Comedy to amuse and relax the minds of the spectators”.

\(^{18}\) Further discussion of implied timpani parts can be found in Tabourot’s *Royall Drummer & Martiall Musick*, pages 77-84.

\(^{19}\) See Altenburg’s *Former Use* [for kettledrums].
accounts of King Ladislav V of Hungary and his journey from Prague to Paris in 1457. (Bowles 2002:16) Up to the late classical period timpani and trumpets complemented each other in orchestral scores. As already discussed, the technical terms for kettledrum beatings in Altenburg’s manual are derived from trumpet terminology. With the intention of matching articulations of the trumpets, comes the formation of a bona fide technique for timpani.

With regard to instructional sources, there are large periods of history\textsuperscript{20} in which there seems to be nothing furthering the literature begun by Altenburg. This is most likely due to guild members’ attempts to maintain secrecy.\textsuperscript{21} A similar period of time is evident from the mid nineteenth to the mid twentieth century, the latter representing a time when the publication of timpani instruction books blossomed worldwide. Therefore, we must assume that working timpanists were either using the older method books or relying simply on self-discovery and private instruction. Because of this, any trace of technical advancement must be gleaned through a study of the timpani writing by composers and the technical demands they placed upon the player. An examination of technique based solely on composition would help to fill the historical periods whereby there is a lack of attention to methodology within an instruction book.

If we consider that Altenburg published his treatise in 1795 and relate the information to current orchestral repertoire, two possible conclusions come to mind.

\textsuperscript{20} This is evident in the lack of publications between Altenburg, 1795, Boracchi and Kastner, 1842/1845, Pfundt, 1849 and twentieth century publications.

\textsuperscript{21} According to Harms, the guilds began to dissolve during the reign of Napoleon.
1) Although a speculative suggestion, timpanists at the time of Altenburgs’ publication were employing techniques presented by him.

2) Altenburg is discussing an ancient style, exclusively, that provides no account of its use by timpanists of the day. Therefore, it is an historical document rather than a useful tool for instruction.\(^{22}\)

Regarding the first point, John Michael Cooper suggests that timpanists of the 18\(^{\text{th}}\) century were most likely using the techniques found in Altenburg’s treatise. This claim is supported by the observation that the music of this period was still written for purposes such as military or courtly functions and also for other festive occasions.\(^{23}\) (1999:261) Cooper’s claim might also be applied to the music, and timpani practices, of the 19\(^{\text{th}}\) century. Evidence of this can be found in Ernst Pfundts’ section on Schlagmanieren in his treatise, Die Pauken from 1849. Furthermore, the fact that Kastner includes similar beatings to those found in Altenburg, it could be assumed that some timpanists were using these techniques in this time period.

The treatises of Altenburg, Kastner and Pfundt are the most important of the literature spanning the years 1795 and 1849. Although Altenburg’s document is brief, it is the first of its kind and, for this reason, is important from an historical standpoint. The fact that some of this information is reiterated in Kastner sixty years later is a testament to its

\(^{22}\) Cooper suggests its sole purpose is the preservation of the timpanists (and trumpeters’) art as acquired and practiced in the exclusive guilds.

\(^{23}\) Benvenga authored an interesting article entitled Mozartean Drumming with relevant material on this subject.
importance for research proving that Altenburg’s technical examples were still relevant. Kastner’s method is extremely thorough in comparison. It is the first attempt at providing a complete course in timpani instruction. In this respect it is a model for the instruction books of the twentieth century. Curiously, there is no material that focuses on orchestral repertoire despite the fact that composers of the day were writing timpani parts of a more complex nature. Berlioz, for one, was utilizing timpani in a unique way at approximately the same time period of Kastner’s publication. Pfundt’s treatise differs from the others as *Die Pauken* discusses specific ideas applied to orchestral timpani parts. This is most definitely due to the fact that Pfundt was himself a timpanist chosen by Felix Mendelssohn to hold the position in the Leipzig Gewandhaus Orchestra. After Pfundt’s treatise, there is no evidence of any substantial volume of timpani instruction until 1943 with the advent of twentieth century publications started by Friederich Sietz.
CHAPTER TWO – LITERATURE SURVEY

This chapter surveys commonly used timpani methods and manuals in a critical fashion to identify lacunae and inconsistencies. It is clear after studying the following texts, and also having conducted interviews with timpanists, that there are those who believe that a well-rounded foundation in technique is attained through private instruction or through oral tradition. Nevertheless, it will also be apparent that certain authors have made an attempt to offer a complete course in timpani technique within one text. The output of timpani instruction books has been very prolific since the mid twentieth century. Kastner’s text from 1845 is included in this survey as his is the first attempt at offering a complete method and the format is similar to some published in the twentieth century.

The first timpani method in the twentieth century is Friederich Sietz’s Modern School of Timpani Playing published in 1943. Prior to this, extant sources include ancient texts such as Johann Altenburg (1795), Carlos Antonio Boracchi (1842), Jean-Georges Kastner (1845), Ernst Pfundt (1849) and Georg Fechner (1862). These include brief technical instruction, save for Kastner and Pfundt, who’s publications are more thorough.

The capabilities and mechanical advancements of timpani have a later development compared to other orchestral instruments such as those of the string family and this probably accounts for a smaller volume of instructional literature. To illustrate, the range of possibilities on a violin, melodically and harmonically, outweigh those of even modern timpani. Advanced technical capability of modern timpani is a relatively recent
development that began in the late nineteenth century with the introduction of pedal
timpani. It was not until the early twentieth century that composers utilized their full
capabilities whereas violin development was more or less complete by the early baroque.
This is not to say that there were no advancements in violin technique beyond this time;
however, basic violin technique was reached much earlier than the timpani. Mechanical
development, such as the addition of pedal timpani is one issue that accounts for the
authoring of timpani instruction texts that proliferated in the twentieth century. This
groundbreaking advancement allowed composers to create timpani parts that presented
the performer with a completely new set of musical and technical challenges. Therefore,
a need became apparent to address these issues in a more current instruction book.
Furthermore, the proliferation of conservatory, university and college percussion
departments must certainly have increased the need for new pedagogical material.

It is important to make a distinction between two terms. *Method* and *Manual* are often are
used to describe texts with similar intent. The Merriam-Webster Dictionary online
defines them as follows:

Method (1): A systematic procedure, technique, or mode of inquiry employed by or
proper to a particular discipline or art (2): a systematic plan followed in presenting
material for instruction.

Manual (1): A book that is conveniently handled; especially: Handbook (an instruction
manual).
For this study, texts that fall under both definitions will be considered. For example Saul Goodman’s *Modern Method for Tympani* can be discussed as a method book as it is laid out in a manner designed to systematically instruct timpani students on a course from fundamental to advanced techniques. In contrast, although not titled as a manual per se, is Alan Abel’s *20th Century Orchestra Studies* [for timpani]. Rather than offer a course in basic technique as Goodman does, Abel provides examples of orchestral repertoire with suggestions for interpretation and performance designed for the timpanist who has already developed a sufficient technical basis required to perform orchestral timpani parts. Similar to Abel’s text is Jacques Rémy’s *Ludwig van Beethoven Symphonies*. Rémy’s text simply provides Beethoven timpani parts with added phrase and articulation markings by the author. These two texts can therefore be considered manuals.

I have categorized twenty-seven texts discussed in this study. Category One includes texts that attempt to provide a thorough knowledge of all aspects of timpani instruction including basic theory and ear training. Most common in this category are the North American texts that present a progressive course of study.²⁴

**Texts included in Category One**


²⁴Ironically, it is Kastner’s European text that is formatted in this way for the first time.


6. Kastner, Jean-Georges (1845) – *Méthode Complète et Raisonée de Timbales*


Category Two includes texts that provide a series of technical exercises, not necessarily organized in a progressive fashion (although some are), accompanied by extensive written commentary.

**Texts included in Category Two**


6. Eckhardt Keune (1977) *Pauken*

Category Three includes texts with a large volume of exercises and etudes. In most cases, authors provide brief explanations explaining their pieces. However, in other cases, there is no qualification.

**Texts included in Category Three**


Category Four texts focus entirely on orchestral repertoire offering musical, technical and interpretive suggestions on how to study and perform orchestral timpani parts.

**Texts included in Category Four**

3. Randy Max (2010) – *Orchestral Excerpts for Timpani*


The four categories are somewhat fluid and there will be occasional intermingling. There are two texts that focus on a very specific area of technique and are therefore not included in the four categories outlined above. These include *Pedal Technique for Timpani* (1988) by Stanley Leonard and *Der Paukenwirbel/The Timpani Roll* (nd) by Arend Weitzel.

Another format includes sources that are presented as research documents such as *Timpani Tone and the Interpretation of Baroque and Classical Music* by Steven L. Schweizer; and *Timpani and the Timpanist’s Art* by Nancy Benvenga. Although these will be referred to within this dissertation, they will not be strictly considered in the same categories as the other sources as they are research oriented. Nevertheless, they contain relevant information with pedagogical merit.

Finally, I must also acknowledge *Die Pauke* by Herbert Tobischeck. This extensive work is a commentary on timpani mechanics and technique related to symphonic repertoire. Due to the difficulty in translating the dense German text, it will only be referenced and not discussed in detail.
1.1 Category One Texts

The most complete - though not necessarily organized - instructional texts are found in texts from the North American literature.\(^{25}\)

Category One texts attempt to provide the broadest possible scope of issues on timpani technique and often include sections on basic music theory. These texts attempt to outline a complete course in timpani instruction beginning with very basic technique and progressing to involved technical issues and concepts.

If nothing else, they are the most thorough from beginning to end. However, there are many discrepancies in their organization. *The Gardner Modern Method* by Carlton Edward Gardner, *Modern Method for Tympani* by Saul Goodman; *Paukenschule* by Heinrich Knauer; *Ludwig Timpani Instructor* by William F. Ludwig and *Modern School of Timpani Playing* by Friederich Sietz attempt to provide a comprehensive course but they have a general lack of organization. This obscures any concrete focus within these texts. In contrast to the above texts are several others in this category that are better organized such as: *Exercises, Etudes and Solos for the Timpani* by Raynor Carroll; *Percussion Manual* by Michael F. Combs; *Timpani Method: A Complete Method for Timpani* by Alfred Friese and Alexander Lepak\(^{26}\); *Fundamental Method for Timpani* by Mitchell Peters and *Primary Handbook for Timpani* by Garwood Whaley. All of these authors provide a well-organized presentation of information. The content is succinct,

\(^{25}\) This is not entirely exclusive as some European authors present similar formats.

\(^{26}\) From here on this will be referred to as Friese only
yet thorough. For example: Carroll and Friese discuss specific issues completely before moving on to another subject. When offering instruction on how to practice a timpani roll, they cover many relevant facets of this technique. Combs, although similarly consistent is considerably brief in his attention to this and other technical matters.

Garwood Whaley’s *Primary Handbook for Timpani*, similar to Carroll’s text, is successful in presenting a concise and logically structured course for fundamental timpani technique. He achieves this by offering brief, yet informative, descriptions of basic technique and providing studies for each technical issue. The second part of the text is a series of solo studies. What sets Whaley apart from other authors is that each solo is accompanied by a specific description outlining its purpose. Whaley’s focused approach as well as Carroll’s, Peters and Combs results in a more concentrated course.

In contrast, Saul Goodman in *Modern Method for Tympani* presents information in a format that is disjointed. For example, in the section on the timpani roll, he begins by discussing differing types in detail. Following this he begins a completely different section on muffling, after which he returns to his discussion of the roll. Goodman does not make any connection between these two subjects. Peters’ text, although presented somewhat more coherently than Goodman’s, shows similar inconsistencies, as does Sietz.

The German text, *Paukenschule* by Heinrich Knaur (1955) attempts to provide a course in timpani with many similar elements found in the texts already discussed. It is, however, much less detailed than those by the North Americans. Similar topics to the
aforementioned North American authors such as roll concepts are covered but these subjects are treated superficially when contrasted with information in Whaley’s text. For example, Whaley’s section on the roll is much more involved than Knaur’s. Knauer provides brief descriptions for topics such as roll warm up, roll notation, crescendo roll and rolling on two drums simultaneously. Whaley’s written content is similar but much more elaborate in the exercises that follow. There are fourteen roll studies in Whaley compared to two in Knaur. This is not to say that either author is correct or incorrect. What one may believe to be a sufficient amount of technical practice may be completely at odds with another. What is questionable is the organization of content.

This lack of fluidity makes it difficult to determine the progression or course. This may seem like a minor detail, but its importance becomes obvious when looking at texts that present material in a more coherent fashion such as Carroll’s.

When discussing the two most basic stroke types in timpani technique, Carroll presents these topics in a logical order. For example, discussion of legato precedes the discussion of staccato. This is not the case with Peters as he presents a myriad of other subjects between the two. Some clarification as to why it is presented in this way would be beneficial and possibly less confusing for the timpanist using this text.
1.2 Category Two Texts

Several texts fall into this category from both the North American and European catalogues. These include: *Portraits for Timpani* and *The Orchestral Timpanist* by Anthony Cirone, *Studies for Timpani* by Siegfried Fink, *Technique for the Virtuoso Tympanist* by Fred D. Hinger, *Etuden fur Timpani* by Richard Hochrainer, *Pauken* by Eckehardt Keune, and *Symphonic Studies for Timpani* by Nick Woud.

Category Two texts generally target specific musical and technical issues rather than presenting a complete overview of technique - frequently evident in Category One texts. It can be assumed that these are directed at those who possess a requisite level of timpani technique and a general musical knowledge.

There are subtle differences in subject matter but the format is often quite similar. That is, a specific section of written content about timpani technique, and/or general ideas about timpani, followed by an extensive volume of etudes allegedly addressing these issues.

European texts generally lack an organized presentation of explanatory content with the exception of Nick Woud, where his intention is obvious as discussed below. There is often no obvious order to how the etudes are laid out. For example, Hochrainer’s first two books, of three, comprise a large volume of etudes with no written component. The only evidence of a logical progression, in the absence of any formal explanation by the author,
can be found in their increasing complexity. Curiously, it is not until book three that Hochrainer includes written information, simply titled: Ideas About Playing the Timpani. Hochrainer’s information is relevant and valuable but it lacks organization, containing random material. Consider the following statement: “It should sound like ‘timp’” (1983:1).

It is difficult to understand how a comment such as this could possibly benefit anyone. Apart from examples such as this, there are many interesting observations. One is Hochrainer’s discussion of pitch and sound:

Experienced timpanists will confirm that every note on the drum has a quite specific character. B, for example, is not just C lowered by a semitone; it is another world entirely, austere, mournful. C sounds godlike, majestic, D is cheerful and serene. (1983:3)

Most likely, Hochrainer is describing how timpani notes are heard within the context of an orchestra although he does not make this clear. However, comments such as this give rise to a subject that is not common in timpani manuals and method, that is, the concept of sound. Mitchell Peters, as discussed in Category One texts, is the only other author that attempts to convey this notion.27 Peters suggests that a concept of sound involves training the hands to respond to a tone quality that is first conceived in the mind: “Try to have a mental concept of how you want something to sound before you play. Then use your hands to achieve it” (1993:41).

27 Although not discussed as a method book, Schweizer includes extensive commentary on sound concepts in his sections on Psychological Openness to Music and Creating Emotion.
The etudes in Hochrainer’s first book are written for two, three and four drums. There is very little written about what specific problems and/or difficulties occur within each etude. Book two is similar comprising a collection of original etudes. As in Book One, any formal explanation of its content is absent. It is difficult to see how these etudes progress. There appears to be an increase in rhythmic difficulty from Book One to Book Three. However, there are many examples in Book Three that are as basic as exercises from book one. It could be argued that the material presented in all three books could be interchanged, as there is no apparent logic to the sequence of etudes. Nick Woud, on the other hand, organizes his studies so that the intent for each is obvious. Specifically, Woud quotes Richard Strauss’s *Burleske*, in his *Study No. 1*. This, in addition to the original material provided by Woud, clarifies the intention of the etude. Similarly, in *Study No. 3*, Tchaikovsky’s *Symphony No. 6* is directly quoted and altered through several permutations.

Eckehardt Keune’s *Pauken* is presented in one volume but is similar to other Category Two texts in its inclusion of a large number of etudes with little or no accompanying explanation. Keune includes a short history of timpani and a section on music theory. The written content dedicated to timpani technique is extremely brief after which Keune provides 155 etudes for two, three, four and five timpani. As in Hochrainer’s books, the only obvious characteristic is that they appear to increase in complexity. There are exceptions, however, where simpler etudes are placed among the difficult. There is no account of why the author has done so.
Siegfried Fink’s *Studies for Timpani* is presented in three volumes similar to Hochrainer’s texts. Fink provides a detailed set of etudes with a description of each study, or group of studies, and specifies reasons for why they were composed. Fink prefaces Book One with a description of the etudes and offers suggestions for practice. Often, Fink includes a description of the technical or musical issue for which the etude is intended. In this way his rationale for composing specific etudes is easier to determine than Hochrainer’s. However, the organization of Fink’s text is scattered and, in this way, it is reminiscent of Hochrainer’s third book. For example, etudes are presented to address issues related to timpani technique with no apparent cohesion. To illustrate: A series of etudes in book three is presented as follows: #2 – Single Stroke Roll; #3 – Changes of Time Signature; #4 – Changes of Pitch; #5 – Paradiddle Strokes (how they are not used in timpani playing); #6 – Lesser-known meters. These subjects could be grouped together in a more logical fashion. Such as: Changes of Time Signature and Lesser-known meters could be grouped into a separate category. As in Hochrainer, Fink’s commentary is often confusing: “Paradiddles are not used in timpani playing. But they are unavoidable in complicated passages involving a lot of kinetic activity and are even indispensable in certain stylistic articulations” (1988:8).

It would make sense for Fink to follow his discussion on kinetics with information on paradiddles since he makes a connection between the two. However, no further mention of this appears until much later in the book in his discussion of music for four timpani and the concept of “minimum kinetic activity” (1988:48). In general, all of the texts
discussed thus far are lacking in a systematic distribution of material. Anthony Cirone’s *The Orchestral Timpanist* is no exception.

Cirone’s text is most comparable to Fink’s *Studien fur Pauken*. Short studies are accompanied by written explanations - a format that mirrors Fink’s organizational approach. For example, after Cirone discusses technical issues such as the roll, muffling, sticking etc, and provides etudes for each, he changes direction including thoughts on the staccato stroke. Once again, a contextual problem in the organization is evident. Cirone never describes the basic or legato timpani stroke in conjunction with the staccato stroke. Instead, technical issues are presented in a disorderly way.

The first section of Cirone’s text utilizes pieces for two drums only, after which there is a selection of exercises written for three and four drums that is similar in layout to other Category Two texts. *The Orchestral Timpanist* concludes with six final studies incorporating issues discussed throughout the book.

*Portraits for Timpani*, also by Cirone, is a set of timpani etudes. A brief introduction by the author suggests reasons for the compositions that follow. “The 50 studies were composed with the particular problems of timpani playing in mind … such as rapid movement between the drums, muffling for clarity of phrasing, staccato and legato techniques and rolls” (1976:1).
Unlike Fink, Cirone never provides a description of where these instances lie. In looking at his etudes some of the problems Cirone describes are obvious but some are not.

Fred Hinger’s *Technique for the Virtuoso Tympanist* is similar to Hochrainer’s book three. Its introduction consists of various thoughts, ideas and techniques about timpani technique followed by several etudes. Comparisons to Fink and Cirone can be made as there are occasional explanations and instructions written for each exercise.

Hinger presents many original ideas. One of these is his attempt at distinguishing different stroke types with particular reference to stick height. He illustrates through a unique method of notation. By altering the size of stem written on the head of the printed note, different stick heights are indicated. For example: a long stem indicates a larger stroke and the opposite for smaller stemmed notes. Generally, the longer the note value, the larger the stem of the note and the higher the stroke. Hinger provides several exercises (not etudes) to familiarize the player with this concept. Other issues that Hinger covers are cross sticking, doubling and rolling that are common to many of the texts discussed thus far. The etudes that follow, for two, three and four timpani, are designed to incorporate all of the ideas from the exercises presented before. Once again disorganized and confusing material is evident. For example, quite out of context with the rest of the etudes, Hinger includes an “Exercise in [a] Circle of Keys” followed by one entitled “Study in all Keys and Time Signatures, ‘tune as you go’” (1975:52).

There is no explanation for why these etudes suddenly appear and they have almost no relationship to the written content in the introduction of the text.
1.3 Category Three Texts

It is difficult to say whether Category Three texts are intended to be complete courses of study, as there is very little written explanation given by the authors. However, their inclusion in this study is important based on their widespread use by teachers and students. This is the case particularly with the Délecluse etudes.

_Thirty Studies for Timpani_ by Jacques Délecluse, as the title suggests, is presented as a set of etudes for timpani. Similar to several other authors discussed previously these etudes progress from two, to three, to four drums and also increase in complexity. Délecluse provides a short explanation at the beginning of all three books describing how each exercise addresses a different musical problem. This is the extent of his written information and he never specifically identifies the musical problems he claims the etudes are based on. Similarly, in _Twenty Studies [for Timpani]_ by the same author, the only explanation is that the pieces are “more or less inspired by orchestral parts from the symphonic repertoire”. His third publication, _Fifty Daily Exercises for Timpani_ is nothing more than a series of drills for technical endurance not unlike a rudimental snare drum book.

Not as widely known, but deserving mention, are two texts: _Etudes for Timpani_ by Valentin Snegirev and _200 Exercises for Two Timpani_ by Gérard Berlioz. The former is a collection of etudes similar to the Délecluse etudes and comparable to many other texts in
its random organizational presentation. The Berlioz is simply a large collection of exercises similar to *Fifty Daily Studies* by Délecluse.

### 1.4 Category Four Texts

The texts in this category are few. Before discussing this further, I should note that many of the texts already discussed in previous categories include orchestral repertoire for study such as in Carroll, Friese, Gardner, Goodman, Ludwig and Sietz. Hinger published an entire set of orchestral studies apart from his general method book. However, other than Hinger, within all of these, there is virtually no description on how to study and practice the timpani parts. Carroll and Gardner provide a small amount of description supporting the content of their texts. Carroll, for example, concludes his discussion of roll technique with an example from the orchestral repertoire that utilizes the roll. He includes an excerpt corresponding to all of his examples of technique. Gardner also offers brief advice on practicing his exampled excerpts such as a sticking suggestion for *Danse Bacchanale* by Saint-Saens and a tuning suggestion for Wagner’s *Lohengrin*. Apart from a few other instances, there is no commentary. Hinger’s series, *The Timpani Player’s Orchestral Repertoire*, John Tafoya’s *The Working Timpanist’s Survival Guide* and Randy Max’s *Orchestral Excerpts for Timpani* are the most thorough of all categories in their treatment of symphonic repertoire.

Hinger’s series is a very comprehensive and detailed approach to orchestral timpani.
It comprises several volumes that include the works of Beethoven, Brahms, Tchaikovsky, Sibelius, Strauss and Stravinsky. Hinger gives specific musical and technical direction for preparing orchestral repertoire. Throughout the entire series there are instructions for issues such as blending with the orchestra, various shades of colour regarding sound, articulation and many other musical suggestions. For example, Hinger comments on sound production regarding *Ein Heldenleben* by Richard Strauss:

The basses and celli enter on this measure – a good cue. It will give an added dimension to the following B-flat timpani note if it is played in octaves, i.e., if the large timpani is able to tune down to a B-flat. If this is possible, I would advise just touching (play softly) the head to add color to the notated B-flat played on the 28” drum. (1985:36)

Sticking suggestions are also included. Similar examples occur throughout all of these texts showing insight into Hingers performance practices. These often include unorthodox techniques such as playing with two mallets on the same note and using snare drum-type multiple bounce rolls. Tafoya’s book is similarly presented with performance suggestions for each symphonic piece included. However, as Hinger discusses the entire work of a composer, Tafoya is more concerned with the study of popular audition excerpts. It is geared towards students preparing common excerpts that appear on timpani audition lists. Not only is there musical and technical advice but also Tafoya describes techniques that have evolved out of audition experience such as in Elgar’s *Enigma Variations, variation XIII*. “Although this excerpt specifies snare drum sticks, a specialty stick is normally used at auditions” (2004:66).
Tafoya’s text includes a CD-ROM with the complete timpani parts to complement all of the excerpts observed. Randy Max’s *Orchestral Excerpts for Timpani* is, in many ways, an extension of Tafoya’s text. Designed to prepare the timpanist for auditions, historical context is provided, various recordings are suggested, and play-along practice tracks are included on a CD. These texts are discussed further in Chapter Three.

1.5 Summary

There is a significant catalogue of instruction books available on timpani technique. In surveying many of these, two issues become apparent.

The first is the absence of exercises that directly correspond to orchestral excerpts. There are many etudes that authors claim to be inspired by orchestral timpani parts. However, in many cases, it is not clear what symphonic work has inspired the original composition. This is less the case in texts by Tafoya and Max where the intent is the treatment of the audition excerpt only. In Délecluse, Hochrainer and Fink, the direct orchestral sources are difficult to find within the etudes. In Woud it is slightly easier to locate the orchestral source but the reference is oblique and often masked within a larger solo work.

Secondly, in the so-called complete method books, the inclusion of symphonic repertoire is nothing more than a copy of the printed part. It is beneficial insofar as it gives the reader access to the timpani part from an orchestral score. Goodman, for example,
includes several timpani parts from the standard repertoire. There is no instruction offered for study or commentary made stating why they are important. Furthermore, there is no connection made between the excerpted material and the technical exercises preceding. To be sure, there are those who believe that this is a function of private instruction. However, clarification in the printed literature could more beneficial.

The organization of content is another area that needs attention especially when considering texts that claim to offer a complete course of study. Often the material is presented in a disjointed way. This is particularly evident in older methods such as Goodman and Ludwig. The content of a text should also support the claim of the title. For example, the title *The Orchestral Timpanist* by Cirone is quite misleading. Not only is there no inclusion of symphonic repertoire, no reference is made to orchestral timpani playing whatsoever. Consider the following statement in Cirone’s introduction:

> The etudes included in the three books were written with two objectives in mind: (1) to provide original solos for the various instruments which may be performed independently and (2) when played in conjunction, the three books provide pieces which can be used for ensemble performance, beginning with the most elementary of percussion set-ups. (1978:1)

It is difficult to make a connection between this statement of intent and the title of Cirone’s text. Authors such as Max, Tafoya and Weitzel succeed where Cirone does not. These texts include a much more focused study and do not stray from their proposed

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28 Standard for 1948, the year of his publication.
intention. Augmenting the formats of Max, Tafoya and Weitzel with excerpt specific exercises would further the literature.

This survey is the first step in revealing and defining the widely used instructional literature for timpani. I do not claim that the manuals discussed throughout are the only ones in existence and, for the purposes of this study, it was important to place a limit on how many sources were cited.\(^\text{29}\) This survey is merely a starting point in a continuing process to compile and examine timpani methods and manuals, to identify lacunae and to provide new suggestions for study.

\(^{29}\) Further comparisons may be made to texts such as *Symphonic Repertoire for Timpani The Nine Beethoven Symphonies* by Gerald Carlyss as well as *A Timpani Method Based on the Performance Practices of Edward M. Metzenger with an Application of These Practices to the Symphonies of Beethoven and Brahms* – a thesis by Erwin C. Mueller.
CHAPTER THREE - TECHNIQUE

This chapter is a detailed study of basic timpani technique as it appears in the methods and manuals discussed in Chapter Two. Ideas about technique from these texts are related to information gathered from interviews with Ian Bernard - former timpanist with the National Arts Centre Orchestra; Tom Greenleaves – timpanist with the Leipzig Gewandhaus Orchestra; Brian Jones – timpanist with the Dallas Symphony Orchestra; and Benedickt Leithner – timpanist with Deutsche Oper Berlin.

Aspects of timpani technique within these texts is discussed, analyzed and contrasted under the following categories: 1) Grip 2) Basic/Legato Stroke 3) Staccato Stroke 4) Roll 5) Pedaling 6) Treatment of Symphonic Repertoire.

For the purposes of this study, when referring to the fingers, the thumb will always be discussed as separate from the other fingers. This will avoid any confusion based on inconsistencies of how the fingers are numbered in various instruction books. To clarify; in certain texts the thumb is referred to as a finger while in others it is not, adding confusion when cross-referencing sources. Often one author discusses the thumb as the first finger while another makes reference to the index as the first finger.

After basics of technique are contrasted and compared, the treatment of orchestral literature will be the final point of discussion. Texts will be examined with respect to their approach, if any, to symphonic repertoire.
1.1 Grip

It is appropriate to begin with some detail regarding timpani grip, as this is the starting point for any student in the early stages of instruction. It is generally accepted that there are two distinct grip styles commonly described as the German and the French grips. Although it is unclear how they came to be designated as such, these two terms are frequently referred to, within the texts cited in this dissertation, even though it is doubtful that either one is used by any timpanist exclusively. The two terms likely arose from practices passed down from timpani instructor to student through oral tradition.30 Nancy Benvenga, author of *Timpani and the Timpanist’s Art*, comments: “There is evidence of a trend at the beginning of the twentieth century whereby the grip changed from “thumbs up”31 to “thumbs in”; the latter being what today is considered *The German Grip*” (1979:37).

Prior to this the only written account of grip is found in Jean Georges Kastner’s *Méthode complète et raisonée de timbales* (1845) and various treatises on the subject of timpani that either predate Kastner or fall within a similar time frame.32 Apart from Kastner, grip

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30 A thorough examination and comparison of the Viennese and French styles can be found in the thesis entitled *Die Wiener und die Französische Paukenschule im Vergleich* by Ameli Kruse-Regnard.

31 The so-called French technique.

32 These include instrument treatises with reference to timpani by Johann Eisel, Georg Fechner, and Daniel Speer.
descriptions in ancient treatises are superficial and any inclusion of discussion on this subject corresponds to historical pictures that show one that looks crude and unrefined.

Kastner does not discuss the hands as thumbs up or thumbs over but he describes what is probably the first published description stating how the mallets are held.

La baguette se place entre la première phalange du pouce et las deuxième de l’index, à peu près au tiers du manche; on la serre entre ces deux doigts avec fermeté, ce qui n’empêche point qu’il lui reste encore assez de jeu, en raison de la longueur du manche et du poids de la tête, à quoi vient d’ailleurs en aide l’impulsion des trios derniers doigts restés libres, lesquels chassent la baguette de bas en haut, au mement où se frappe le coup. (1845:24)

The stick is placed between the first joint of the thumb and the second joint of the index finger at about one third of the distance from the end of the handle. The rest of the fingers help to propel the stick from low to high to make the stroke. (Translation by the author)

In addition to instructional texts, commentary on grip is found in research documents by authors Nancy Benvenga and Steven L. Schweizer. Therefore, they will be included in this discussion even though they are not method books per se.

Benvenga’s Timpani and the Timpanist’s Art and Schweizer’s Timpani Tone and the Interpretation of Baroque and Classical Music both comment on the development of timpani grip. In referencing Heinrich Knauer’s description of the German grip, Benvenga offers the following opinion. “This technique affords a good deal of power, an important consideration in the large orchestras of, for example, Wagner and Strauss” (1979:37).
Schweitzer’s discussion is more thorough. He refers to a French and German style but also suggests a third grip, the American Grip\textsuperscript{33}, lying somewhere in between the two. Within the German style, Schweizer discusses two sub-styles: A Viennese and an Amsterdam style as described in Amelie Kruse-Rengard’s \textit{Die Wiener und die französische Pauken-schule im Vergleich} from 2003. For the German grip, Schweizer quotes Fred Hinger’s description: “The German style of playing palms down produces a darker sound than the French style” (Hinger in Schweizer, 2010:30).\textsuperscript{34}

The French grip, discussed by Schweizer, is specifically referred to as a “French-style staccato” (2010:29). In this style the mallet is held between the thumb and first two fingers. Schweizer’s description reflects those of Otto Seele, Ernst Pfundt and also Goodman’s method of holding the mallet for all purposes whereby the third and fourth fingers “should not come into contact with the stick at all” (1948:21). Schweizer’s account of staccato technique, as rooted in the French-style, poses an interesting dilemma if compared to Goodman’s similar description. Goodman studied with Alfred Friese who was from the German tradition having held a position with the Leipzig Gewandhaus Orchestra. Perhaps Siegfried Fink’s description of grip will shed some light on this inconsistency. He is the only author that describes a Berlin and Dresden grip. The illustrations provided show the Berlin grip as similar to what other authors have described as the French grip while the Dresden is like the common German description. Other than these two distinct grips and illustrations of each, there is no explanation of

\textsuperscript{33} Also referred to by Gary Cook in \textit{Teaching Percussion}.
\textsuperscript{34} Schweizer provides an extensive discussion on grip in \textit{Timpani Tone and the Interpretation of Baroque and Classical Music} on pages 21-22 and 29-30.
when or why each might be used nor is any account for their differences in relation to sound or technique.

Peters makes a very clear distinction between the German and the French grips but also suggests that some timpanists use a grip that falls somewhere between the two. Similar to Schweizer’s American Grip designation although Peters does not label it as such.

Peters makes a very clear distinction between the German and the French grips but also suggests that some timpanists use a grip that falls somewhere between the two. His preference is for the French grip to be used in the development of good timpani technique: “The author prefers the French grip as the focal point of developing a good timpani technique. Some people prefer the German grip because of the ease of transfer of hand position from the matched grip snare drum and mallet positions” (1993:16).

The label of German and French with respect to grip is a curious distinction. It is probable that those who have studied timpani are familiar with the terms. However, as a designation for timpani technique, it is not present in many of the instruction books discussed in this dissertation. We may therefore conclude that, although in many texts it is clearly defined, it is not an important designation for some authors.

In *Pauken* (1976:32), Eckhardt Keune illustrates two grips but they are not distinguished as German or French. In *Technique for the Virtuoso Tympanist*, Hinger illustrates grip positions he calls Hands Over and Hands Up. These are similar to what other authors describe as German and French.

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35 Similar to Schweizer’s *American Grip* designation although Peters does not label it as such.
In the examples where German and French grip are categorized separately, it is my opinion that they are used as a distinction for beginner timpanists. This is the case for authors F. Michael Combs in his *Percussion Manual* and also in Gary Cook’s *Teaching Percussion*. Combs states the following:

The German grip … produces a darker sound and is usually easier for a younger student. (1995:90)

The French grip is most accepted and usually preferred by professional timpanists. (1995:91)

By comparison to method books devoted entirely to timpani, Combs’s information is concise yet his statements concerning German and French grip are too general. Most likely this is an elementary method of showing the student different hand positions to encourage experimentation. To apply this to advanced technique is another matter. Ian Bernard, timpanist with the National Arts Centre Orchestra from 1969 – 2010 discusses this issue:

To become married to German or French grip is limiting. I wonder whether anyone ever plays either or because the wrist is very limited in the amount of travel with thumbs up [French] position. Changing from thumbs up to hands over [German] creates more range of motion in the wrist. As you get louder you vary the grip and then you are playing effectively thumbs up but the position is very open. (Ian Bernard, interview by author, Ottawa ON, November, 2009)

The descriptions of grip in many instruction books are often presented as an either/or concept contrary to ideas presented by Greenleaves and Jones. That is, German grip produces a darker sound than the French grip. Cook claims the following: “Timpani grip
is only one variable in the production of sound and is only partially responsible for the

This is supported by Tom Greenleaves of the Leipzig Gewandhaus Orchestra: “There are
many ways of holding the sticks and it doesn’t have a direct contribution to sound. It is
more conceptual, based on matching the sound of the orchestra” (Tom Greenleaves,
interview by author, Leipzig, August 2010).

Brian Jones, timpanist with the Dallas Symphony Orchestra makes a similar claim:

The terms, German and French shouldn’t be put in a box or taken too literally to try to create a sound or touch. Memorize the sound in your head, not the feeling in your body. A combination of sound concept in your mind should come through your hands without necessarily thinking German or French. (Brian Jones, interview by author, Detroit, MI, March, 2011)

Not all authors make reference to German or French grip and their variances. Regardless, it is the topic of much attention and, through the examples that follow it will become clear that there are many subtle differences within the framework of a general technical concept.

Andrew Shivas in The Art of Tympanist and Drummer, which is completely descriptive in prose only, makes some interesting suggestions. One of the more interesting claims

36 With the exception of a few very brief musical examples and photographs, there is nothing included in the way of exercises.
made in comparison to other manuals is that the ideal grip is dependent on the types of mallets used (1957:24). No other author, cited in this study, makes reference to mallets having any influence on how the grip is modified. Shivas’ descriptions show how grip is altered for soft and loud volumes.\(^\text{37}\) For example, in soft playing, the thumb and first two fingers (index and middle) are the only contact points on the mallet. In loud volumes or, heavy as he calls it, the whole hand is used except for the little finger. Also for loud playing: “The thumb tends to slide forward becoming level with the index finger, unless it happens to be a very short thumb” (1957:24).

Although this statement attempts a more thorough description of what may or may not happen to the grip within a change of dynamics, it is presented without enough illustration to support the claim, leaving the reader uncertain of his meaning. The lack of clarity is apparent even more so in Hochrainer. Consider the following description of grip:

How do we hold the stick properly? We need one grip for piano and another for forte. When playing softly, the stick is held between the thumb and the first bend of the index finger. Model: The hammer of a piano. The stick must not lie in the second bend of the index finger because this would limit its freedom of movement. When playing loudly, the stick lies between the thumb and the last joint of the middle finger so that the rebound is not impeded. (1983:1)

\(^{37}\) Also evident in the illustrations in Kruse-Regnard.
It is difficult to see how the metaphor of a piano hammer ties into a discussion of mallet grip and Hochrainer provides no further clarification. If used in reference to the stroke, it would be easier to compare the two. Secondly, in his description of louder playing there is no account for the function of the index finger. It is possible, when considering the grip descriptions of Greenleaves and Leithner (to be discussed below), Hochrainer means the index finger is left off the mallet for loud playing. However, this is conjecture and a more thorough description would be beneficial.

Tom Greenleaves, and Benedikt Leithner, differ with regard to several of the above descriptions of grip suggesting a different approach. Based on their studies with Rainer Seegers, a grip was encouraged that put more pressure on the small fingers at the base of the mallet while keeping the index finger relatively relaxed and often removed from the mallet completely. The control of the mallet comes from the second, third and fourth fingers rather than the fulcrum point between the thumb and first two fingers as other authors suggest. Jones makes a similar and more specific reference to the use of the smaller fingers: “Use thumb, index and middle finger for lighter playing. But for deeper playing remember that you have your back two fingers. Also use the back two fingers for loud rolls and relax the index and middle finger” (Brian Jones, interview by author, Detroit, MI, March, 2011).

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38 Timpanist with the Berlin Philharmonic

39 Particularly when rolling.
A relaxed index finger is suggested by Hochrainer, but only for loud playing. (1983:1)

Recently, certain mallet manufacturers have added a small piece of rubber tubing placed at the base of the mallet.\(^{40}\) According to Leithner, this allows the fingers to remain relaxed due to the friction of the rubber, therefore eliminating worry that the mallet will be dropped. Bernard has adopted a similar practice covering the shaft of the mallet with a rubber covering not unlike tennis grip. As far as has been researched for the present study, this has never been suggested in a commercially available timpani instruction book.

The texts by Carroll and Whaley are quite brief when addressing ways in which the mallet is gripped. Neither one mentions German or French as a classification. Carroll merely refers to grip, in his description of the legato stroke, as one that should be relaxed. (2001:24) Whaley is more specific in his description but confusing in his discussion of which fingers come in contact with the mallet as in the following statement.

\[\text{The timpani stick is held between the first joint of the index finger and the pad (fleshy part) of the thumb. The third finger should make contact with the stick as it is used to guide and generate the stick’s motion. The fourth and fifth fingers normally do not touch the stick. (2003:6)}\]

Whaley’s description makes it difficult to decipher what he means by the third, fourth and fifth finger (hence the disclaimer at the beginning of this chapter about thumb and finger distinction) and it is not clarified by the illustrations. The illustrations show a finger placement on the mallet but do not support the claim that the fourth and fifth

\(^{40}\) Specifically those made by Kato
fingers do not touch the stick (2003:6) making Whaley’s description inconsistent.

Goodman claims that the third and fourth fingers never touch the mallet similar to a specific grip used by Bernard. Bernard, however, uses this grip for staccato playing similar to the French-style staccato by Schweitzer. For legato playing, Bernard suggests all fingers in contact with the mallet. Similarly, Cirone suggests all fingers in contact with the mallet but specifies a pressure distribution of the fingers. “The thumb and forefinger provide the point of contact, and the remaining three fingers relax under the stick” (1978:2).

Differing accounts such as these have possible advantages and possible disadvantages. For some, it could result in confusion about how to properly hold the mallets. For others, it might be diverse enough to promote experimentation with all variations.

1.2. Summary of Grip

In summary, considering many different descriptions of the same general concept of timpani grip, it is clear that there are subtle differences. Apart from brief references in the treatises of Eisel and Speer the discussion of grip in Kastner’s text is the first detailed description we have for pedagogical purposes.

The terms, German and French with regard to grip appear to be a twentieth century categorization with little or no information that reveals from where the designation is derived. Kastner, being a French author, never refers to any grip or style that would
indicate anything that is exclusively French and the same can be said for German authors such as Altenburg, Pfundt and Fechner. These authors do not distinguish a German grip in comparison to a French grip - a distinction commonly found in more recent literature. In fact, the only concrete distinction of grip presented in a German method is Fink’s description of Berlin and Dresden grips. However, there is no thorough description of their differences. Fink only includes an illustration of the two.

The interviews conducted with Bernard, Greenleaves, Jones and Leithner, call into question the subject of French vs. German grip as a viable distinction. The difference in grip proved to be a peripheral concern for each timpanist. Although the position of the hands is described as German and French in several of the works cited in this dissertation, there is no indication that the timpanists interviewed consciously thought about playing either way. Generally, more importance is placed on the ability to alter the hands in order to produce a variety of colours. Therefore, the descriptions found in various texts are not absolute and should be considered only as a guideline.

Regardless of whether or not German or French grip is a conscious choice, the two terms exist in examples of North American literature and, in some cases, are used as a pedagogical term. In particular, it is evident in the methods of Combs, Cook, and Peters. The designations of German and French are presented in a way that would indicate a student should use one or the other. Although Peters offers a less either/or approach suggesting the option of the American grip, it is limiting in its dogmatic approach. Schweizer, on the other hand, is much more thorough in his account providing specific
examples of how tone can be modified with each grip. A more liberal attitude is found in a lesser-known method by Joel Chauviere entitled: *Méthode Technique de Timbales* from 1985 in which the author states: “There are several ways of holding the timpani sticks. There are no hard and fixed criteria for preferring one way to another. The teacher will thus choose the method best suited to his style of teaching” (1985:1).

Considering this statement along with thoughts expressed in the interviews, the grips decided upon by the player or teacher has more to do with experimentation for musical purposes rather than for the development of an exclusive school of playing. Chauvier’s philosophy of grip could also be applied to the many discussions afforded to the stroke.

### 1.3. Basic/Legato Stroke Technique

Once grip is established in the method books most authors describe how to properly execute a basic stroke on the timpani. Following a rudimentary understanding of the basic stroke more specific strokes are introduced such as *legato* and *staccato*. Following the introduction of the stroke styles, the roll is generally introduced. Based on the survey of literature from Chapter Two the texts vary in sequence from author to author.

Jean-Georges Kastner provides the first detailed description of a basic stroke in *Méthode complete et raisonée de timbales*. Under the heading *Art de Blouser*, (see translation

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41 It will be seen further into this discussion that some authors treat the *legato* stroke as having the same meaning as basic stroke.
above) Kastner describes many ways of striking the timpani. His technical examples are
in part an extension of Altenburg’s attempt to reveal various beatings from the baroque
period. In this early documented account, Kastner describes a way of striking the drum to
produce a resonant sound. This involves a stroke that uses both mallets striking at once
but in different places on the head and is described under the following heading:

\textit{Le Coup Simple}\textsuperscript{42}

L’une des main, la droite ou la gauche, à volonté tient sa baguette à un pouce de
la peau el l’autre l’en tient a quatre ou cinq pouces et il n’en faut pas moins que le
coup soit frappé en mème tems par toutes deux. (1845:29)

One hand, the right or the left, throws the stick an inch off the drum while the
other four or five inches off the drum but strikes at the same time. (Translation by
the author)

The \textit{Coup Simple}, or simple stroke, is most similar, as a technical term, to the basic stroke
described in more current literature. The function appears to be the same as modern
method, being a resonant stroke, but the technique Kastner describes is quite différent.
Rather than resembling the basic stroke description of, for example, Goodman or Peters,
Kastner describes a technique similar to the flam rudiment on snare drum or a grace note.
There is no detailed discussion of \textit{legato} as a term to define articulation as there is in
more recent literature. In fact, Kastner makes the claim that \textit{legato} articulation is not

\textsuperscript{42} Coup, is defined in \textit{Centre National des Ressources Textuelles et Lexicales} as a rapid
movement. In the \textit{Merriam Webster French-English Online Dictionary} it means to strike.
possible on the timpani: “Il est impossible d'obtenir le LEGATO sur les Timbales” (1845:37).

Describing a softer articulation, Kastner refers to a covered mallet to achieve a legato sound. Harrison Powley translates a passage referring to this in his article Some Observations on Jean Georges Kastner’s Méthode complète et raisonée de timbales: “They [covered mallets] produce a rather soft sound for use in piano passages” (1980, 17 N2:65).

It is curious that Kastner describes a softer sound but claims that there is no such thing as legato on timpani. This could be due to the widespread use of harder mallets, at the time of his publication, despite his reference to sponge-headed mallets.\(^\text{43}\)

The years between the publication of Kastner’s Méthode complète et raisonée de timbales (1845) and Goodman’s Modern Method for Tympani (1948)\(^\text{44}\) do not show any contribution or any significant additions to pedagogical output for timpani technique.

\(^{43}\) A description found in Hector Berlioz – Grand Traite d’instrumentation et d’orchestration moderns from 1844

\(^{44}\) Although a later publication date than Carl E. Gardner (1944), the Goodman (1948) text has been chosen as the next source for study, after Kastner, due to its more thorough approach to technique.
Although sources such as Borrachi’s *Manuel per Timpanista* (1862) and Ernst Pfundt’s *Die Pauken* exist, they are not written solely for instructional purposes.\(^{45}\)

Georg Fechner’s 1862 treatise entitled *Pauken und Trommeln in ihren Neueren und Vorzuglicheren Konfirktionen*, and the method by Franz Kruger, *Pauken und kleine Trommel-schule mit Orchesterstudien* are, for the most part identical to material in Kastner’s *Méthode*. As Powley describes, they are “basically a condensed translation [of Kastner]; however, no mention of Kastner is ever made” (1978:70). Powley asserts the same for Friederich Sietz’s *Modern School of Timpani Playing*.\(^{46}\) Therefore the discussion of technique, in this study, will resume with Goodman as his is the most thorough of the earlier twentieth century attempts at describing timpani technique.

In Goodman’s account of fundamental technique, the basic stroke is described as simply “Striking the Tympani” (1948:22). Goodman’s description is concise and includes ideas about how the timpani are struck but it is misleading. Consider the following statement: “The motion in striking the tympani is that of wrist and fingers. No arm or elbow motion is used at this time” (1948:22).

These instructions are useful only to a certain degree. It is certainly important when executing a basic stroke to consider the wrist and fingers. However, to say that no arm or

\(^{45}\) There is pedagogical material in these treatises. However, as Benjamin Harms points out, the main impetus for publication was to promote new mechanical developments in timpani design.

\(^{46}\) In examining this text, it is clear that Sietz’s method is different than Kastner’s including original content contrary to Powley’s claim.
elbow motion is used is far too broad a statement. Goodman never supports his claim with an example of when the arm and elbow does come into practice. In his description of the basic stroke or, as he calls it, the legato stroke, (as do Carroll and Whaley) Peters is specific describing the beginning point of the stroke at a stick height starting ten to twelve inches off the drum. The motion of the stroke involves the forearm to aid the motion from the wrist and fingers. Leithner offers a different opinion: “What should be taught is to follow the natural rebound of the mallet because stroke starts from low not high. Every stroke begins with taking the mallet up in one movement” (Benedikt Leithner, interview by author, Berlin, August, 2010).

Shivas’ account is similar to Leithner’s: “The stick is flicked upwards, brought down on the head and instantly flicked back again” (1957:28).

A similar concept is found in Hinger’s illustration of self-resistance: “Touch (press) the mallet into the surface and pull away in one motion. Do this alternately with each hand, increasing the speed – still not making a sound. The beat will start at the drum head and not in the air above” (1975:3).

Peters describes the concept of the stroke ending, with a natural rebound, back at the starting position ten to twelve inches off the head. Whaley’s account is similar except for the starting point of the stroke: “This stroke [legato] begins with the stick parallel to the drum head. Using the wrist, raise the head of the stick approximately twelve inches from the drum head” (2003:6).
Cirone’s description of the *legato* stroke is similar to Whaley’s while Hochrainer describes a more complex process in *Three Phases of a Timpani Stroke*:

1. To lift up the arm and hand to a point from which their strength can be used for acceleration.
2. Accelerating to give the small mass of the stick enough force to set the large drumhead vibrating.
3. Relaxing at the moment of impact, so as not to impede the rebeat. (1983:1)

In contrast to the aforementioned descriptions of *legato*, Carroll says nothing about fingers, wrists or arms. Instead he describes a sound-oriented relationship to stroke. Words such as big, full, warm and sustained are all used in this context. Schweizer incorporates similar ideas under the heading *Using Physical Gestures to Color Tone*.

Tone can be shaped by the use of wrist, arm, and body. Most timpanists concerned with tone production emphasize the contribution that the wrist plays in producing a good tone and they teach that good tone production results when the wrist – not the arm – is used to place the stroke. Because the wrist is more flexible and responds quicker to the rebound of the timpani head than the arm, timpanists believe that the primary motion in placing the mallet on the timpano head must flow from a limber wrist. After striking the head, the wrist is used to quickly bring the mallet off the head, allowing the head to “sing” resonantly. Timpanists who use the arm to place the stroke inevitably drive the mallet into the timpani head. Not only does this arm-driven motion create a heavier, articulate sound, but it also dampens the head and it prevents the head from ringing fully. (2010:23)

Regarding what body part is used for the basic stroke Hinger differs from all other authors in his account of Stick Technique.
I believe that the performer should be trained to use every possible hold and playing technique in order to draw his color choice from the infinite spectrum of sound. In actuality, every part of the body is used. Some parts as the thorax and lower body are used in support of the moving members. A physical action should [complement] the type of music being performed. (1981:3)

Hinger includes other methods of sound production and stroke in *Technique for the Virtuoso Tympanist*. These include a forearm method as well as finger technique and hand position to attain a variety of sound colours. Bernard presents a similar idea based on variation in colour:

> The method of hitting the drum: You can propel the stick down and up with a relaxed grip [using the wrist] which will produce a legato sound or you can snap it [for staccato]. You can do the same thing with just your fingers and then you can combine those two so that your wrist is going up and down in a legato manner and your fingers are going up and down in a legato manner. So now we’ve got yet another colour. (Ian Bernard, interview by author, Ottawa ON, November, 2009)

### 1.4. Staccato Stroke Technique

Although Kastner’s discussion of *staccato* is brief, it is one of the earliest uses of the term in timpani literature. In contrast to his assertion that *legato* is impossible to achieve on timpani he claims that *staccato* is easily accomplished. However, his discussion does not refer to stroke modification. Instead, the term is made in reference to shorter note values. To clarify, there is no described motion in relation to muscle manipulation (wrist, fingers or arms) to achieve a staccato stroke as can be found in Goodman:
By exerting different pressures with these fingers (thumb and first finger) it will be noted that different values can be given to the type of tone produced on the timpani. By grasping the stick tightly between the thumb and the first finger a short staccato tone can be produced. (1948:40).

In Kastner’s terms, *staccato* is the act of cutting off the sound that is produced by the stroke and dampening the timpani head with the hands. Therefore, compared to more recent definitions, it is a matter of duration and not articulation. Friese suggests a similar idea: “Rest one or more of the fingertips on the head, to cut down some of the resonance of the instrument, while the stick in the other had plays the staccato notes” (1954:23).

Two of the most detailed descriptions of the staccato stroke can be found in Peters and Schweizer. Peters references the *staccato* stroke in relation to the *legato* stroke therefore not defining them as completely separate concepts. While they are intended to create different articulations, there remains an element of *legato* resonance in a *staccato* stroke. “The sound will be slightly less resonant [than legato] but will have more articulation (or point)” (1993:78).

Schweitzer introduces another term for articulation including what he calls the *marcato* stroke as falling somewhere in between *legato* and *staccato*. He refers to physical means by way of achieving variation in sound – such the use of wrists and fingers – but also places as much importance on the choice of mallet.

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47 Also referred to by Peters
Staccato strokes are typically made with staccato sticks. The sticks are lightly pinched between the thumb and the first two fingers. These strokes are made by smartly snapping the mallet off the head. The effect of the small mallet head and the quick penetration is a short sound: more punctuated, less colorful, and with fewer lower partials. The staccato sound, in addition to sounding short, is also bright. (2010:28)

Peters’ description of staccato includes ideas that are not found in other method books, including distinctions such as full-stroke staccato and finger-controlled staccato. These are used to create various colours within a staccato framework. Peters offers advice that is successful in making mechanical functions less technical and more open to experimentation. Consider the following: “One must develop a sensitivity between the hand, the drumhead, and the speed of the notes being played in order to know how to vary the pressure needed for proper execution” (1993:78).

On the subject of the staccato stroke, Whaley and Carroll are relatively brief. In keeping with concepts presented by Peters and Schweizer, both Carroll and Whaley maintain that staccato articulation uses a stroke combining wrist and fingers. Whaley provides a scale that correlates dynamics to the degree of pressure placed upon the mallet. For example, a pianissimo to mezzo-piano staccato stroke uses a light degree of pressure with a mallet height of one to two inches. These numbers all increase as the desired dynamic increases. Like Schweizer, he suggests mallet choice contributing to the staccato sound. However, he also advises that “the student should develop the staccato stroke so that it may be used whenever required and with any type of stick” (2003:26). Carroll’s inclusion of
orchestral excerpts makes his text more distinct showing a direct application of technical terminology to the symphonic repertoire.

1.5. Summary of Stroke Technique

The two major stroke distinctions are legato and staccato as discussed above. All too often this is the only designation presented in modern timpani methods. To what then is the student to refer when considering more specific timbres of legato and staccato?

Schweizer and Peters are most successful in explaining subtleties within these stroke types both using the term marcato as falling somewhere between the two. Schweizer’s work is the most thorough attempting to explain variations of stroke, tone and colour in his first chapter entitled Theory and Practice of Timpani Tone Production. In Benvenga’s chapter The Evolution of Timpani Tone, an emergence of variation in timpani tone is discussed in relation to a change in mallets and head quality rather than alteration of stroke technique.

The variations of legato and staccato strokes serve many tonal functions for any number of notes in a given piece of music. But there is a connection between mind and body that needs to be considered. One must formulate a personal way of striking the timpani that combines experimentation, personal instruction and the adoption of sound learned both visually and aurally. The concept of sound is used in conjunction with stroke technique. Consider the following statement once again: “Experienced timpanists will confirm that
every note on the drum has quite a different character. B, for example, is not just C lowered by a semitone; it is another world entirely, austere, mournful” (1983:3).

Undoubtedly, there is pedagogical merit in this statement. However, there is no explanation of how such concepts might be achieved through technique. If an author is going to venture into the territory of explaining specifics of sound, it should be supported with a more tangible means of attainment, if possible. At the very least, an example from the symphonic literature should be included to illustrate. The absence of explanation could be due to the fact that such ideas are difficult to convey in writing. The attempt to do so may result in an over-verbalized and distorted technical concept. This is often the case in Schweizer’s text. Perhaps if Hochrainer’s statement were accompanied by an example of what context a C is different than a B, it would achieve the desired result in presenting a legitimate concept for instruction. A median between the brevity of Hochrainer and the comprehensiveness of Schweizer would be more beneficial to a student and/or teacher. Hypothetically, there could be exercises in order to improve how one creates various colours of sound. Perhaps these could also include video examples of stroke types to illustrate in conjunction with a verbal description. The result would be a multi-faceted exercise to create a guide for practicing orchestral excerpts. This, in conjunction with referencing multiple styles of playing, both live and recorded, could provide the student with a variety of opinions to effectively develop a thorough approach to studying specific pieces of music. This is merely a suggestion and the efficacy of this type of instruction needs careful consideration before it is carried out.
Carroll and Schweizer attempt to provide this information. Carroll distinguishes stroke types accompanied by an example from the orchestral repertoire. However, it could be more beneficial with further explanation. Carroll’s examples of excerpts using the legato stroke include, Beethoven’s Violin Concerto and Symphony No. 7, Brahms’s Symphony No. 1, Tchaikovsky’s Symphony No. 4 and Mussorgsky’s Pictures at an Exhibition. There is no commentary accompanying these excerpts. Is one to infer that the legato stroke is the same for each? It is possible that Carroll assumes the timpanist is familiar with the stylistic differences of these pieces and could conclude that they do not in fact use identical stroke execution. Clarification would be beneficial. Furthermore, when commenting on achieving varying degrees of volume he merely states that louder volumes are achieved by altering the height of the stroke similar to assertions made by Cirone and Whaley. There is no indication that any change in the application of pressure while propelling the mallet would create a similar result or would have any effect on the volume of the stroke. It is my opinion that most timpanists would not attribute dynamic variation to mallet height alone. Rather, it is a combination of factors such as wrists, fingers and arms, the velocity with which the stroke is executed as well as the pre-conceived mental concept of the desired sound. Commenting on various stroke types, Schweizer describes a full-bounce stroke referencing the opening of Brahms Symphony No. 1. Carroll simply suggests using a legato stroke for this piece but Schweizer says the following:

A full-bounce stroke produces a very heavy, dark sound. Using a large, soft stick, gripping the stick very loosely, and placing the stroke deep into the head, the timpanist catches the bounce of the head – bringing the stick up high. This produces perhaps the largest, broadest, darkest and most soul-shaking sound
produced by few instruments. In the opening bars of Brahms *Symphony No. 1*, the timpanist can use a bounce stroke to good effect. (2010:29)

Schweizer’s words are much more specific and evocative than Carroll’s to describe a standard orchestral timpani excerpt. More beneficial still would be the inclusion of an excerpt-specific exercise to accompany his description.

1.6. Roll Technique

In most texts, the aspects of roll technique follows the discussion of grip and stroke types. Altenburg is quite brief in his examples of roll beatings. He refers to three types – *Wirbel* (roll); *Gerrissene* (single, double and rapid rolls); and *Roulement* (short roll). 48 Kastner’s *Méthode*, published fifty years later, is much more thorough. He describes the commonly used roll that involves single strokes 49 but also reiterates the use of double rolls by Altenburg. Kastner provides the following roll distinctions:

A) Roulements courts (short rolls) B) Prolongés (long) C) piano (quiet) D) forté (loud), E) crescendo, F) diminuendo, G) cresendo-diminuendo, H) en alternant d’une Timbale a l’autre (rolling from one timpani to the other), and I) sur la deux Timbales à la fois (on two timpani at the same time). (1845:34) (Translation by the author)

Each of the above roll descriptions is accompanied by an example and exercise providing the first publication with extensive material on roll practice.

48 There does not appear to be any evidence behind the use of this French word used in conjunction with the German terms. The term ‘double roll’ appears in English only due to the translation by Edward Tarr.

49 Single stroke rolls were, at this time (nineteenth century), the normal practice.
In the twentieth and twenty-first century literature there are many approaches to achieving roll proficiency. Most authors agree that the act of rolling involves single, alternating strokes with varying degrees of speed. The speed with which the roll is executed depends upon the size of the drum and its tension. The goal is to create a continuous and sustained sound with little or no audible presence of individual strokes. The methods of Goodman, Peters, Whaley, Carroll and Cirone present very similar explanations and roll exercises with minor variances. In comparing roll techniques within the twentieth and twenty-first century volume of literature to Kastner, new ideas in the recent texts are apparent. Their absence in Kastner is most likely due to the fact that Kastner himself was not a timpanist. The information in Kastner’s Méthode is, in part, the result of consultation with M.M. Poussard, timpanist of L’Opéra Emery de l’Opéra-Comique. Listed below are examples of new ideas presented for study and practice in Goodman. These most likely represent issues encountered by Goodman as they appeared in the symphonic repertoire. They are listed as follows: 1. The Tied and Separated Rolls. 2. The Short Eighth Roll or Twirl. 3. How to Attack the Roll 4. The Speed of the Roll. 5. The Forte Piano Roll. 6. Dynamic Control of the Roll. (1948:26-35)

Similarly, different roll terminology is outlined in the method books of Peters, Cirone, Whaley, Knauer, and Carroll. Hinger and Schweizer include different ideas about the roll as does Nick Woud in *Symphonic Studies for Timpani*. Hinger compares the roll to the act of drawing the bow across the string on a violin for sustained sound: “It is desirable

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50 Based on the definitions outlined on page two of this dissertation Woud’s text could be considered a manual and not as thorough as the methods of Peters or Hinger. However, it deserves mention here for some interesting roll concepts.
that the roll on a timpani have the same effect, therefore the time and motion principle should be applied as smoothly as possible with a maximum of relaxation in the grip of the mallets” (1975:20).

Also unique to Hinger’s method is suggestions for experimentation encouraging an openness to various means of achieving technical results. Consider the following: “Artistic imagination can be accomplished by speeding up or slowing down the roll. During a roll of long duration, the performer can follow the intensification of phrase line of instruments that he or she might be accompanying” (1975:21).

Nick Woud offers a similar philosophical approach to roll concepts as a preface to one of his studies.

Don’t be afraid to use a slow roll. The tempo is slow, the tuning is low, the character is thoughtful, so why hurry, why stress? An open roll can be beautiful. As soon as the singles connect, don’t go any faster. At a distance, the audience will just hear a nice long relaxed note (actually that’s what a roll essentially is) and won’t hear the singles. (1999:43)

It is clear that these authors are attempting to find ways of imparting information that not only involves technique but also experimentation and interpretation. Nowhere is this more evident than in Schweizer’s discussion of darkening rolls in Sibelius’s Finlandia.

The opening section of this music musically depicts the oppressed spirit of the Finnish people. Timpanists can play bars 10 and 12 as fortepiano crescendo rolls. So doing helps create the tension that is essential to transmitting the sense of oppression that Sibelius wishes to portray. (2010:36)
Similar concepts are found in Hochrainer’s notes: “The timpanist must always know what the composer has given his instrument to do, whether it is supposed to be a triumphal march or a storm with thunder and lightening” (1983:3).

Although an interesting statement, it is not supported by any reference to technique as it is in Schweizer. Furthermore, Hochrainer does not provide any exclusive material for roll study. Rather, it is incorporated into the large number of etudes within three books.

One text deserving separate mention is Arend Weitzel’s *Der Paukenwirbel / The Timpani Roll*. Based on the literature surveyed for this study it is the only source exclusively dedicated to roll practice and it encompasses an exhaustive amount of technical information while maintaining a broader philosophical and interpretive focus similar to Woud.

Presented as a complete training program for the timpani roll, this is the most complete text dedicated to one specific facet of technique. Comparability to previously discussed texts is difficult in this case yet beneficial to accrue a cross-section of ideas. There are commonalities among all texts in their treatment of the roll. However, Weitzel presents a completely new set of terms for his exercises. For example, if directly related to Peters, the studies included for *crescendo and diminuendo* rolls are more complete. To be sure, Peters offers a larger amount of exercises than many other authors but Weitzel’s treatment is more involved. He describes various roll speeds with which the *crescendo* and *diminuendo* are played providing exercises to illustrate. Furthermore, Weitzel
addresses the issue of ending rolls accurately – curiously absent from many other texts.

On this subject he includes several variations such as: 1. Rolls with and without a final note. 2. Timing final notes. 3. Rolls with ties, with and without a final note. 4. Rolls with breaks. 5. With and without final notes. (nd:23)

Examples of similar concepts are found in Goodman under The Tied Roll. Although he instructs the player to strike a final note out of a roll, Goodman does not provide the option of rolls without final notes as does Weitzel. In Schweizer, the technique of ending rolls is observed with a more focused example of Mozart’s music. He proposes the following:

How does one decide when to play the final note as a tremolo or as a single note if the tremolo sign crosses the bar line? The timpanist should consider (1) if the rolled note is tied to [the] note in the downbeat of the next measure, and (2) if the timpani is doubling another part where the sustained note is tied to the downbeat of the next measure. If either of these conditions applies, the concluding note should be rolled. (2010:138)

Schweizer presents the term “stinger” when discussing the end of a roll and warns that it should be used with discretion.

Former Cleveland Orchestra timpanist, Cloyd Duff, uses a stinger to terminate the roll at the end of the first movement of Brahms’s Symphony No. 4. Brahms builds so much excitement into the music that a stinger seems appropriate. However, using a stinger within a symphony or movement may give a false sense that the piece has ended, and waiting to the end of the piece to place a singer gives the stinger its greatest effect. (2010:53)

For the attack of a roll, there are opposing methods from the following authors:
Weitzel: The general rule is: EVERY roll should be practiced starting with the left and the right hands! (nd:22)

Goodman: The roll should be attacked with the right hand. (1948:27)

Hochrainer: To get a full sound on the attack, it is good to start with both sticks at once. (1983:1)

Bernard’s description of commencing a roll is comparable to Hochrainer. Affirming the quote above, he agrees that, at least in some cases, the roll should be started with both hands. He talks about the technique of creating a smooth beginning to the roll and therefore limiting the sound of impact that may be heard if beginning with only one hand. To achieve this he illustrates with the following: “It should be as if the roll has already started before impact is made with the timpani head” (Ian Bernard, interview by author, Ottawa ON, November, 2009).

Inevitably, no matter how a roll is started, one hand will need to begin the attack. Otherwise, the result would be a very awkward recovery from the initial stroke if, hypothetically, both mallets struck at the same time.

Several texts offer unorthodox advice when faced with unusual roll challenges. For example, Hinger suggests using a multiple bounce roll to create a different colour when rolling on a highly tuned timpano. He argues that to maintain the common single stroke roll would bring out too many individual sounds. Cirone also suggests applying what he
calls the “crush roll” (1978:6) when rolling on a very short duration or staccato marking.

Hochrainer proposes another technique:

Nowadays rolls are single-beat everywhere, but earlier they were played as press rolls as on a snare drum. We can still put a bit of that method to good use, by letting the right stick bounce (press) while the left stick plays a single beat. In pianissimo this sounds very good, and in forte it helps when the roll is quite short. (1983:1)

Weitzel dedicates a specific section to what he calls “special tricks” (nd:30) and these include four specific examples of problems related to ending rolls successfully. They are unparalleled for their inclusion in the broader scope of method books and without a doubt extremely useful in dealing with roll-specific challenges. However, what would be more beneficial would be examples from the symphonic literature that could illustrate direct source for these specific problems as seen in Carroll.

On a final note, one other aspect of Weitzel’s text sets it apart from others. The concluding pages involve a vigorous training program for developing roll stamina. More akin to an athletic routine, exercises include playing up to speeds that cannot be maintained for long periods of time, in effect, causing fatigue. After a rest interval, these exercises are resumed designed to push the limits of technique. In addition to these stamina-building drills, Weitzel includes a series of stretches to be carried out in conjunction with the playing exercises. Photo illustrations are included.
1.7 Summary of Roll Technique

Considering the many accounts of roll technique, the most involved is Weitzel, being the only text completely dedicated exclusively to roll study. There are many useful roll etudes and exercises in all of the texts in this study but none offer a complete course with a single focus. Weitzel’s text does not include symphonic repertoire. Undoubtedly, it is written this way intentionally to be used as a supplement to orchestral study. Nevertheless, it would be beneficial to include the specific works that inspired his exercises. The result would be a direct reference with which to formulate a comprehensive technical connection of exercise to excerpt. A more orchestrally-oriented discussion of roll interpretation can be found in Schweitzer. With regard to the common problem of ending rolls, contrary to many of the method books, he discusses the orchestral context as dictating whether or not to do so with an extra stroke. Referring to Mozart’s *Haffner Symphony* he says the following: “In measure 74, he ties a half note roll to an eighth note. This should be played as a single roll with no concluding stroke since this figure doubles the exact rhythm in the trumpets and horns” (2010:141).

Kohloff discusses roll notation and interpretation in his commentary on Beethoven’s *Symphony No. 5*. He makes interpretive suggestions such as playing what Beethoven notated as 16th notes as a regular roll. Hinger makes similar interpretive decisions. On whether to play the printed 8th notes or a roll, in Beethoven’s music, Hinger states the following: “It is of no consequence if these measures are played as eighth notes or as a
tremolo since the tempo is so fast that the listener would have a difficult time differentiating between the two” (1982:34).

Kohloff provides more of the same throughout his text but it is very specific to one piece. The information is well-organized providing commentary for each specific musical example as it is in Hinger. What would be more useful is the incorporation of an exercise that is directly related to the various excerpts presented.

1.8 Pedal Technique

Carroll, Goodman, Hinger and Peters all provide information on timpani pedal technique. Most thorough, however, is Stanley Leornard’s *Pedal Technique for the Timpani*. This work is of particular importance as it is the only volume of its kind in the literature, therefore, it will be discussed in depth.

All of the authors mentioned in the previous paragraph support the necessity for an advanced level of ear training in order to facilitate proper pedal technique. There is also a common theme in these texts expressing the value of singing difficult pedaling passages before they are carried out on the timpani. Peters considers this to be a crucial aspect of preparing difficult passages that require pedaling. He also states the following: “It is essential that the performer always “mentally hear” pitches before they are pedaled. This

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51 Also present in Friese-Lepak, Gardner, Hochrainer, Ludwig even though not discussed in detail here. Several of these authors include ear training and theory in the first pages of their text.
skill is easily built upon a strong foundation of basic ear training and a thorough
knowledge of intervals” (1993:70).

When considering the challenges of pedaling, both Peters and Carroll refer to the
development of what they refer to as a kinesthetic sense when considering the challenges
of pedaling. They are relatively brief when compared with Leonard’s treatment of the
subject. Generally, apart from Leonard, the texts discussed here include only a small
amount of written information accompanied by various etudes. Whether or not this is
intentional is open to interpretation. It is possible that these authors value practical study
more than verbal description that would account for the inclusion of etudes with little
explanation. When compared to Leonard’s complete course in pedaling, the content in
other texts seems insufficient. Furthermore, Leonard does not consider pedaling to be an
isolated technique for one purpose only as is the case in other method books. Rather, it is
part of a total concept. Consider the following statement by Leonard:

The timpani pedals are not used merely for tuning. Indeed, they do facilitate
tuning, but they are also a basic component in overall performance techniques.
Manipulating the pedals with confident understanding, the performer can actually play the timpani, and fully appreciate the musical potential of these instruments. (1988:3)

Leonard provides the only volume of its kind in Pedal Technique for the Timpani. There
are many factors that set this text apart from the others. One of the most important
statements by Leonard can be found in the first few pages where he suggests that pedal
practice be incorporated very early in a timpanist’s course of study. This is not to say that
other authors do not agree that it is important to introduce pedaling early on. However, it is very clearly stated by Leonard and not in other texts making this a significant pedagogical statement. This, along with many other philosophical ideas, makes Leonard’s book unique. To illustrate, one only has to look at a heading that appears at the beginning of the text, titled: “Using the Pedals: A Positive Approach” (1988:2). This may seem like a minor detail but it sets a welcoming tone for a very detailed course in an often-daunting technique.

Other aspects of Leonard’s text that add importance include the following three ideas: 1) “Successful performance on the pedal timpani involves movement of the foot, leg, and body, in addition to arms, wrists, and fingers” (1988:4).

This important statement is not mono-focused, as are sections on pedaling in other texts, taking into account aspects of technique other than pedaling to illustrate a unified technical concept.

2) “This arc of instruments, which may consist of two or more drums, is a console. When performing, the player must always think of this console as the instrument, not merely a collection of individual drums” (1988:4).

This concept, or anything similar, is not expressed in any of the other texts involved in this study. The same can be said for the following: 3) “The drums must be spaced in the arc to fit the physical proportions of the player” (1988:4).
These ideas are only a small part of what makes this text an important resource for any teacher or student of timpani. What is most vital is Leonard’s philosophy of what he calls the Total Process of Pedal Tuning.

The total process of pedal tuning combines several principles to achieve a musical result. The finest result is produced by the timpanist who uses the entire mechanical and musical resources of the instrument with an understanding of how all the forces and energies of the instrument and the performer work together. This total process could actually be called a system of performance. (1988:11)

Philosophies such as this are commonplace in this text. Despite the specific focus of his course, there are many concepts and issues that not only pertain to pedaling but also to other considerations making this a very comprehensive source. It does not include the broad scope of technical issues as do many of the other sources. However, Leonard’s text is, in this author’s opinion, the most involved while maintaining an accessibly logical layout with an inviting and positive tone.

1.9 Summary of Pedal Technique

Stanley Leonard remains unmatched in his treatment of technique regarding pedaling. However, he does not include substantial information on pedaling directly related to the symphonic repertoire. His only illustration relating directly to orchestral excerpts is the inclusion of Bartok’s Concerto for Orchestra, movement four. The remaining practical studies are all original.

52 It does, however, include non-pedaling warm-up exercises and general technical advice such as leaving time to “warm up the fingers, wrists, arms and intellect” (1988:24).
There is also a general lack of pedaling examples of symphonic repertoire in many of the other texts discussed in this dissertation. In the texts by Friese, Goodman, and Peters, pedaling exercises involve playing either popular melodies or original etudes. In cases where pedaling excerpts are provided, there is no instruction or commentary to accompany the music. Authors such as Abel, Hinger and Leonard offer suggested tuning changes in some of their orchestral examples but this is the extent of their instruction. Randy Max and John Tafoya on the other hand, provide the most guidance of all authors for pedaled orchestral excerpts. For example, when discussing Bartok’s *Concerto for Orchestra*, Movement four, Max’s approach is very thorough. After including brief historical information, he supplies the original printed timpani part and makes various performance suggestions. For example, Max comments on his preference for what timpani should be pedaled and when. Max illustrates this by providing various tuning plans for each excerpt that involves significant pedaling. He also suggests choreography for working out the movement of the feet. Max describes the following for *Der Rosenkavalier* by Richard Strauss: “During the 4-bar rest before [66], first pedal the 32 to G, then move your feet back to the inside drums, tuning C and D” (2010:100).

On a final note, based on personal experience, I have found that some timpanists believe that a complete reliance on gauges for tuning is not preferable. I have also spoken with those who believe that they should not be used at all and that tuning should involve muscle memory and kinesthetic ability of the feet, used in conjunction with the player’s sense of pitch. However, there are those who advocate using gauges to a certain degree.
Max suggests that in performance the timpanist should split the focus between the gauges and the conductor. (2010:22) Hinger points out that the timpanist should rely on whatever works to correctly tune in this strong statement: “Only an amateur would ridicule the use of indicators [gauges] when the player finds them necessary. A rule to follow is “Use any means possible to get the correct pitch”” (1975:6).

1.10 Treatment of Symphonic Repertoire

Before Fred Hinger published his series *The Timpani Player’s Orchestral Repertoire* from 1982 - 1985 timpani texts were very brief, if not altogether negligent, in their treatment of the symphonic repertoire. Category One texts such as Friese, Gardner, Goodman and Ludwig all include examples of symphonic repertoire that demonstrate technical issues. However, there is a general lack of detail regarding the reason for their inclusion. The authors provide no performance guidelines for the repertoire. Moreover, there is no insight or explanation for the excerpted music. Category Two and Category Three texts such as Délecluse, Fink, Hochrainer and Woud provide a multitude of etudes including material inspired by orchestral music. For Délecluse, Fink and Hochrainer, it is difficult to make a direct link to orchestral music based on their etudes. In examining the studies it is clear that there are similarities and in some cases, indirect references. Woud presents his studies with descriptions of what piece(s) and what composer(s) inspired each etude in addition to providing performance suggestions. The etudes, however, never refer to the original timpani part other than brief quotes. Fink offers performance suggestions for his etudes but they are less thorough than Woud’s and have even less
reference to symphonic repertoire. Category Four texts include the most concrete link to orchestral timpani parts. This was set in motion by Hinger’s series from 1985. Since then there have been several attempts to provide a more substantial course for preparing orchestral timpani parts. In addition to Hinger, the most successful of these efforts include the following authors; Raynor Carroll, Roland Kohloff, Randy Max and John Tafoya. Carroll’s *Exercises, Etudes and Solos for the Timpani*, is not a Category Four text based on the literature survey of Chapter Two. However it is included in this discussion due to a partial focus on orchestral excerpts to illustrate specific technical issues.

Although Kohloff’s publication is only centered around one composition (Beethoven, *Symphony No. 5*), his format is similar to Hinger’s. Both include extensive musical and technical suggestions but also place emphasis on the importance of score study.

Comments include suggestions such as the following in Kohloff’s text:

1) Contrast in dynamics and other performance possibilities not always provided in the score. 2) What to listen for in the other instruments of the orchestra. 3) Cues in the score to ensure correct entrances when faced with rest counting. 4) Common musical liberties applied by conductors. 5) Technical suggestions such as which notes should ring and which should be dampened. 6) Advice for articulation. 7) Part editing – the addition of notes not found in the original score.

(2007:3-13)

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53 Although the texts by Alan Abel and Jacques Remy have publications dates prior to Hinger, they are much less detailed and, therefore, will be not be discussed.

54 Originally, this was intended to be a series much like Hinger’s dealing with many different works.
Hinger’s and Kohloff’s texts are presented in an organized, yet informal manner creating the impression of a private lesson transcribed in a book. This is particularly so in Hinger’s case.\footnote{Comment: “Although counting is always desirable, it is difficult to miss the entrance 4 measures before letter Dd. If you do, turn in your mallets!” (1985, Vol.5:8).}

John Tafoya’s *The Working Timpanist’s Survival Guide* is geared towards common excerpts found on audition lists. He includes general musical instruction that would benefit any playing situation but his text is specifically focused facilitating audition performance. In some cases, he offers modifications on how an excerpt differs in concert compared to auditions. For example, he suggests specific tunings for excerpts that involve pedaling to mitigate the difficulty performing timpani parts that are out of context. To clarify: There is another dimension to playing excerpts in the absence of an orchestra with which the timpani would normally blend. A specific example can be found in his suggestions for the finale of Bartok’s *Concerto for Orchestra*. For this excerpt Tafoya recommends a tuning scheme for both concert and audition situations. (2004:79)

Tafoya’s text is first to make audition preparation a major focus. Randy Max is much more thorough in *Orchestral Excerpts for Timpani* from 2010. He includes many performance suggestions for a large number of orchestral works. Included is biographical information on the composer and historical context for each excerpt. Unique to this text is the inclusion of a large list of recommended recordings of each excerpt provided. For each of these, Max provides various tempi taken by the conductors to give a cross-section of possibilities for preparing an excerpt. Each excerpt is accompanied by an audio
example, on CD, taken from the list of recordings and also a Practice Track. This feature allows the timpanist to play the excerpt along with a partial orchestra part. The practice tracks begin at a slow speed and gradually increase to performance tempo. Other features include various tuning schemes for both American and German timpani configuration.\textsuperscript{56} To date, this is the most practical source for the application of orchestral timpani techniques. It could be argued that, up to this point, any timpanist preparing excerpts could play along to various recordings of orchestral works, in essence, creating the same playing situation as the Practice Tracks. However, when using the Practice Track, the inclusion of a progression of play-along tempi is more progressive than simply playing along to a recording.

Although it is not presented as an instruction book in the traditional sense, Schweizer’s *Timpani Tone and the Interpretation of Baroque and Classical Music* provides performance suggestions for symphonic repertoire. Most of Schweizer’s content is based on two very specific time periods, as the title suggests, but also includes references outside of these styles. There are musical, historical and interpretive suggestions as well as a thorough scientific analysis of timpani acoustics. Regarding performance techniques, his commentary most often refers to issues such as phrasing, colour and dynamic shading, muting, articulation, interpretation of roll notation all of which is applied to many examples of symphonic timpani parts. It is presented in a way that is extremely analytical and discussed with a highly interpretive angle. In some cases Schweizer discusses compositional inspirations to illustrate his examples. Consider the following

\textsuperscript{56} American timpani set-up is largest timpani on the left and highest on the right. German is the opposite.
regarding Haydn’s Paukenmesse: “Understanding the choral and historical context of this timpani passage is important to interpreting the part. Juxtaposed to one another are (1) the choir that is singing, “O Lamb of God, who takes away the sins of the world” and (2) the timpani – a symbol of war” (2010:128).

The interpretive component of Schweizer’s research puts his work in a different category from other texts offering a wealth of musical and historical information for anyone interested in the music from the baroque and classical periods.  

1.11 Summary of Treatment of Symphonic Repertoire

Is it clear when looking at the large amount of instructional literature that there is a thorough treatment of orchestral timpani parts beginning in 1985 with Hinger’s series, The Timpani Player’s Orchestral Repertoire. Prior to this time, although excerpts were often included, the focus was to provide either a complete method or a large volume of etudes. Over the years, since Sietz’s publication in 1943, authors have progressively become more detailed in their approach to providing instruction on orchestral timpani parts and, more specifically, timpani excerpts. The most successful, in my opinion, are those that deal exclusively with the timpani parts from the symphonic repertoire such as the publications by Hinger, Kohloff, Max and Tafoya. The latter texts contrast those that include timpani parts with no commentary, such as older texts of Goodman, Friese and Sietz. Hinger, Kohloff, Max and Tafoya also provide a more directed study than those

57 These periods make up the bulk of the information provided despite the fact that there are references to music from later times.
that create a large number of etudes roughly based on symphonic music such as those by Délecluse, Fink, Hochrainer and Woud.

Despite the trend to further the literature based on the study of orchestral timpani parts, there is still nothing that uses the technical material directly related to a timpani part as a means of composing exercises to facilitate their challenges. If there are exercises that directly relate to timpani parts from the symphonic repertoire, it is not obvious. As I have already stated, there are etudes that claim to be based on challenging orchestral timpani parts. However, having analyzed many different authors’ treatment of the symphonic repertoire, the sources often are still obscured by the larger context of the etudes. The exercises presented in Appendix B of this dissertation will provide what I feel is missing from the texts discussed thus far.
CHAPTER FOUR - CONCLUSIONS

The material for this dissertation was selected to give the broadest possible cross-section of information available on different styles, techniques, ideas and concepts found in the instructional literature for timpani. The interviews with timpanists Ian Bernard, Tom Greenleaves, Brian Jones and Benedickt Leithner, their opinions on which timpani books they preferred, and why, proved to be very interesting after having researched the instructional texts for this dissertation. All of the timpanists interviewed referenced various methods and manuals as having useful information. However, in every case there is an emphasis on the fact that these should be supplemental to private instruction, individual experimentation and self-discovery. It is interesting to note that this sentiment is present in the very first published timpani manual by Altenburg from 1795: “It is not possible in this brief essay to describe the advantages accruing to them [pupils] from such exercises. As I have already said, in this case oral instruction is always best” (1795:125).

With the exception of Leithner, all interviewees did not place much emphasis on the extensive use of instructional texts. They all referenced texts that they felt were beneficial to certain degree, describing method books as falling short of being a complete vehicle for study. All four timpanists provided thoughts about ways in which the literature could be enhanced. Ian Bernard feels that texts should be a set of exercises that are similar to those used by a string player, although he was not specific, that would be started at a very young age. He qualifies this with the following statement:
I’ve formulated a couple of exercises that work on the two most important things in timpani playing. One is the roll and the other is articulation. But they also are exercises that allow you to produce a variety of sounds with one pair of sticks and you discover, in the process, muscles you didn’t know you had. (Ian Bernard, interview by author, Ottawa ON, November, 2009)

It is difficult to see a direct relationship between a string instrument and timpani when considering that string instruments deal with melodic material and timpani do not. Also, to compare the articulation achieved by a bow on a string is quite different than articulation with timpani mallets on a vibrating head. It is also doubtful that anyone studies timpani at a young age as would, for example, a violin student. Regardless, Bernard feels that there is no comparable pedagogical resource for timpani practice. Although there are texts that claim to be complete methods, Bernard feels that they do not provide a proper course. What specifically Bernard would contribute in this respect, apart from his proposal above, he did not express.

Brian Jones discussed several of the works cited in this dissertation as containing valuable material for study. He refers to the texts of Carroll, Délecluse, Goodman, Hinger, Hochrainer, Max and Tafoya as successful books, although he does not provide specific examples from any of these. His suggestion for enhancing timpani literature is to devise a way to “cross-train”, as he put it, the student by incorporating technique and style from as many different timpanists as possible. In a way, this is already possible in cross-referencing the many timpani texts that are available. Perhaps an intersection of style and technique within a single book would be more beneficial. Similarly, Tom Greenleaves feels that a cross-reference of recordings to hear different playing styles, and
orchestra styles, would be beneficial for inclusion in an instructional text. At the time of this interview both Greenleaves and I were unfamiliar with Randy Max’s publication that provides a list of suggested recordings for the purposes of hearing different timpanists’ styles of playing.

Benedikt Leithner’s only preference from the large volume of literature is Weitzel’s *Pauke üben* and *Der Paukenwirbel*. Leithner says that he and all of his students use these two books. His only addition to the literature would be a detailed approach to practicing intonation. In relation to other instrumentalists, Leithner claims that timpanists are often lacking in ability to properly deal with intonation within a group of other instrumentalists. He feels that young timpanists generally do not have as much experience tuning as would string players, many of whom would have played in youth orchestras or chamber groups and would have developed an ability to adjust tuning within an ensemble. Although an interesting notion, this would be difficult to convey in a book. Without direct experience playing in an orchestra or ensemble, providing this information as written instruction might be impossible.

All of the texts cited in this dissertation offer, at least in part, their own approach to timpani instruction whether it is intended as a complete course of study, covering all aspects of timpani performance, or as a more specifically directed guide. Judging by the inclusion of orchestral excerpts in most cases, there appears to be an underlying goal to improve technique associated with issues in the symphonic repertoire. However, there must also be a desire to further the position of timpani in the world of solo repertoire.
substantiated by the enormous volume of solo etudes from authors such as Carroll, Délecluse, Fink, Hinger, Hochrainer, Knauer, Vic Firth and so on. Délecluse claims that his etudes are loosely based on orchestral timpani parts. Hochrainer’s are similarly presented and, in some cases, direct, yet brief, references to the symphonic literature can be identified. Having personally worked through all of the Délecluse etudes, it is difficult to say with any certainty that, in studying them, I gained any specific knowledge on how to approach practicing orchestral excerpts or whether, in an orchestral situation, these have proven beneficial in how I prepare and perform an orchestral timpani part. For those who study and perform the plethora of solo timpani etudes there must certainly be incidental benefits that might relate to a timpani part from the symphonic repertoire. However, apart from the personal satisfaction of learning and performing a solo piece, the link to the orchestral world seems tenuous. In some cases original etudes are not composed with a direct relationship to orchestral music and do not intend to be. This is particularly evident in Vic Firth’s *The Solo Timpanist*. It is clear to see the stand-alone solo nature of these pieces. For Délecluse and Hochrainer and even Woud (who often directly quotes symphonic repertoire in his studies, albeit very briefly) it is less obvious despite their alleged relationship to symphonic timpani parts.

The method books by Goodman, Friese, Gardner and Ludwig present another dilemma when considering symphonic repertoire. The inclusion of orchestral examples without any performance suggestions, or reason for their inclusion for study, is all too common. Furthermore, there is no direct connection between the orchestral examples provided and the content pertaining to technique. Carroll’s text is, marginally, an exception. It is
organized using orchestral examples that correspond to technical issues. However, it is questionable as to how efficiently the etudes work to prepare the player for the original orchestral parts. To illustrate, there are eighty-eight exercises and twelve etudes (2001:110-123) specifically composed by Carroll for four timpani. Following these are several examples of orchestral excerpts (2001:124-125) also utilizing four timpani. If the exercises, etudes and excerpts are to be studied in relation to one another, the only tangible connection that can be made is that they all involve the use of four timpani. There is no technical exercise or etude that directly relates to an orchestral excerpt nor is there instruction on how to practice orchestral timpani parts. Certainly the continual practice of such etudes would increase the familiarity a player has with the spatial elements involved in any piece requiring four timpani. This may be Carroll’s intention even though it is not specified. However, no two excerpts are the same and, therefore, there is a void of specifically tailored exercises to facilitate each unique characteristic whether it is written for two, three or four timpani. Hypothetically, it is doubtful that if one were to practice all of Carroll’s examples in sequence that they would be better equipped to play the excerpt that he relates to the etudes. In looking at the etudes in Carroll’s book written for four timpani, I have attempted to make a correlation between them and the excerpt from Mahler’s Symphony No. 5. This is one of the excerpts Carroll has included in relation to the exercises and etudes for four timpani. I do not see any obvious correlation. If the exercises are related to the excerpt, it should be more obvious. Otherwise, why not simply study the excerpt and create an exercise that directly relates, keeping solo pieces as a separate endeavor? This issue is the fundamental concern of this dissertation. That is, to address the need for excerpt-specific exercises to assist in the
musical and technical development of preparing timpani excerpts for performance. The appendix of this dissertation will include suggestions to this end.

There is no holy grail of timpani instruction despite efforts by some authors to create a complete method. Discussing method books and manuals with other timpanists and, reflecting on my own experience, has lead to the conclusion that method books and manuals should always be supplemental to private instruction and personal discovery. These two experiences are equally important. In addition to these two points is the visual aspect of learning timpani and, for that matter, any other instrument. Though not exclusive, I believe that visual learning is important in developing a playing style. Many technical ideas, when studying timpani, were solidified by watching experienced timpanists perform.

The content of many of the texts discussed in this dissertation leads me to conclude that much of the material is perfunctory. For example, Mitchell Peters includes a section describing the proper place to strike the timpani under the headings, The Playing Area and Beating Spots. Although commentary on these issues is useful, I do not recall ever looking to an instruction book for this information. Furthermore, I did not learn to play legato, staccato, or a roll by studying a text. Instead, attention to this issue was the result of weekly reminders from my teacher, personal preference and experience playing with orchestras. In my experience I was never told to read the section, in a particular text, pertaining to this or any other issue. These are merely a few examples of many issues included in the large number of instruction books. With the exception of Leithner, and his
enthusiasm for Weitzel’s *Pauke üben*, none of the timpanists claimed that any of the exercises are essential for students. Greenleaves discussed specific etudes that appear on audition lists in Europe but did not refer to any volume of studies that he used to any great extent.

I feel that it is very difficult to properly convey basic technique through written description. More specifically, a written description of how timpani should sound is even more difficult to convey. In my opinion, it should be left out of instructional texts completely unless it can be described accurately. To be sure, this is a bold statement and one that will generate a reaction. To illustrate, consider the following description by Peters:

In the following exercises, the player should employ a relaxed lift in order to produce a soft, legato sound. Start with the stick positioned as closely to the head as possible (about one inch). Next, relax the grip completely, allowing the stick to fall freely. As the stick begins to fall, lift it (with a relaxed movement using the arm) about 18” off the drum. The sound is produced not by striking the drum but by allowing the stick to drop to the head as you lift it off. (1993:54)

I do not consider this to be a very clear description. It is also a contradiction of terms. If the stick is making contact with the drum, is this not considered striking? Also, how does one “drop” something as it is being “lifted off”? Descriptions such as this do more to confuse than to clarify. As someone with experience playing timpani, I understand what Peters is attempting to describe. However, if this is the first description seen by a young student, it might be difficult to comprehend. The argument can be made that an example
such as this one is, as I have stated before, supplemental to private instruction. If that is the case, why commit it to print if it needs clarification through private instruction?

Some may indeed wonder how I can make this statement and be so bold as to provide my own exercises, as in Appendix B. To defend my position, I believe that these exercises are less subjective than stroke types, sound and touch. The technique is more absolute and does not comment on interpretation. It is technical and more related to muscle memory than anything else. Even various stroke types, although these are definitely an aspect of technique, are arbitrary. One can describe a legato stroke as starting approximately twelve inches off the drum and involving a lift after impact but, as I am sure many timpanists would agree, this is simply one description within a myriad of other possibilities. One can describe louder volumes while referring to stick height but loud playing can be achieved with a relatively low stick height and softer dynamics can be effectively played with a mallet coming from a high starting point. Additionally, variations of stroke types are constantly changing in every playing situation based on the response to playing with other musicians combined with personal discovery and experimentation and even the suggestions of a conductor. Therefore, it stands to reason that these fine points are very difficult to convey in a book.

If authors insist on describing very specific ideas about technique in a text, perhaps it should include a visual component to properly illustrate. As stated above, I believe that timpani technique involves a great deal of visual learning. Therefore, the addition of a video example showing a personal demonstration, to accompany a verbal or written
description could eliminate possible confusion. To my knowledge, this has not been done.

New instruction books continue to be authored and it is not my intention to denote these or any other books as completely ineffectual. However, I feel that they must be observed very critically. Throughout this dissertation I have challenged the efficacy of composing a large volume of etudes. The reason for my objection is that I have not been able to reconcile to what extent they have improved my playing, having worked on many of them. I make this point considering their relationship to the study of excerpts. I recognize the benefit of distancing oneself from exclusively practicing excerpts. In this respect, solo timpani pieces can be advantageous as unrelated to symphonic music. I also recognize that all instruments have volumes of etudes most likely to provide variety. If etudes continue to be written, the intention should be clearly stated.

What I have remembered as having the most benefit, when preparing timpani parts, is the creation of exercises with a direct connection to the composer’s original score. Presently, it is a practice that I employ and feel that it could further the literature in the form of a practice manual with a single focus.

My suggestions in Appendix B are not intended to be a complete timpani guide. I do not believe comprehensive methods, in the absence of instruction, to be a successful means by which to learn technique. I also do not presume to offer a replacement for private
instruction but, rather, suggest ways to work on orchestral excerpts based what has worked for me.

In studying the large volume of texts included in this dissertation, it has become clear that the style of exercises I, and others, have used to prepare excerpts is not found in any timpani instruction book. To be sure, there could be coincidental similarities to exercises found in the many instruction books already discussed. However, I guarantee that if there is any relationship to the symphonic repertoire, it is not identified by their authors as I have done. Looking at the literature for the trumpet, I have found similar exercises, to ones that I use, in the series, *Symphonic Works – Complete Trumpet Parts* by Michael Sachs. In this series, the excerpt is broken down to a skeletal structure and worked progressively until the original part is played. Sachs includes a concise description of each exercise. My suggestions for timpani exercises are reminiscent of this method of practicing. I believe that this offers a much more focused approach to learning orchestral timpani music for the timpanist who already has a basic understanding of technique.
Bibliography


———. Timpani and the Timpanist’s Art. (1979) Gothenburg University, Goteborg.


Sietz, Frederick. (1943) *Modern School of Timpani Playing.* Leedy Manufacturing Co., Indianapolis.


Weitzel, Arend. (nd) *Der Paukenwirbel/The Timpani Roll.* Gretel Verlag, Dinklage.


APPENDIX A

Having surveyed a large volume of timpani instruction books, it seems appropriate to briefly look at similar texts that are commonly used by other instrumentalists and draw comparisons. The texts discussed here have been chosen because they present material that could possibly be applied to instruction books for timpani. The first comparison is drawn from the trumpet literature as it has been so closely associated with timpani throughout history and still is to this day. I will begin by discussing articulation exercises from Jean Baptiste Arban’s *Famous Complete Trumpet, Cornet and Saxhorn Method*. To contrast the comparison to trumpet, I will discuss one specific aspect of Rodolphe Kreutzer’s *42 Studies*, edited by Ivan Galamian. Galamian was a famous violin pedagogue who devised a system for editing a large volume of violin repertoire. The practice of edited violin studies might transfer to timpani literature as the large volume of etudes could be enhanced in similar ways.

It is difficult to compare timpani to other orchestral instruments. Firstly, melodic and harmonic possibilities are limited compared to other instruments of the orchestra. Generally, timpani do not have to play scales, arpeggios, chords etcetera, as do string, wind and brass instruments. However, there are aspects of technique and other concepts that can be related to timpani pedagogy. Based on the close relationship throughout history of timpani and trumpets, I have looked at a standard trumpet method to draw some comparisons. One of the most widely used trumpet methods is the *Famous Complete Trumpet Cornet and Saxhorn Method*, by Jean-Baptiste Arban.
comparisons can be made to timpani technique in the inclusion of references to articulation, particularly *staccato*. These articulations are not directly transferrable from trumpet to timpani as the method of how trumpet articulation is executed is obviously quite different from how it is done on timpani. What is achieved with the tongue and mouth on the trumpet is done with the hands and mallets on the timpani. Nevertheless, there are ways in which the timpani literature could benefit from an observance of the section on *staccato* articulation in the Arban method.

*Staccato* articulation is an important aspect of timpani instruction. However, the terminology is limited in the timpani literature when compared to what is found in the trumpet literature. In many timpani instruction books there is often only two designations for *staccato* articulation. One is *staccato* and the other is *marcato*. Peters and Schweizer are the only two that use both. They also describe more specific articulations within a *staccato* framework. Peters is less detailed, describing a “full-stroke” and “finger-controlled *staccato*” (1993:78) to achieve various colours. To illustrate variations in articulation, Schweizer refers to terms found in orchestral scores such as *portato*, *martellato* and *staccatissimo* (2010:41). However, there are no exercises provided to illustrate as there is in Arban. Arban’s *staccato* designations applied to timpani technique might be beneficial if included in *staccato* exercises such as those written by Peters or Goodman. Authors could include markings in their exercises that reflect the terms presented by Arban such as, simple *staccato*, sharp *staccato* and semi-*staccato*. (1956:45-54) In effect, there could be a completely new terminology applied to timpani technique. Additionally, markings could be applied to exercises that would indicate different
articulations rather than simply provide a large amount of \textit{staccato} exercises that indicate nothing. This is the case in many timpani texts.

Regarding violin literature, there are many etudes, by various composers, that have been edited by prominent pedagogues. One example is Kreutzer’s \textit{42 Studies} edited by Ivan Galamian. The addition of fingerings to Kreutzer’s studies is one important aspect of how these pieces are modified. A similar practice could enhance the timpani literature with the addition of sticking suggestions for the large volume of etudes from many different instruction books. In addition to adding sticking suggestions, timpani etudes could be edited for articulation as is also done for many violin etudes. The result is a more focused way of practicing repertoire that is included in so many timpani instruction books.

Lastly, the practice of editing timpani etudes in this way could also be applied to solo literature such as the many concerti for timpani and also the repertoire composed by Elliott Carter. To my knowledge, this has never been done and is a way in which concepts from the instruction books of other instruments could be applied to timpani literature.
APPENDIX B

The following exercises suggest an approach to practicing orchestral timpani parts.

Conceptually, these practice routines are inspired by four years of private instruction with Ian Bernard - former Principal Timpanist of the National Arts Centre Orchestra in Ottawa, Ontario Canada. However, they are original unless otherwise indicated.

I do not suggest that these exercises are the final word on symphonic timpani repertoire preparation. My intent is to document exercises that have helped me prepare and practice timpani excerpts. The exercises are geared toward training the hands to facilitate the technical demands of the excerpts. Therefore, there will be little or no commentary on sound and interpretation. I feel that this is best developed personally and/or with the help of a private instructor.
Mozart - Symphony No. 39 in Eb major, Opening twenty-one measures: An exercise based on this excerpt.

Practice all examples at quarter note = 50. One of the most difficult aspects of this excerpt is to maintain a steady pulse at a very slow tempo. It is preferable to use a metronome that can eliminate beats. Consider the following:

Begin by setting the metronome to sound all four beats in the measure. Then eliminate beats two and four from sounding on the metronome to create a larger amount of space within the measure. Finally, eliminate the sound of beat three so that the metronome is only sounding the first beat of the measure. Experiment with counting in subdivisions of eighth notes and sixteenth notes and decide one that is preferable. Personally, I prefer to count eighth notes for this excerpt. It is advisable to commit to one or the other and not mix the two to maintain consistency. Practicing examples 1 (a), (b) and (c) and eliminating beats on the metronome helps to solidify the very slow tempo before the rhythm becomes more complex.

\[
\begin{align*}
&\text{a)} \quad \begin{array}{c}
\begin{array}{cccc}
\cdot & \cdot & \cdot & \cdot \\
\cdot & \cdot & \cdot & \cdot \\
\cdot & \cdot & \cdot & \cdot \\
\cdot & \cdot & \cdot & \cdot \\
\end{array}
\end{array} \\
&\text{b)} \quad \begin{array}{c}
\begin{array}{cccc}
\cdot & \cdot & \cdot & \cdot \\
\cdot & \cdot & \cdot & \cdot \\
\cdot & \cdot & \cdot & \cdot \\
\cdot & \cdot & \cdot & \cdot \\
\end{array}
\end{array} \\
&\text{c)} \quad \begin{array}{c}
\begin{array}{cccc}
\cdot & \cdot & \cdot & \cdot \\
\cdot & \cdot & \cdot & \cdot \\
\cdot & \cdot & \cdot & \cdot \\
\cdot & \cdot & \cdot & \cdot \\
\end{array}
\end{array}
\end{align*}
\]
Once this feels comfortable, practice exercises 2, 3 and 4 in the same manner to solidify the tempo of this excerpt and to familiarize the overall pulse and the change of rhythmic subdivisions within. This will help develop a steady time in between notes where counting is often lost. For example, this is the case between the first note and the 32\textsuperscript{nd} notes as in example 2 (a). Example 5 is more difficult to count properly since the roll involves unmeasured strokes. Although some use a measure roll, I recommend using an unmeasured roll as it sounds smoother. This is more important when playing the excerpt in the absence of an orchestra.

Counting with beat elimination, as described above, can effectively work for accuracy in time keeping. When all of the exercises are practiced this way, play the excerpt with the various metronome settings already described. This specific exercise is created for excerpt practice for an audition situation where the part is played out of context without the orchestra. Realistically, while it is good work on time keeping and counting, one would never have to count as meticulously in an orchestral situation.
Beethoven – Symphony No. 1 in C major, Movement III: An exercise based on excerpts in this movement.

Practice all of these exercises with the right and the left hand separately. For each exercise, keep the opposite hand and mallet (that is not striking the head) in line with the hand and mallet that is striking. By allowing both mallets to travel together, even though only one is playing, the complete arm movements are carried out. Practicing with both hands separately, although this is not how the excerpt will ultimately be executed, will help the weaker hand to strengthen. When changing from one drum to another practice shifting mallets, not crossing. Practicing these exercises ten to 15 minutes a day not only provides a good foundation for this excerpt but also works well as a general warm up to get the hands moving quickly. Even though marked differently in the actual part, play everything down one dynamic level. Therefore, forte is played as mezzo-forte and fortissimo is played as forte. Of course, all of these dynamics are relative to the eventual blend of an orchestra.
Beethoven – Symphony No. 7 in A major, Movement I: An exercise based on a thematic rhythmic figure.

One of the biggest challenges of this excerpt is feeling the triple figure set against the duple figure that is the main theme of the first movement. The first sticking examples in (a) and (b) show an exercise created by Ian Bernard to break up the triple and duple figures so that the hands become used to playing these figures independently. Once this is practiced at various tempi, it becomes much easier to play the actual figure with accuracy. The second sticking pattern I have added as an option to Ian Bernard’s. Rather than alternate all of these figures, it is sometimes easier to use a double right as seen in the second sticking pattern. The exercises should be practiced from pianissimo to fortissimo.
Beethoven – Symphony No. 9 in D minor, Movement II: An exercise based on a thematic rhythmic figure.

This excerpt is very similar, rhythmically, to the exercise for Beethoven Symphony No. 7. However, now the rhythm is broken up between two drums. Although the character is quite different than the excerpt from Symphony No. 7, the technique can be worked on in a similar way. Observe the different sticking and experiment to determine what will be the most comfortable and successful means of achieving the precise rhythm.
Brahms Symphony No. 1 in C minor Movement I mm. 77-106: An exercise based on this excerpt.

One of the challenges of this excerpt is to accurately connect the roll on the fourth beat to the downbeat as smoothly as possible and in tempo. I have found that practicing a measured roll, for each instance where this occurs, helps to develop the technique needed to successfully play this passage. Additionally, the increase from sixteenth notes in example (a), to quintuplets in example (b), to sextuplets in example (c), trains the hands to respond to rolls with odd groupings. This is ultimately what happens when one plays a short, unmeasured roll. Therefore, when playing the excerpt, with unmeasured rolls, the hands should automatically adjust to play the downbeat in the proper place. However, a literal execution of any one of these three exercises could work in a performance if the measured roll is smooth enough.
These exercises are effective in preparing this as an excerpt but also as a general warm up much like the previous example from Beethoven Symphony No. 1. However, I find that it takes more technical stamina to play this excerpt up to tempo. As indicated, it is best practiced with separate hands at first and worked quite slow to fast to allow proper development of technique. This allows for the weak hand to be trained as efficiently as the strong hand, depending on the orientation of the player, regardless of what hand begins each passage. A relaxed way of playing is essential in exercises (e) - (h).
Sibelius – Finlandia mm. 4 measures before F: An exercise based on this excerpt.

The four measures leading up to letter F is one of the most difficult roll passages in the repertoire. One of the challenges is the ability to roll evenly and continuously between two drums while accenting and making a gradual crescendo. Using a variation of roll speed, to achieve rapid movement between two drums and accents, is what I have found to be the most technically difficult aspect of this excerpt. Therefore, I formulated an exercise that trains the hands to respond to irregular groupings of notes while quickly moving between two drums. Exercises (a), (b), and (c), are designed to warm up the hands applying uneven groupings. This simulates how a continuous roll can speed up and slow down to facilitate rapid movement from drum to drum. Exercise (d) is based on the sequence of notes directly corresponding to the original timpani part. Once the patterns become easier to play, accents can be applied as is written in Sibelius’ original timpani part. I am not recommending that the excerpt be played this way in a performance or audition, as in example (d). This is an exercise to develop technique so that the hands will respond accordingly when playing the original part.
\[ \text{\( \frac{70}{80} \frac{90}{100} \frac{110}{120} \frac{130}{} \)} \]

a)

\[
\begin{array}{ccccccc}
\text{R} & 5 & \text{L} & 5 & \text{R} & 5 & \text{L} \\
\end{array}
\]

b)

\[
\begin{array}{ccccccc}
\text{R} & 6 & \text{R} & 5 & \text{L} & 5 & \text{R} & 6 \\
\end{array}
\]

c)

\[
\begin{array}{ccccccc}
\text{L} & 5 & \text{R} & 5 & \text{L} & 5 & \text{R} & 6 \\
\end{array}
\]

d)

\[
\begin{array}{ccccccc}
\text{R} & 5 & \text{L} & 5 & \text{R} & 5 & \text{L} & 5 \\
\end{array}
\]

e)

\[
\begin{array}{ccccccc}
\text{L} & 5 & \text{R} & 5 & \text{L} & 5 & \text{R} & 5 \\
\end{array}
\]