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CONTENTS

PURPOSES OF THE PERCUSSIVE ARTS SOCIETY — To elevate the level of percussion performance and teaching; to expand understanding of the needs and responsibilities of the percussion student, teacher, and performer; and to promote a greater communication among all areas of the percussive arts.

PERCUSSIONIST is published Fall, Winter, Spring/Summer by Percussive Arts Society, Inc. Materials to be considered for publication should be sent to: F. Michael Combs, Editor, the PERCUSSIONIST, Department of Music, University of Tennessee, Knoxville, Tn 37916. All correspondence concerning membership, subscription rate, changes of address, etc., should be addressed to PAS, 130 Carol Drive, Terre Haute, Indiana 47805.

Resolved: That a copy of each issue of the PERCUSSIONIST shall be sent to each member of the Percussive Arts Society, Inc., and that each member's dues shall include a year's subscription to the PERCUSSIONIST and PERCUSSIVE NOTES.

Third Class permit. Knoxville, Tennessee. Clerical assistance furnished by the University of Tennessee-Knoxville.

PAS HALL OF FAME

1979 Avedias Zildjian, Richard Hochrainer
1978 Louie Bellson, Alfred Friese, William "Billy" Gladstone
1977 Cloyd Duff
1976 William Street
1975 Frank Arsenault, Clair Musser, James Blades, Paul Price
1974 Harry Partch, James Salmon, Gene Krupa, Morris Goldenberg
1973 William Ludwig, Haskell Harr, Roy Knapp, Saul Goodman, John Noonan

The P. A. S. Hall of Fame Award is given to a person who has influenced the percussion world as evidenced by his contribution in any of these categories:

Performance excellence
Writing and composing
Teaching excellence
Inventions and/or discoveries

Nominations are made from the membership at large. No stipulation is made as to whether the person nominated is living or deceased. Nominations are open to all members of PAS through its publications. All nominations are to be received by the secretary of PAS no later than March 1 of each year.

A LOOK AT FUTURE ISSUES OF THE PERCUSSIONIST

The Spring/Summer issue of the PERCUSSIONIST will contain a number of in-depth articles on marching percussion by Sherman Hong, Ken Mazur, Dan Spaulding, Allen C. Benson, Bob Buck, Jay Wanamaker, William A. McGrath, Willis Rapp, and others. This should be an exciting issue with abundant reference material.

The fall issue will be devoted to percussion notation including articles organized and edited by PAS Vice-President Tom Siwe.

* *

The PASIC'80 will be held in San Jose, California (near San Francisco) on the campus of San Jose State College. Tony Cirone, the percussion instructor at San Jose State College and percussionist with the San Francisco Symphony, will be the host. The dates for the convention are November 14-16, 1980. Watch for the fall issue of PERCUSSIVE NOTES for detailed information.

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The manuscript for the musical examples in the *PERCUSSIONIST* are provided by Dr. David Vincent, Percussion instructor at East Tennessee State University.

NEW EDITOR OF PERCUSSIVE NOTES MAGAZINE

President Jim Petercsak has announced the resignation of Jim Moore as PERCUSSIVE NOTES editor and the appointment of F. Michael Combs as the new editor. Mike is the percussion instructor at the University of Tennessee at Knoxville, and has served the Society as a former member of the Board of Directors, former First Vice-President, host of the PAS International Convention in 1977, and chairman of the literature listing committee that produced the booklet "Solo and Ensemble Literature for Percussion." He has been serving as editor of the PERCUSSIONIST since this fall and has already assumed his duties with PERCUSSIVE NOTES. All correspondence regarding PERCUSSIVE NOTES should now be directed to F. Michael Combs, Editor, PERCUSSIVE NOTES, Music Bldg., 1741 Volunteer Bldg., Knoxville, Tennessee 37916.

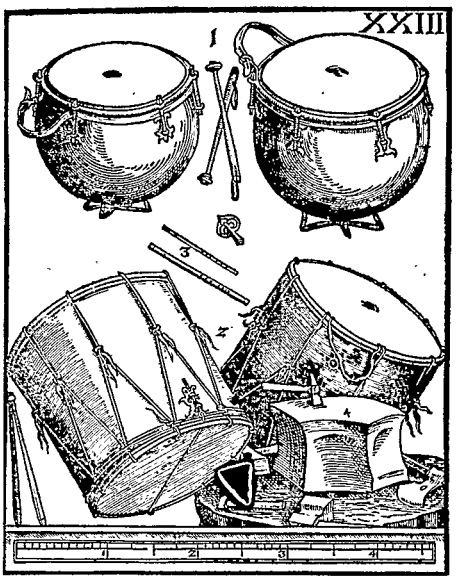
On Using the Proper Timpani in the Performance of Baroque Music

Edmund A. Bowles

Dr. Bowles is an executive with IBM in New York City and has written extensively on the historical aspects of the timpani. He earned a Ph.D. in musicology from Yale University. He has recently completed a monograph on the development of the pedal timpani. This article on baroque timpani first appeared in the *Journal of the American Instrument Society* 2 [1976]:56-68 and is reprinted with their permission.

The growing interest in baroque music and its popularity with performing groups in recent years has led to a concern for the correct *Aufführungspraxis* based upon historical precedents and authentic instrumental sound. More and more frequently, concerts and recordings alike reflect this awareness, as seen in the care taken to execute ornaments or embellishments in the proper style and to perform with original instruments or faithful replicas. Unfortunately, this concern has virtually ignored the timpani, in spite of the fact that they came into their own as an orchestral instrument during the seventeenth century.[1]

Strictly speaking, authentic performances require the use of proper instruments; and it is no more "correct" to play baroque music on modern instruments than it is to play recent music on seventeenth-century instruments.[2] More specifically, baroque kettledrums are quite



Early Baroque kettledrums. From Michael Praetorius, *Syntagma Musicum*, Wolfenbüttel, 1619 (facs. ed. Kassel, 1958), Vol. II.

different in size, shape, and sound from their more modern counterparts. In spite of this, one gets the impression that performers and conductors in general are either completely ignorant on this subject, or are quite content to play old music on new instruments, dismissing the whole question with the rationalization that any way one hits it, a drum is a drum.[3]

While when compared to other instruments the timpani have not changed radically over the past few

centuries, there are in fact very significant differences over time that bear serious investigation. From the Renaissance through the nineteenth century, kettledrums were small by modern standards. In the baroque era, a pair usually measured approximately eighteen and twenty inches in diameter and about twelve inches deep.[4] With a smaller, shallower bowl, the skin was under less tension. Thus, a given note would normally lie under the mean of the drum's compass. Not only was there less resonance and volume of sound, but the quality was different. The smaller the kettle, the more intense the unrelated, or "inharmonic," frequencies. When struck, the head, with more "slack," tended to emit a "belting" tone, the skin sagging under the sticks' impact and the response delayed due to the slower recovery period before the next stroke.[5] This is an important point, for playing on smaller drums producing a lower level of dynamics provided a better balance in the smaller-sized baroque and early classical-style orchestras.[6]

Kettledrummer, from Johann Christian Weigel, *Musicalisches Theatrum,* Nürnberg, 1722. Photo courtesy of Germanisches Nationalmuseum, Nürnberg.

Even the rather squat shape of most baroque drums had an effect upon their sound. Acoustically speaking, the ideal depth of a drum should be equal to the distance from the playing spot to the further-most edge; in other words, about four inches less than its diameter. The cavity, or sound chamber, should be hemispherical for proper reflection of the sound waves to a spot equidistant from the beating node. Of course, little was known about the acoustics of instruments during the seventeenth century, which may in part explain the wide variety of drum shapes encountered.[7]

While there are no manufacturers today who make "baroque" timpani, a reasonable compromise can be obtained through the use of twenty- and twenty-three-inch drums, both readily available. If one is willing to go to the expense, kettles can be ordered in any size and shape from a metalworking shop equipped to spin or hammer sheet stock over wooden forms. Fittings, of course, can be obtained separately from any drum company.[8]

It is unfortunate for those concerned with recreating the authentic sound of baroque timpani that plastic heads have become so ubiquitous. Indeed, today it is difficult to find calf skins and the metal hoops over which to stretch them. As any timpanist knows, plastic heads do not have either the same "feel" or "bounce" when struck as does natural hide; they exhibit less resonance, less elasticity. Even the sonority is different: it is dryer, more brittle, and the tone shorter and

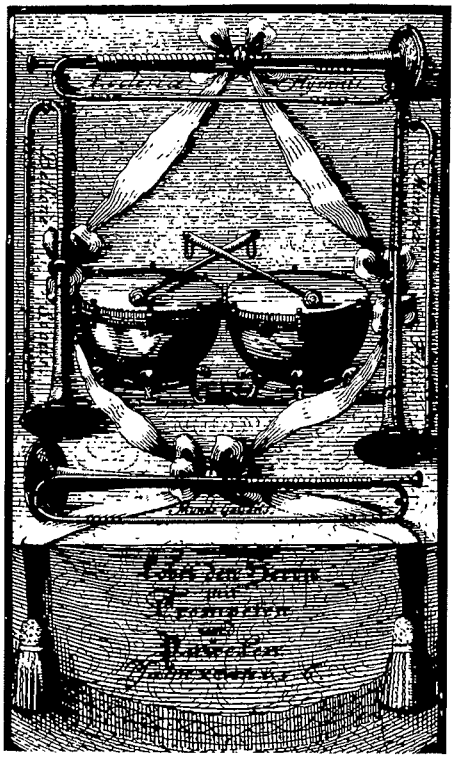
The Parchment Maker, from Christoph Weigl, *Abbildungen der gemeinnützlichen Haupt-Stände*, Regensburg, 1698. Photo courtesy of the Deutsches Museum, Munich.

duller. The chief physical differences are that plastic heads exhibit a faster decay of the note and produce more sound at low frequencies, thus providing uneven dynamics.[9]

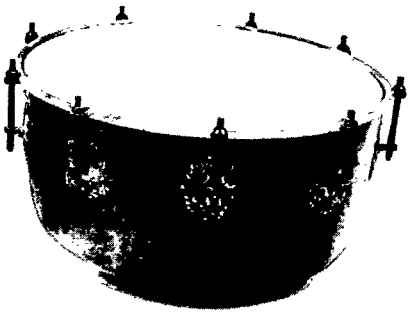
For hundreds of years, drum heads were fashioned by the parchment makers, who as a rule used goat or calfskin. The sheets were thicker and, being hand-scraped, far less uniform in texture than today's skins, which are machine-honed with an oscillating knife. According to contemporary sources, the best skins were half-tanned.[10] By far the most superior products offered by American dealers are the aborted calfskin heads, which produce a sharp, well-defined tone, well focused and clear. English firms still offer the somewhat thicker ordinary calfskin, which produce a more diffuse tone and heavier sound. This, of course, is much closer to the baroque sound.

Drumsticks, too, differed radically from those in use today. The earliest examples were furnished with tiny knobs at their ends.[11] Later on, the sticks usually terminated in small, wooden disks. Fortunately, there is an extremely precise seventeenth-century description to guide us: the material beech or boxwood, the length eight or nine inches, with a rosette at the end the size of a silver crown.[12] Felt was of course unknown, and for softer effects the drummer used sticks covered with chamois or ordinary leather. At least two writers advice him to vary the point at which the sticks hit the drum head.[13]

Obviously, the sound emanating from a skin struck by wood or leather is a far cry from that produced by hitting a head with mallets covered with flannel or cotton felt: it was



Title-Page from Friedrich Friese, *Ceremoniel und Privilegia derer Trompeter und Pauker*, Dresden, 1650. Photo courtesy of the Universitätsbibliothek, Kiel.



Early 18th Century Timpani. Photo courtesy of the Musée Instrumental du Conservatoire, Paris.

more percussive, "drier," and of course louder. The hard knoblike ends of the baroque-style sticks have less "spread" on the drum head, and produce a less full or spacious sound. For solemn or funeral music, sticks covered by wool or gauze were suggested. There is another point worth mentioning. Using a pair of sticks shorter by several inches provides less momentum for the bounce after the initial downward stroke, meaning that the end hitting the drum rests on the skin for a fraction of a second longer. In the roll, shorter sticks, with less recoil on the upstroke, make for a slower trill. However, for articulated passages or embellishments, the hands have better control than with a pair of modern sticks fourteen or fifteen inches long.

Fortunately, it is relatively easy to convert modern sticks for baroque performance. A leathersmith can recover the disk-ended sticks with soft leather, stitching around the edges. Any timpanist familiar with the technique can remove the felt balls from a pair of mallets and replace them with soft chamois, pulling the material around the knobs tightly by means of heavy thread. Wooden-ended sticks, of course, present no problem, although fiber-covered mallets may be preferable as being less "bombastic."

A few words should be said concerning performance practices during the baroque period. The love of spectacle, pomp and circumstance, and embellishment of life in general among the nobility is well known; and kettledrummers played accordingly. They flung their hands high in the air between strokes, and exaggerated the cross-malleting from drum to drum, both techniques ideally suited to conspicuous display.[14] This was the period during which these members of the exclusive trumpeters' and drummers' guild evolved from their status as mounted performers at military parades, maneuvers, and outdoor court festivals to members of stationary indoor orchestras; from performers of strictly improvised music to executants of more formal compositions with parts written out, albeit with fairly wide performance latitude by modern standards.

The music played by the timpani during the so-called outdoor, improvisatory period was generally a simplification of the lowest, or bass, trumpet (clarino) part, but with rhythmic elaborations.[15] Within the aristocratic guild itself, little music was written down, lest it fall into unauthorized hands. Both playing techniques and fanfares were handed down from master to apprentice. Performance was either from memory or was improvised on the spot by combining stock patterns and motifs. Even later on, when kettledrums had already moved from the field to the salon, their techniques

Artillery kettledrums. Detail from a tapestry depicting the battle of Blenheim. Duke of Marlborough Collection, Blenheim Palace. Photograph courtesy of The British Library.

codified and their music written down, musicians were expected to embellish the written notes with rhythmic variations and ornamentations. Improvisation thus remained both a prerequisite and a prerogative.[16]

During the seventeenth and eighteenth centuries, the various methods of beating (*Schlagmanieren*) included no less than fourteen basic units, running the gamut from ordinary rolls and cross-beating, or "tonguing," to an entire repertoire of embellishments.[17] Like the high clarino players' special broad and shallow mouthpieces, tonguing was a closely-guarded trade secret. The trumpeters' term came to be used by the drummers as well, and involved embellishments executed in place of longer notes. Final cadences especially provided a wonderful opportunity for the timpanist to exhibit his skill. According to Daniel Speer, he should improvise during the last few measures, elaborating the trumpet part with sixteenth- and thirty-second-note patterns, and hitting the tonic drum very hard after the trumpet music had come to an end.[18] However, by the time kettledrums had found their way into symphonic music on a widespread basis, the outdoor military technique proved unsuitable, and different performance practices of necessity began to evolve. While the rhythmic formulas and embellishments themselves generally remained the same (or were, in some cases, simplified), the manner of execution was altered. Even the size of the drums changed: freed from the horse, they became progressively larger.

In sum, there is ample evidence available concerning both the nature of baroque timpani and contemporary performance practices to point out conclusively that using modern instruments is musically and historically anachronistic. Given the care often taken to play on authentic instruments in the rest of the orchestra, sidestepping the issue of kettledrums can only be ascribed to ignorance or simply lack of consistency. With the knowledge now at our disposal, musicologists and organologists alike must start educating the performing timpanist. Surely, this application of scholarship to living music is one of the most important contributions we can make.

Eighteenth-century kettledrums. Photograph of a recording session at the Einsiedeln Cloister in Switzerland. Photograph courtesy of the Archiv Production, Polydor International, Hamburg.

NOTES

1. While it can probably be assumed that drums were called for as early as Monteverdi's *Orfeo* (1607), the first extant complete score specifying timpani is not the so-called *Salzburger Festmesse* wrongly attributed to Orazio Benevoli (1628), which was actually written by either Henrich Biber or Andreas Hofer in 1682 and featured among its 53 parts two antiphonal wind bands, each with a pair of drums. On the argument for the use of timpani in the opening toccata of *Orfeo*, see C. Titcomb, "Baroque Court and Military Trumpets and Kettledrums: Technique and Music," *The Galpin Society Journal* 9 (1956): 69f. Some early examples of music for timpani include: Nicolaus Hasse, *Aufzug 2 Clarinde (und) Heerpauken* (ca. 1650); Johann Schmelzer, *Drei Stücke zum Pferdeballet* (1667); Daniel Speer, *Aufzug für sechs Trompeten* (ca. 1685); Pavel Vejvanovsky, Serenade for Strings, Cembalo, Trumpets and Tympani (1680); Andre Philidor, *Marche a quatre timbales pour le carrousel de Mons.*; Jean-Baptiste Lully, *Thésée* (1686); Henry Purcell, *The Faerie Queene* (1692); Sebastian Knüpfer, Cantata, "Ach Herr, strafe mich nicht" (1700); František Biber, Sonata for 6 Trumpets, Organ and Tympani (ca. 1700); Marc-Antoine Charpentier, *Te Deum* (ca. 1702); Claude Bablon, *Marche de timballes pour les Gardes du Roi* (ca. 1705); and Johann Gottmann, *Aufzug fur 4 Clarini und Timpani* (ca. 1710).

2. A hilarious example of this latter approach is a recording of the Hoffnung Interplanetary Music Festival of 1958 (Angel S35800), featuring the Dolmetsch Consort "performing" the final movement of Tschaikowsky's Fourth Symphony and 1812 Overture.

3. Even the former New York Pro Musica owned a modern chain-tuning timpani made specially by Saul Goodman of the New York Philharmonic. Both the skin and mallets were of course new. Two conspicuous exceptions to this state of affairs in recorded music are to be found on the DGG "Archive" label. The Praetorius Dances from *Terpsichore*, according to the album notes, employ "three small kettledrums." According to Dr. Andreas Holschneider of the Archiv Produktion in Hamburg, these were "reconstructed." The anonymous Intradas for 2 Organs, Trumpets, Horns and Kettledrums from manuscripts in the Einsiedeln Monastery in Switzerland employ timpani revamped in 1905. Sometimes, however (again according to Holschneider), original instruments are borrowed, such as the pair in the Germanisches Nationalmuseum in Nürnberg.

4. See for example M. Mersenne, *Harmonie universelle: The Book on Instruments (1616)*, tr. R. E. Chapman, The Hague, 1957, p. 551: "two feet in diameter or thereabouts"; and M. Praetorius, *Syntagma Musicum* (Wolfenbüttel, 1619), fasc. ed. by W. Gurlitt Kassel, 1958, Vol. II *(De Organographia)*, Plate XXIII. Praetorius gives the measurements of 17½ and 20½ inches in diameter respectively, and 12 inches deep. Extant examples of baroque timpani include the following: Copenhagen, Musikhistorisk Museum, Inv. No. H-9, approx. 21¼ inches in diameter (see A. Hammerich, *Musikhistorisk Museum Beskrivende Illustreret Katalog;* Copenhagen, 1909, p. 9); Frankfurt, Historisches Museum, Inv. No. X17061, approx. 17⅝ inches in diameter and 11¾ inches deep (see P. Epstein, *Katalog der Musikinstrumente im Historischen Museum*, Frankfurt, 1927, p. 7); Stockholm, Kungl. Armémuseum, Inv. No. ST Puka 54, 21 inches in diameter; Vienna, Musikinstrumenten-Sammlung, Inv. No. C-266, approx. 22½ and 24⅜ inches in diameter respectively and 14⅛ inches deep (see J. Schlosser, *Die Sammlung alte Musikinstrumente*, Vienna, 1920, p. 94).

5. See P. Kirby, *The Kettle-Drums* (Oxford, 1930), pp. 21ff. Praetorius (*op. cit.*, p. 77) calls kettledrums "great rattletraps" *(Rumpelfasser)*. This phrase bears a striking similarity to Virdung's epithet in *Musica Getutscht* ("Das synd gar ungeheheur Rumpelfasser") and thus may not refer to contemporary instruments at all. Cited in C. Sachs, *Handbuch der Musikinstrumentenkunde*, 2d ed., Leipsig, 1930, p. 86. Sachs translates this phrase as "rumbling barrels" in his *The History of Musical Instruments*, New York, 1940, p. 329.

6. On the acoustics of drums in general, see J. Jeans, *Science and Music*, Cambridge, 1947, p. 242; and D. C. Miller, *Science of Musical Sounds* New York, 1916. Two highly technical works are E. G. Richardson, *Sound: A Physical Textbook;* London, 1929, esp. pp. 125-28; and A. B. Wood, *A Textbook of Sound*, London, 1957, pp. 162ff.

7. This point has also been made by H. C. Robbins Landon in *The Symphonies of Joseph Haydn*, London, 1955, p. 126.

8. The author was fortunate in obtaining a pair of rebuilt timpani dating from 1875, the kettles of which were formed over wooden molds dating from the late eighteenth century. They were manufactured by Henry Potter and Company in Aldershot, who have been supplying timpani to the Royal Household Cavalry and other regiments since Handel's time.

9. See H. C. Hardy and J. E. Ancell, "Comparison of the Acoustical Performance of Calfskin and Plastic Drumheads," *Journal of the Acoustical Society of America,* 33 (1961): 1391-95. During a recent conference on restoration, a recital of trumpet and drum music by the Edward Tarr Brass Ensemble demonstrated clearly the superiority of contemporary heads over their modern counterparts on eighteenth-century drums. The latter "sounded terrible" J. Montague, "Nurenberg Conference on Restoration," *Early Music, 2, (1974): 267.*

10. See D. V. Thompson, *The Materials of Medieval Painting,* London, 1936, pp. 24-28. Basically, tanning consists of a two-step process of unhairing the skin with a lime solution and then, after thorough rinsing, "fixing" the protein in the skin with a vegetable tanning material or metallic salt. In so-called "half-tanning," the second step was omitted. An eighteenth-century writer says that the best drum skins were those smeared with brandy and garlic and then dried in the sun or in front of a fire before being lapped over their hoops (J. P. Eisel, *Musicus autodidaktos: der sich selbst informirende Musicus,* Erfurt, 1738, p. 66). Aborted calfskin heads, a more recent American product, were the most popular until plastic supplanted them. Thinner due to the age of the unborn animal, they are made translucent by using continuous lime baths after the hair is removed.

11. For example, in the retinue of King Christian IV of Denmark on the occasion of his visit to James I in 1606 was a mounted drummer, his two instruments slung over the back of his horse, "whereon hee strooke two little mallets of wood" (F. W. Galpin, *Old English Instruments of Music,* Chicago, 1911, p. 252).

12. A. M. Mallet, *Les travaux de Mars,* Amsterdam, 1685, III, 98.

13. For example, one eighteenth-century writer says that for softer effects one played closer to the rim, while for loud passages the skin was hit near the middle. D. Speer, *Grundrichtiger . . .Unterricht der musicalischen Kunst,* Boppingen, 1697, p. 106. Experiments with Lycopodium powder placed in equal amounts around the head of a drum have demonstrated that maximum agitation occurs directly opposite the node, or beating spot, of truest tone production. This point is approximately 3¾ inches from the rim for a small (23- or 24-inch) drum. Playing at this spot produces proper deflections of the sound waves at right angles, with equal air pressure throughout, making a perfect "square" inside the kettle and returning the sound to the skin at the opposite point from that described above. See H. W. Taylor, *The Art and Science of the Timpani,* London, 1964, pp. 15-20.

14. Mallet *(loc. cit.)* refers to the fine-looking or impressive [*beau*] movement of the arms. A contemporary work observes that "the playing of the timpanist is executed with many contortions of the body and arms that appear excessive [*extravagante*]" (A. Furetiere, *Dictionnaire de l'Académie,* Paris, 1696). A German writer reports that the kettledrummer knows how to strike the drums "elegantly" [*zierlich*], this being accomplished with certain movements and turns that in other contexts would seem ridiculous (J. H. Zedler, *Grosses vollstandiges Universal-Lexicon,* vol. XII, Halle, 1735, col. 1092f.). Eisel *(op. cit.,* p. 66) says that the timpanist's hands must be flexible [*schlenckrende*].

15. Quoting Eisel *(loc. cit.)* almost word for word, Altenburg writes that the kettledrummers sounded the "fundamental bass" of the trumpeter's heroic music (J. E. Altenburg, *Versuch einer Anleitung zur heroisch-musikalischen Trompeter- und Pauker-Kunst,* Halle, 1795, p. 113; English edition by D. Smithers, *Trumpeters' and Kettledrummers' Art,* Nashville, 1974, p. 122). See also p. 124: "Kettledrummers usually perform their stroking—now loud, now soft, now slow, now fast—[together] with artful figures, turns, and movements of their bodies."

16. Numerous examples of outdoor music can be found in G. Schünemann, *Deutsche Fanfaren und Feldstücke aus alter Zeit,* Kassel, 1936. On the status and functions of these musicians as well as their guild, see Titcomb, *op. cit.,* pp. 56-59; and J. Blades, *Percussion Instruments and Their History,* London, 1970, pp. 226-230.

17. G. Fechner, *Die Pauken und Trommeln* Weimar, 1862, pp. 37-55. See also Altenburg (Smithers ed., *op. cit.),* p. 124f.; and G. Avgerinos, *Lexikon der Pauke,* Frankfurt, 1964, p. 76. The *Schlagmanieren* are described under their German rubrics on pp. 22-26, 34f., 37, and 88.

18. Speer, *op. cit.,* p. 219.

Some Observations on Jean Georges Kastner's **Méthode complète et raisonnée de timbales** (ca. 1845)

Harrison Powley

Dr. Powley is Associate Professor of Music at Brigham Young University, Provo, Utah and has earned a Ph.D. in musicology from the Eastman School of Music. This article is a revised version of a paper presented at the Society's International Convention held at Tempe, Arizona, in October 1978. Another version of portions of this paper is published as "Two Little-Known 19th-Century Timpani Tutors: Suggestions toward More Authentic Performance Practices," **Liberal Arts Review of Eastern New Mexico University,** no. 7 (Spring 1979):76-91.

The timpani have a long and distinguished history. They were introduced into Europe from the East: first, in the Middle Ages the returning Crusaders brought back small kettledrums known as nakers; later, in the fifteenth century the West became acquainted with the larger kettledrums of the Ottoman Turks and Mongols. Together with the military trumpet, the Turkish timpani (usually associated with the sultan's elite military corps, the Janissaries) continued their noble association in the courts and armies of Western Europe, at first in German-speaking areas, then later throughout all of Europe.[1] During the Renaissance and baroque eras protective guilds developed to guard and preserve the art of playing these instruments. Because of the secretive and oral traditions surrounding these guilds, very little specific information has been recorded, especially as to how a timpanist was trained.[2]

Scattered references to the timpani appear in diverse seventeenth- and eighteenth-century sources.[3] However, none seem to treat the pedagogical and technical aspects of the instrument in an extended or comprehensive manner. The most informative of these is the short final chapter of Johann Ernst Altenburg's *Versuch einer Anleitung zur heroisch-musikalischen Trompeter- und Pauker-Kunst* printed in 1795.[4]

It is not until the 1840s, with the publication of two timpani manuals, one in Italy, the other in France, that timpanists had specific written methods of instruction.[5] The Italian text, *Manuale pel timpanista* (1842) by Carlo Antonio Boracchi, is primarily devoted to a discussion of his newly invented technical advancements that were to facilate more rapid tuning.[6] The French tutor, *Méthode complète et raisonnée de timbales* (ca. 1845) by Jean Georges Kastner, is a compendium of historical data, basic music theory, an explanation of technical strokes, a series of etudes for practice, and advice to composers on the use of the timpani in the orchestra.[7] This method appears to be the first practical guide for the orchestral timpanist and as such deserves to be more widely known

since it provides much information useful to the proper interpretation of mid-nineteenth-century timpani music.[8]

Jean Georges Kastner (born Strasbourg, 9 March 1810; died Paris, 19 December 1867), an Alsatian composer, theorist, and musicologist, was not a timpanist, but by relying heavily on his contemporaries—the *Méthode*, in fact, is dedicated to M. Poussard, timpanist of the Paris opera—he is able to give what appears to be a very accurate account of the state of the art of timpani playing. An early opera, *Die Könige der Sarmaten* (1835), was so successful that the Strasbourg town council decided to give Kastner a subvention for further study in Paris with Anton Reicha. Kastner remained in Paris for the remainder of his life. His compositions have been all but forgotten today, but his historical and theoretical treatises provide much that is still useful. His *Traité général d'instrumentation* (1837) was the first of its kind published in France, predating Berlioz's (1843) by some six years. Kastner's *Manuel général de musique militaire* (1848) remains yet a treasury of information on the history and practice of military music difficult to find elsewhere. Fortune smiled on his marriage to one of his students, Léonie Boursault, the daughter of a wealthy Parisian theatre manager. (Berton, Paer, and Meyerbeer witnessed his marriage.) Kastner, now free of material needs, spent the rest of his life pursuing his varied musical interests. Yet, despite the influence of his father-in-law six of his eight operas were never performed. His interest in pedagogy is seen in his *Méthode de timbales* and in many other instruction books for most all of the other instruments, including ones for the flageolet and ophicleide.[9]

For his *Méthode de timbales* Kastner had at his disposal Altenburg's *Versuch* and Boracchi's *Manuale*. These texts are frequently cited by Kastner. He also relied heavily in the technical sections on the advice of the above mentioned Poussard and a Herr Müller, timpanist of the Strasbourg theatre orchestra. The *Méthode* is divided into several large sections. The first, a historical account of the timpani from "their creation to our days" comprises pages 2-11. This section brings together in one place most all of the older historical references to the timpani. Kastner expands on the historical work of Altenburg by citing most of the seventeenth- and eighteenth-century theorists who mention the timpani, including Praetorius and Mersenne. Many unreliable line drawings of the old style timpani are included. Because of his thoroughness, several later authors relied heavily on his information and misinformation in their timpani methods.[10] He concludes this section with the observation that it required at least six years to make an artist timpanist. He goes on to say that "the German timpanists were, in general, very famous." Particular attention is drawn to a very celebrated timpanist named Willig: "He had a superb costume and a big salary."[11] Unfortunately, no drawing of this performer seems to be extant.

The second section (pages 12-66), the method proper, outlines the essential principles of music, gives a description of existing timpani, discusses the art of beating the timpani, and concludes by printing a series of original etudes for two to five

timpani for the timpanist to practice. These etudes are perhaps the first of their kind for the timpanist. Earlier discussions of the timpani cite only a few of the specific beatings (*Schlagmanieren*).[12] The third section (pages 67-73) is a short final essay that describes the use of the timpani in the orchestra; passages are directed to the historian, timpanist, and composer.

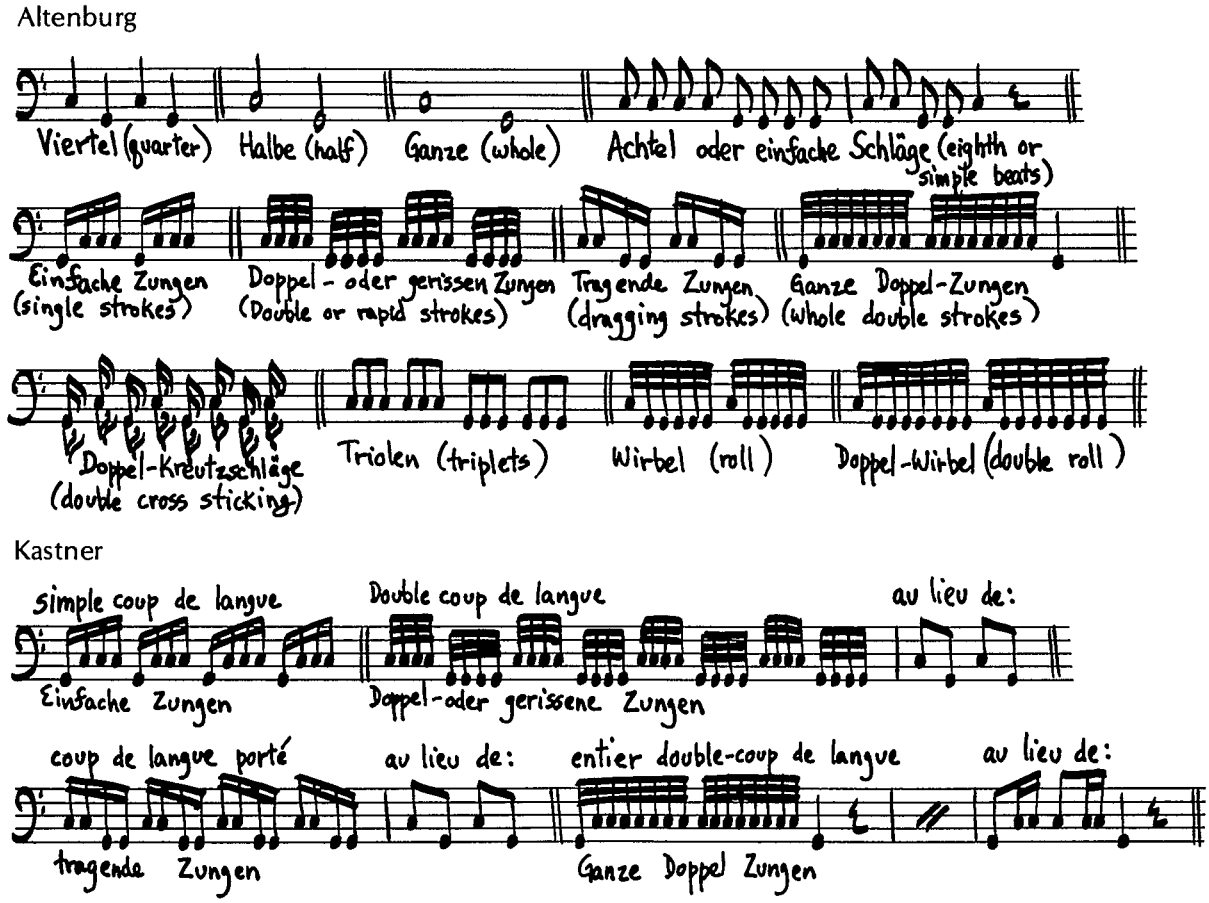
Concerning nineteenth-century performance practices, Kastner furnishes many informative passages in his second and third sections. The timpani are positioned with the large drum to the right. The timpanist can either sit or stand depending on his preference, but the drums should be inclined slightly so that the tuning handles will not be struck while playing complex beatings.[13] Concerning the various types of sticks then in use Kastner mentions three types: (1) small round wooden-headed sticks for staccato and loud or noisy passages, (2) wooden sticks covered generally with deerskin or sometimes with flannel, and (3) sponge-headed sticks of two kinds: first, those "whose head is entirely made of sponge," and second, those "whose head is composed of an inside oval core made of cotton wadding (wool-cotton) covered with sponge." This last mentioned type he considers to be of a higher quality. They produce, he explains, a rather soft sound for use in piano passages. Kastner suggests that every orchestral timpanist should have the three kinds of sticks for use in orchestral performance. Sticks that he considers inferior are made of horsehair or india-rubber, covered by sponge.[14]

The holding of the timpani sticks is also given consideration. We are assured that by the 1840s the old style of tieing the sticks to the fingers had been abandoned by most contemporary performers.[15] Kastner informs us that "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."[16] He further mentions that the other fingers help the stick move during the beating and that the wrists and arms must be relaxed.

One of the most interesting and historically valuable sections is "The Art of Beating." This is in part based on Altenburg's discussion, but Kastner's is greatly expanded. Kastner recognizes the gradual loss of the old style of playing improvised pieces in favor of the orchestral usage of the timpani when he states that

> earlier the art of beating the timpani was more difficult and complicated than today. At the time when the main role of the timpani was to accompany bands of trumpets, or to execute preludes or interludes to celebrate the entrance of some great personage, it was thought that the dexterity of the artist should substitute for the imperfection of the instrument. Thus, we have the origin of all these various strokings again so difficult to perform: the beatings of five, cross stickings, twirling or cross stokes, mixed beats, rolls on two timpani, fantasies, etc., with which a timpanist had to be acquainted in order to deserve the name of maestro and to find employment.[17]

In the orchestral style (no doubt the style of performing from written music recognized by Altenburg)[18] these beats or strokings seem to have been discarded; at least they were no longer recognized or performed by Poussard in the Paris opera. Kastner felt that the modern timpanist needed to know how to perform them, particularly in order to develop dexterity and precision. He reprints most of the examples cited by Altenburg (see example 1).



Ex. 1. Altenburg's *Schlagmanieren, Versuch,* p. 129 compared with Kastner's *"Art de blouser," Méthode,* p. 28.

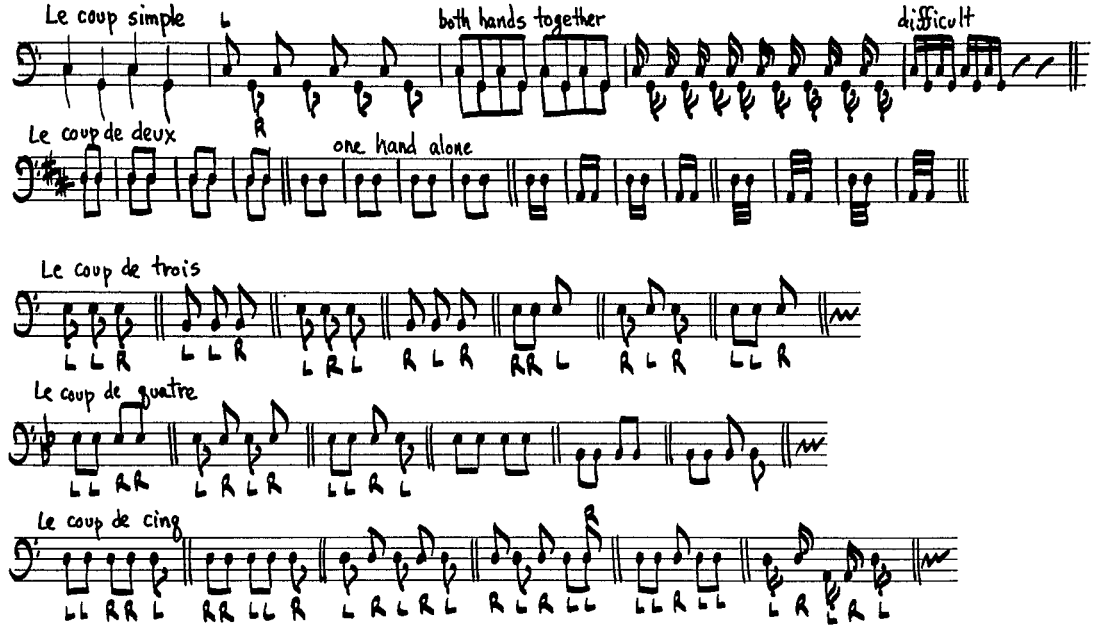
Kastner tells us that they are still in use (1845) and that Emery, timpanist of the opera-comique, used them in the improvisatory marches or quadrilles, but never in the orchestra. The Germans, Kastner informs, still use them.[19] Of especial interest in Kastner's version is his indication of beatings in place of (*au lieu de*) or instead of technically less demanding passages. One can only wonder if timpanists of Haydn's time, for example, would have embellished simple rhythmic patterns along the lines suggested by Kastner. The question of just how much ornamentation and embellishment a timpanist would use when performing from written music remains to be investigated.

Kastner then discusses in some detail five specific types of beats (see example 2) not previously mentioned in his text. The first, *le coup simple,* is executed by striking both sticks on one drum simultaneously (cf. example 1 *Doppel-Kreutzschläge*). The timpanist is further instructed to place one stick about one inch from the rim, the other about four or five inches. This is done, says Kastner, to insure greater head resonance; if both sticks strike the head at the same distance from the rim, close together, the tone is noticeably deadened. Kastner cautions that both sticks striking together should only be used in forte passages "because of the power and volume that it gives to the sonority of the instrument."[20] The second, *le coup de deux,* is the double beat performed by striking two quick beats with only one stick (either left or right) or by striking the first beat, then letting the second be a bounce stroke. Kastner allows that this can be performed hands together or separately, but in fast tempi it is better performed only hands separately.

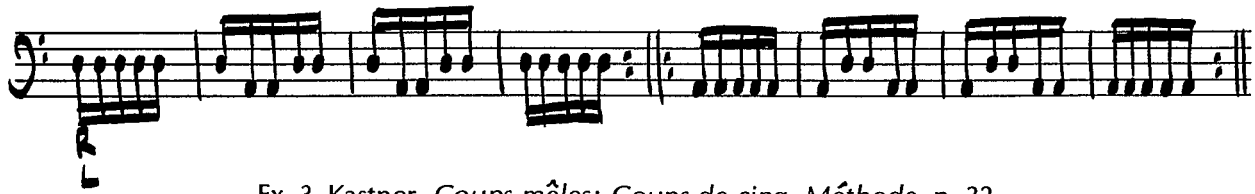
The beats of three (*le coup de trois*), four (*le coup de quatre*), and five (*le coup de cinq*) are more complicated. The performer has many choices of sticking; double and bounce strokes and single strokes are freely intermingled or mixed according to the taste of the timpanist. By practicing all of these various techncal exercises Kastner hoped that timpanists of his day would develop a facile, smooth technique. A discussion of *coups mêles* (mixed or tangled strokes) concludes this section. Here we have the hands passing over or under each other in order to perform the various patterns (see example 3 for a typical passage). Kastner says that these should be practiced very fast and with perfect equality. The exercises should be practiced by beginning with either hand.

Regarding the roll, Kastner discusses the normal type consisting of rapid single strokes. More unusual and reminiscent of Altenburg's *Wirbel* and *Doppel-Wirbel* are rolls on two timpani that were used in entrances (cf. example 1 for Altenburg's examples). Kastner says there are a hundred ways to execute the roll on two or more timpani. Rolls are notated both with abbreviated patterns and trill signs, no distinction apparently being made between the two.[21]

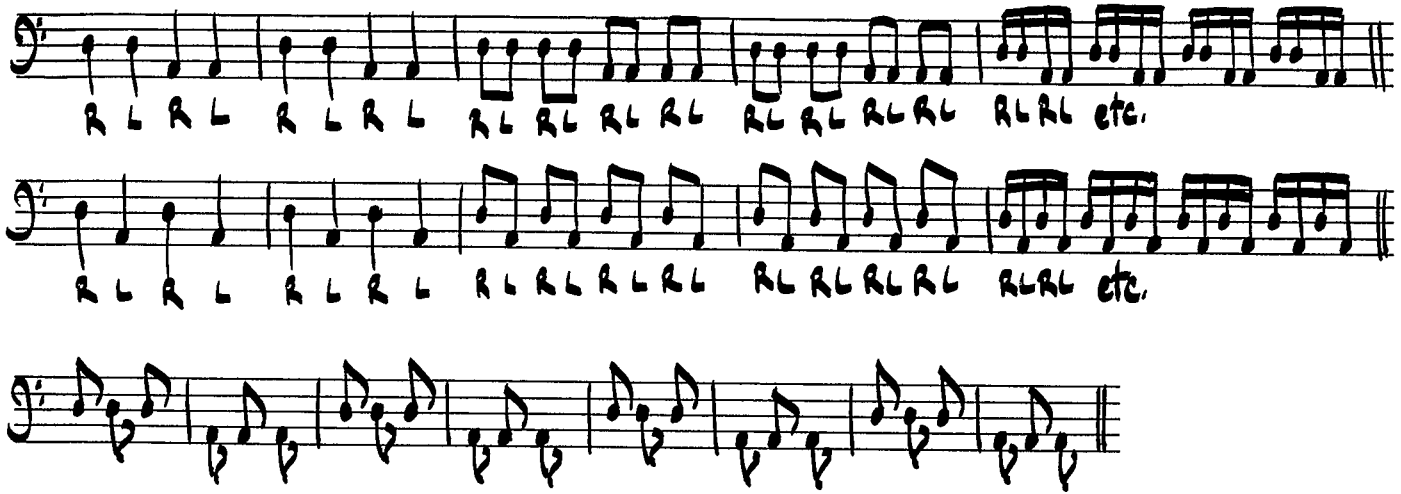
Exercises for the development of cross sticking are divided into three basic types as illustrated in example 4. These all fall under the general heading of *moulinet* (windmill) strokes that involve the crossing of the hands in whirling or twirling patterns. Kastner suggests that these strokes be used only in improvisatory



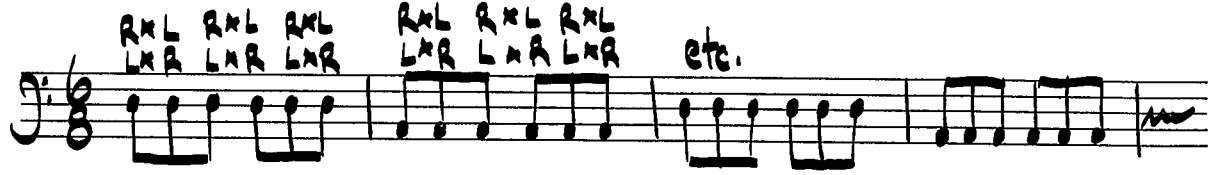
Ex. 2. Kastner, Types of Beatings selected from *Méthode,* pp. 29-39.



Ex. 3. Kastner, *Coups mêles: Coups de cinq, Méthode,* p. 32.



Ex. 4. Kastner, *Moulinet* Strokes, *Méthode,* p. 35 (large drum is on the right).



Ex. 5. Kastner, *Croisés* Strokes, *Méthode,* pp. 35-36 (transcription mine).

entrances and presumably not in the symphonic orchestra.[22] He also writes of a special type of crossed (*croisés*) stroke that could be used (cf. Altenburg's *Triolen* in example 1 and see example 5).

All these strokes, Kastner says, should be used by the timpanist in the so-called fantasias—flights of improvisation. These pieces, he feels, are the best places in which to display his knowledge, his dexterity, and grace. He describes timpanists who

> not yet happy by their success with the large obstacles and difficulties of expressive playing, want to satisfy the eyes as much as the ears by striking around the timpani as many times as there are tuning screws, by moving the sticks above the head, by changing the sticks from hand to hand, by throwing the sticks in the air and catching them without losing a beat in the music, or by some other figure. Such experiences are just a satisfaction of pride and have no useful purpose, especially in our time.[23]

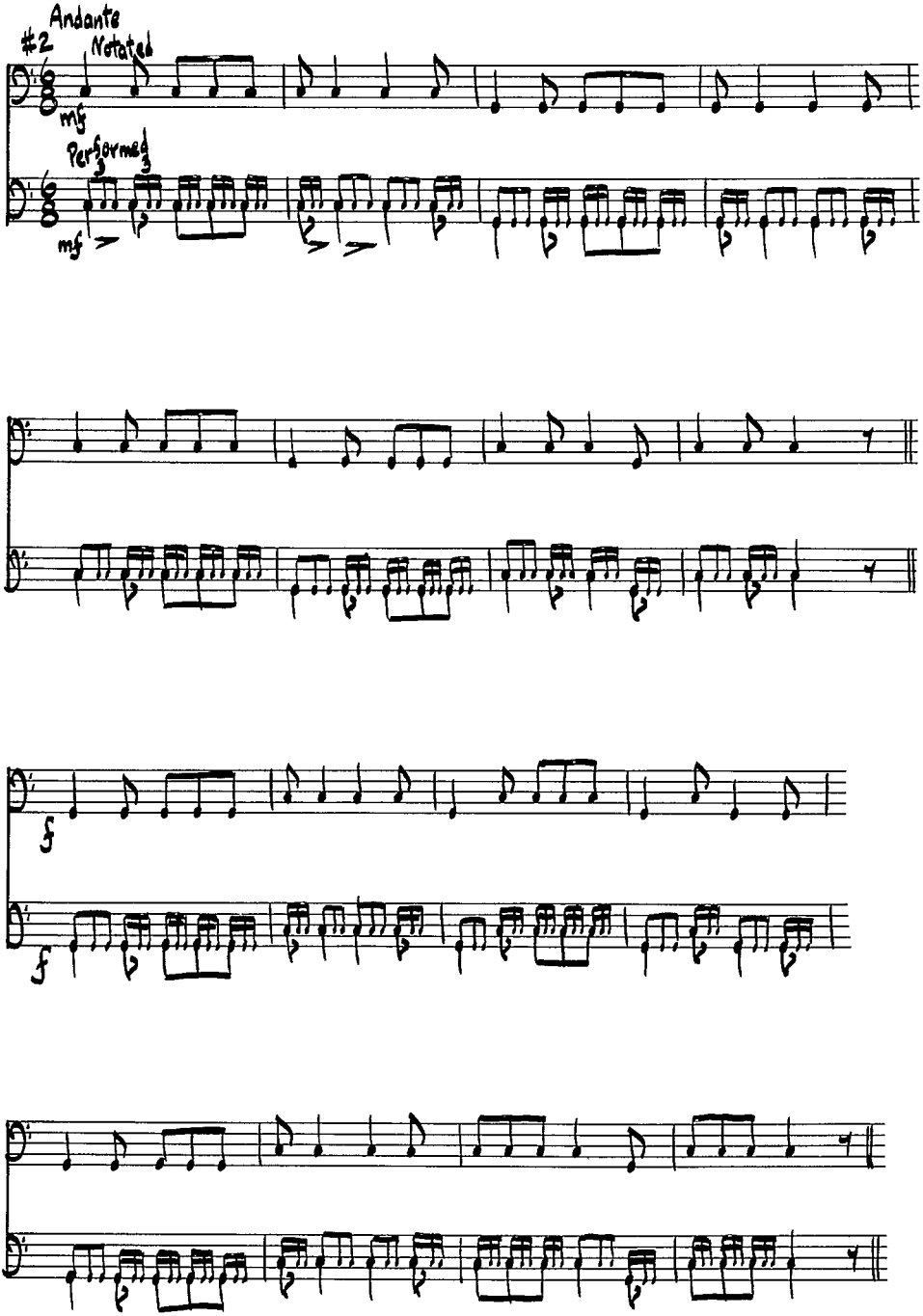
Kastner discourages students from practicing these extreme technical displays. It is enough, he says, to know perfectly the five types of beating and the rolls.[24]

This section concludes with a series of technical studies illustrating the five types of beatings and etudes for two (20), three (12), four (6), and even five (1) timpani. Example 6 shows how the timpanist could ornament a simple passage with the *coup de quatre*. Kastner leaves it to the experience and good taste of the timpanist to decide when to use the various beats. Example 7 is the first of Kastner's etudes for four timpani. These technical exercises for two to five timpani are the first extended etudes for the instrument. They provide the timpanist with specific studies, in addition to the orchestral literature, that will develop his technique and musicality.

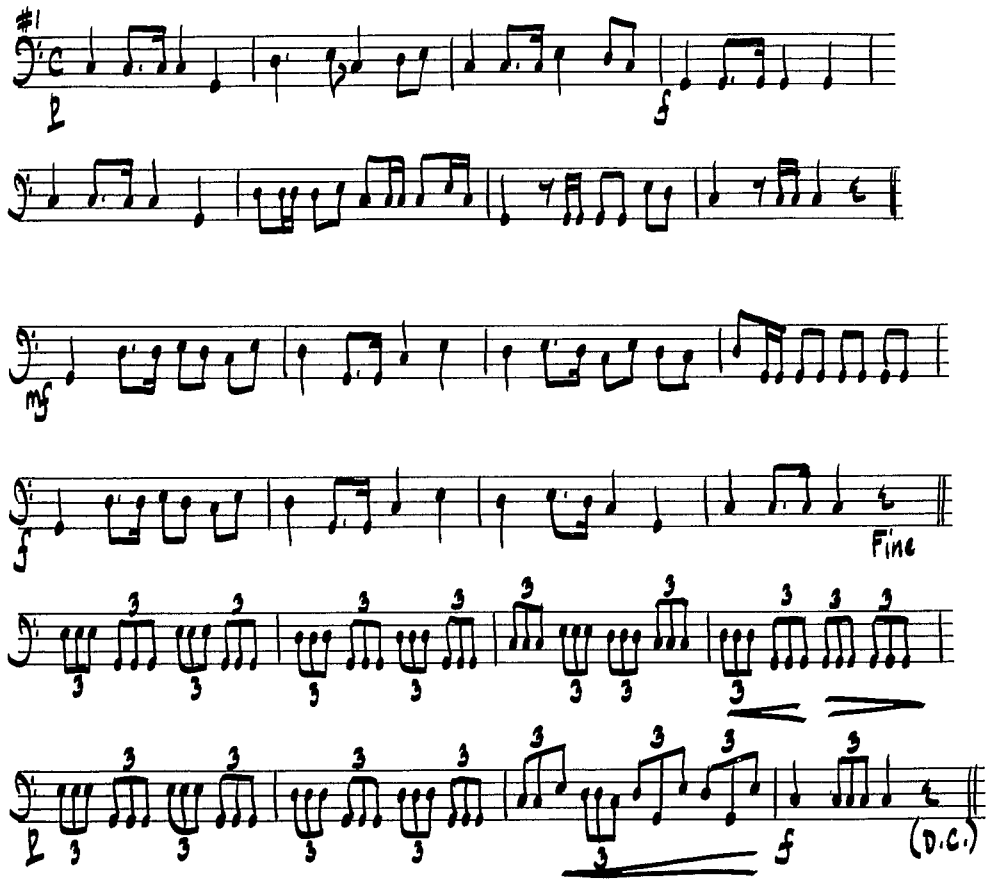
Kastner's *Méthode* concludes with a short essay on the use of the timpani in the orchestra during the first half of the nineteenth century. He suggests to composers the various possibilities of the instrument, particularly the different tone colors available with the various types of sticks. The harmonic and melodic capabilities are also discussed and illustrated by musical examples from contemporary scores.[25]

During the remainder of the nineteenth century and into the early twentieth, Kastner's *Méthode* seems to have been known. Several of his technical exercises, the historical introduction, and the material of types of beatings found their way into the German tutors of Fechner and Krüger.[26] Most interesting, however, is an American method by Frederick Sietz, a Hamburg timpanist who came to America to play in the Theodor Thomas Orchestra of Chicago. Sietz's *Modern School of Timpani Playing* is basically a condensed translation of Kastner's *Méthode;* however, no mention of Kastner is ever made.[27] Sietz does bring the section on the development of the timpani up to date by including pictures of the newer machine and pedal timpani. He also writes some new exercises, but most are simply copied from Kastner's *Méthode*.

The timpani tutor by Kastner, as well as the others from the nineteenth century deserve to be better known.[28] They provide us with insights necessary for preserving the performance practices of the last century, traditions that seem to be slipping further away from us.



Ex. 6. Kastner, *Coups de quatre, Méthode,* p. 57.



Ex. 7. Kastner, Exercise No. 1 for Four Timpani, *Méthode*, p. 64.

NOTES

[1]For further information on the Turkish influences in eighteenth-century European music see A. Schaeffner, "Timbales et longues trompettes," *Bulletin de l'institut français d'Afrique noire* 14 (1952):1466-89; Mary Rowen Obelkevich, "Turkish Affect in the Land of the Sun King," *Musical Quarterly* 63 (1977):367-89; and Eve R. Meyer, "Turquerie and Eighteenth-Century Music," *Eighteenth Century Studies* 7 (1974):474-88.

[2]For what little is known concerning the history of timpani and their performance practices through the eighteenth century see Caldwell Titcomb, "The Kettledrums in Western Europe: Their History outside the Orchestra" (Ph.D. dissertation, Harvard University, 1952); chapter 7 of this work forms the basis of Titcomb's "Baroque Court and Military Trumpets and Kettledrums: Technique and Music," *Galpin Society Journal* 9 (1956):56-81. In this article he discusses the use of the timpani in the court of Louis XIV and presents transcriptions of several marches and a curious "four-hand duet for two pairs of kettledrums composed and performed by the two Philidor brothers, Andre [father of the chess master] and Jacques, at Versailles for Louis XIV's carrousel of 1683 [*sic* 1685]," p. 64. Another facsimile of this duet is printed in James Blades, *Percussion Instruments and Their History* (New York: Praeger, 1970), pp. 237-40. This volume is the best general treatment to date on the entire subject of percussion history and literature. A recent study by Susan Sandman, "The Wind Band at Louis XIV's Court," *Early Music* 5 (1977):27-37 discusses the entire corpus of manuscript sources of this music. See also Edmund A. Bowles, "Eastern Influences on the Use of Trumpets and Drums during the Middle Ages," *Anuario musical* 26 (1971):1-26.

[3]See Edmund A. Bowles, "On Using the Proper Timpani in the Performance of Baroque Music," *Journal of the American Musical Instrument Society* 2 (1976):56-68; reprint ed. this *Journal* 17 (1980): 55-62.

[4]Johann Ernst Altenburg, *Versuch einer Anleitung zur heroisch-musikalischen Trompeter- und Pauker-Kunst, zu mehrerer Aufnahme derselben historisch, theoretisch und praktisch beschrieben und mit Exempeln erläutert* (Halle: Joh. Crist. Hendel, 1795; reprint eds., with a Postscript by Frieder Zschoch, Leipzig: VEB Deutscher Verlag für Musik, 1972, and Monuments of Music and Music Literature in Facsimile, 2d series, no. 36, New York: Broude Bros., n.d.), pp. 125-123 [*sic*, the irregular numbering of pages does not affect the continuity of text]. Altenburg (1726-1801), a field trumpeter during the Seven Years War (1756-1763), wrote this book while employed as an organist in Bitterfield. The work was conceived as early as 1770 since a preliminary Table of Contents was announced by the editor [Johann Adam Hiller] in "Nachricht," *Wochentlichen Nachrichten und Anmerkungen*, 10 December 1770, pp. 398-99.

[5]To be sure there are other printed sources in the early nineteenth century, but Boracchi and Kastner seem to be the earliest tutors. Aside from articles in enclyclopedia such as the *Encyklopadie der gesamten musikalischen Wissenschaften*, 1835-1842 ed. s.v. "Pauke," by [G.] Sch[illing], the early German methods, Ch. Fr. Reinhardt, *Der Paukenschlag* (Mehlis: Johann Christoph Klett, 1848); Ernst Pfundt, *Die Pauken* (Leipzig: Breitkopf und Härtel, 1849; 2d ed., 1880); and Georg Fechner, *Die Pauken und Trommeln* (Weimar: B. F. Voigt, 1862), are printed later. An English translation of Altenburg's *Versuch* was made by Edward Tarr, *Essay on an Introduction to the Heroic and Musical Trumpeters' and Kettledrummers' Art, for the Sake of a Wider Acceptance of the Same, Described Historically, Theoretically, and Practically and Illustrated with Examples* (Nashville, Tenn.; Brass Press, 1974).

[6]Carlo Antonio Boracchi, *Manuale pel timpanista* (Milan: Luigi di Giacomo Pirola, 1842). Unfortunately there seem to be no extant models of his timpani or tuning devices.

[7]Jean Georges Kastner, *Méthode complète et raisonnée de timbales à l'usage des exécutans et des compositeurs, précédée d'une notice historique et suivie de considérations sur l'emploi de cet instrument dans l'orchestre* (Paris: M. Schlesinger, [ca. 1845]).

[8]Kastner's *Méthode* does not seem to have been reprinted during the nineteenth century, but it must have been widely known because information and exercises from it were republished in later methods in Germany and America (see below for a more detailed discussion of this aspect of Kastner's work).

[9]On Kastner's biography see Hermann Ludwig [van Jan], *Johann Georg Kastner: Ein elsässischer Tondichter, Theoretiker, und Musikforscher—Sein Werden und Wirken* 3 vols. (Leipzig: Breitkopf und Härtel, 1886); for shorter and more accessible accounts of his life and work see F. J. Fétis, *Biographie universelle*

des musiciens, 2d ed., 8 vols. (Paris: Didot et Cie., 1877-1878), 4:480-87; *Grove's Dictionary of Music and Musicians*, 5th ed., s.v "Kastner, Jean Georges," by A[lfred] L[oewer ɔerg]; and *Die Musik in Geschichte und Gegenwart*, s.v. "Kastner, Johann Georg," by Francis Muller. Ludwig, *Kastner*, pp. 271-73, prints a German translation of the Preface to Kastner's *Méthode* and cites the praise of Fétis, *Gazette musicale*, 19 July 1846, for the timpani method, especially the section of practical exercises for the training of the orchestral timpanist.

[10]See below, n. 26.

[11]Kastner, *Méthode*, p. 11.

[12]This topic has not yet received extended scholarly attention. The various types of *Schlagmanieren* and their use in outdoor and indoor musical situations remains to be explored in depth.

[13]Kastner, *Méthode*, pp. 22-23.

[14]*Ibid.*,pp. 23-24.

[15][J. P. Eisel]. *Musicus autodidaktos* (Erfurt: Johann Michael Funcken, 1738), p. 68, mentions this practice: "Die Paucken-Schlägel. . .mit kleinen Riemchem an den mittelsten Finger vest machen, damit sie im Schlagen ihm nicht ehtfallen und das ganze Werck verderben."

[16]Kastner, *Méthode*, p. 24.

[17]*Ibid.*, p. 27.

[18]Altenburg, *Versuch*, pp. 127-28.

[19]Kastner, *Méthode*, p. 28.

[20]*Ibid.*, p. 29.

[21]*Ibid.*, pp. 34-35. Prof. Richard Hochrainer believes that the introduction of abbreviated notation for timpani rolls was an attempt by late eighteenth- and early nineteenth-century composers, e.g., Haydn, Mozart, and Beethoven, to make timpanists play more even sounding rolls rather than the double-stroke rolls he feels were in use on the timpani as well as field drums of that time. He suggests that when a composer wrote the trill sign over the note, he wanted a softer sounding roll, played with double strokes, in contrast to the fuller-sounding abbreviated-note roll (Richard Hochrainer, "Beethoven's Use of the Timpani," trans. Harrison Powley, *Percussionist* 14 [1977]:66-71). Prof. Hochrainer also informs me that "Austrian timpanists in small rural bands and orchestras still use this double-beat roll." Interview with Richard Hochrainer, Knoxville, Tenn., 29 October 1977.

[22]For examples of orchestral usage of similar patterns examine the melodic-rhythmic figures in the timpani parts to Beethoven's Eighth and Ninth Symphonies. In Vienna during the early nineteenth century there were some very celebrated timpanists, e.g., Anton Eder and his son-in-law, Anton Hudler, both of whom played in orchestras that Beethoven conducted in his own works. Beethoven probably wrote his virtuosic timpani parts for these men (Hochrainer, "Beethoven's Use of the Timpani," pp. 67-69.)

[23]Kastner, *Méthode*, p. 36.

[24]*Ibid.*

[25]*Ibid.*, pp. 67-72. This section of Kastner's *Méthode* will receive more detailed treatment in a future study.

[26]Fechner, *Die Pauken und Trommeln*, pp. 37-55 recounts in summary fashion the material presented by Kastner, *Méthode*, pp. 27-39, particularly on the *Schlagmanieren*. Franz Krüger, *Pauken und kleine Trommel-Schule mit Orchesterstudien*, ed. Kurt Schiementz, 2nd ed. (Berlin: Arthur Parrhysius, 1951; 1st ed., 1942), reprints with few modifications eleven etudes from the Kastner *Méthode*, never once mentioning the earlier source.

[27]Frederick Sietz, *Modern School of Tympani Playing* (Indianapolis, Ind.: Leedy Manufacturing Co., n.d.). Communications regarding the location of other copies of this method are requested.

[28]I have made an annotated translation of Kastner's *Méthode*.

Contemporary Timpani Techniques

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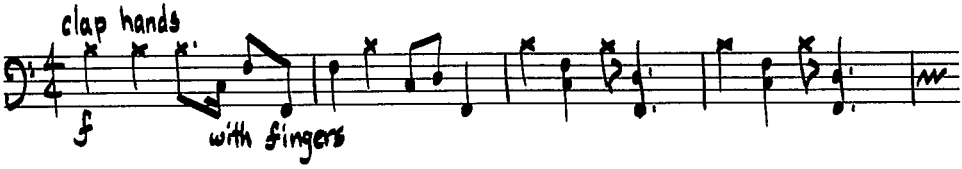
A discussion of the multifarious aspects of timpani sound production in contemporary music is necessary in order to understand the inherent capabilities and limitations of the instrument. Composers, orchestrators, and arrangers as well as performers need to be aware of new methods of performance. This study is limited to an investigation of unusual agents of attack and implements of execution, methods of striking, and areas of striking. These areas are essential to the comprehension of the uses of the timpani in contemporary music. Writing for any instrument, especially the timpani, is a complex task at best, particularly in the current era of rapid change and technological advances. Adam Carse addresses this situation appropriately:

> All [orchestration books] necessarily suffer from a complaint common to dictionaries and encyclopedias, namely, that they begin to be out-of-date from the moment they are written; furthermore, the learning of orchestration is really only acquired by the practical experience which neither textbook nor teacher can supply.[1]

Agents of Attack and Implements of Execution

According to Gardner Read, directions to percussionists for employing different kinds of mallets and beaters are as common in contemporary scores as the designations of the specific surface area to be struck.[2] Imaginative composers are notably partial to the use of the player's finger tips and nails in creating delicate sounds on the many and various membranophones, including timpani. John Beck combines the use of fingers and clapping of hands in his *Sonata for Timpani,* second movement (see example 1). In addition, somewhat more robust sounds can be achieved by the use of the flat hands or the knuckles on drum surfaces. Read specifies that timpani be rubbed with the fingers near the rim and also with the fingernails and middle finger of the right hand in his mammoth work for percussion sextet, *Los Dioses Aztecas (The Aztec Gods).*

Intriguing, in sonic terms, are the special sounds available to the orchestrator when timpani are struck not with conventional sticks and



Ex. 1. John Beck, *Sonata for Timpani* (Boston: Boston Music Co., 1971), p. 5.

mallets, but with such objects as a clave, maraca, woodblock, triangle, tambourine, or hand cymbal, as well as with sleigh bells and chains. In actuality, Read points out, these striking procedures convey a twofold aural impression to the listener—the percussive impact of the unusual agent on the instrument membrane and the inherent sound of the object itself.[3]

A few of the unique, and perhaps bizarre, effects (usually indicated with instructions, less frequently via pictograms) by experimental composers include the following:

1. Play close to timpani rims with thin triangle beaters (H. Brant: *Verticals Ascending*).

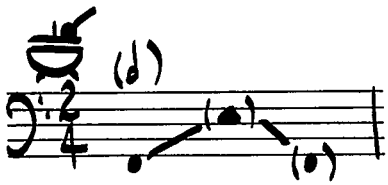
2. Lay the bottom bar of a triangle on the timpano head; strike the triangle while moving the drum pedal up and down (D. Erb: *The Seventh Trumpet*).

3. Spin a silver dollar on the timpano head, making a slow glissando with the pedal at the same time (M. Ellis: *Mutations*).

4. Obtain any wind-up mechanical toy which hops or jumps; wind it up and let it hop on a timpano surface (B. Childs: *Jack's New Bag*).

5. Place a cymbal, dome side down, on the timpano head; strike the cymbal and/or head while moving the pedal up and down (J. Collins: *Improvisation del Quiché*).

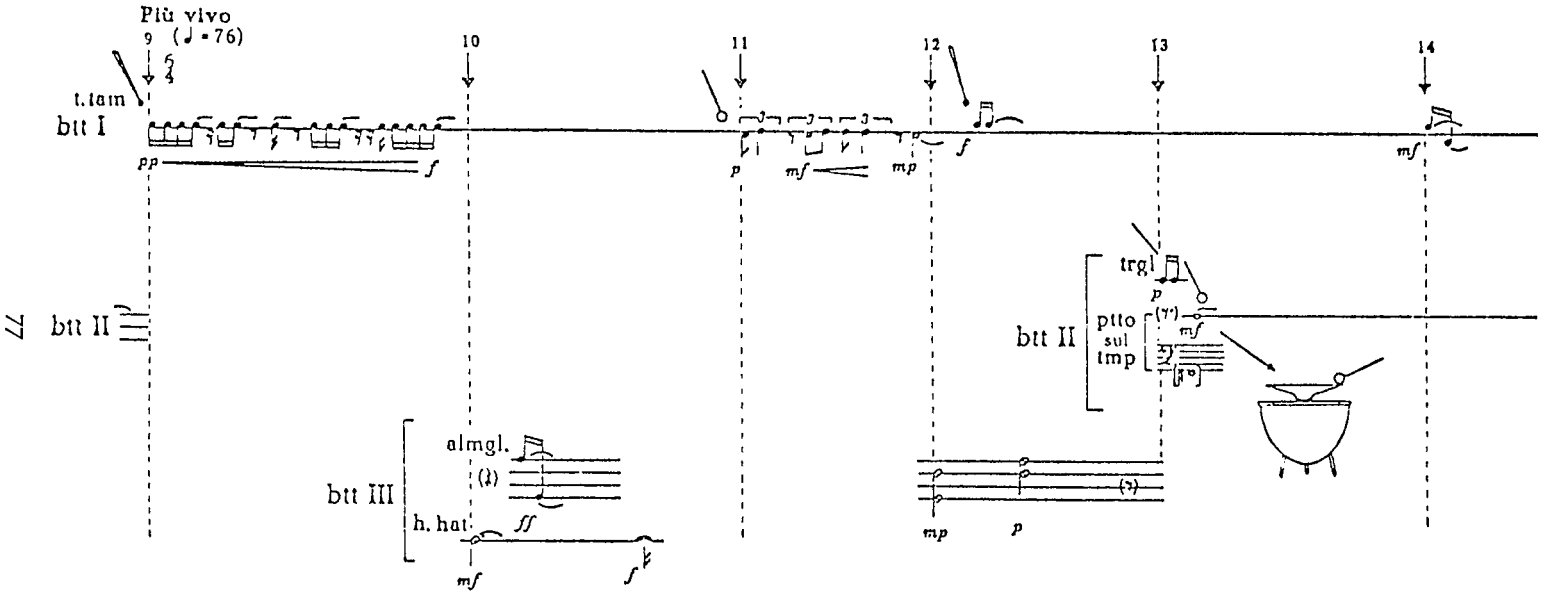
David Cope elaborates further on the last effect mentioned when he describes a suspended cymbal over the timpano head struck with a soft mallet at the halfway point while executing a glissando on a large timpano with an irregular tremolo to the highest note and back.[4] The symbol recommended by Cope for this effect is given in example 2.



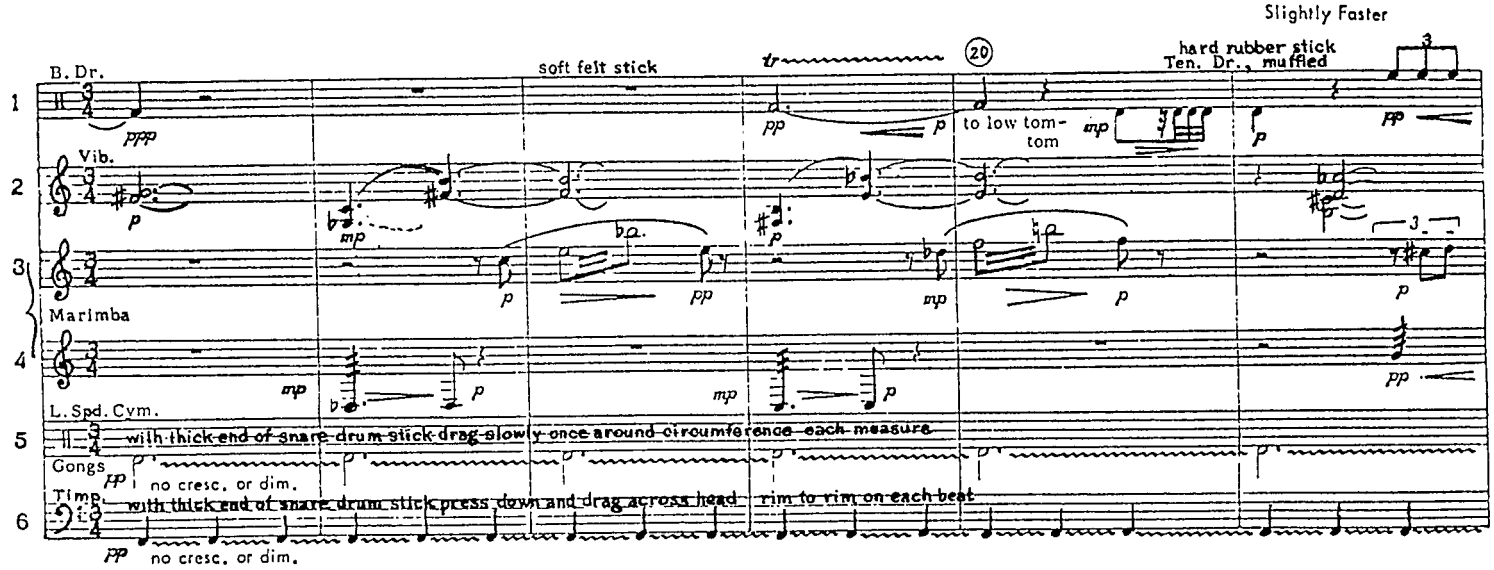
Ex. 2. David Cope, *New Music/ Notation*, p. 84.

Traditionally, the effect would be indicated by detailed written-out instructions; symbolic pictographs conserve space and are universally understood. A similar effect is used by Wlodsimierz Kotoński in *A Battere;* it is explicit to the extent that the rim area on the cymbal is to be struck (see example 3). Gardner Read achieves an unusual effect on timpani by specifying the use of the "thick end" of a snare drum stick (see example 4).

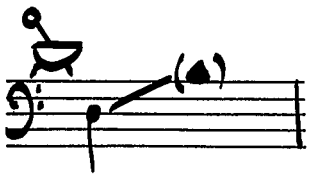
In *Configurations* William Kraft requires that the end of a bass drum mallet strike at the halfway point on the timpano head with a pedal glissando to the highest possible pitch; the pictograph for this particular device is illustrated in example 5.



Ex. 3. Wlodsimierz Kotonski, *A Battere* (Celle: Moeck Verlag, 1968), p. 17.



Ex. 4. Gardner Read, *Los Dioses Aztecas* (Chicago: M. M. Cole, 1969), p. 9.



Ex. 5. William Kraft, *Configurations* (New York: MCA Music, n.d.).

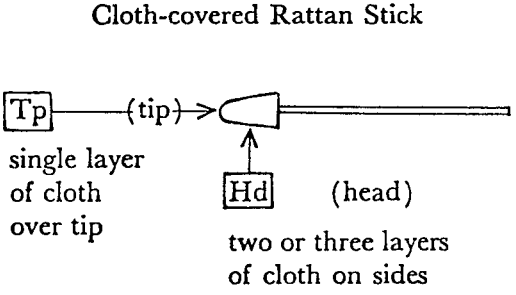
Elliott Carter is meticulous in describing the use of cloth-covered rattan sticks in the Moto Pertetuo (II) movement from his *Eight Pieces for Four Timpani.* Two modes of striking are indicated by the following symbols and explanations by the composer. (see example 6). The Saeta (I) and March (VIII) call for reversing the timpani sticks in order to strike with the wooden handles or butt ends. Playing with the wood end is indicated BUTT, normal performance by HEAD.[5]

Some contemporary composers have called for dropping an object onto the timpano membrane surface; the objects used range from coins of various sizes, small hand cymbals, finger cymbals, crotales, marbles, and the like. The following works use some of these devices: C. Alsina, *Trio 1967;* L. Ferrari, *Société II;* L. Foss, *Echoi;* V. Globokar, *Accord;* M. Kagel, *Sonant;* and B. Schäffer, *Scultura.* In Merril Ellis's *Mutations* the timpanist is instructed to drop a tennis ball on the timpano head from a height of two feet, allowing it to bounce freely on the surface, and even perhaps to the floor!

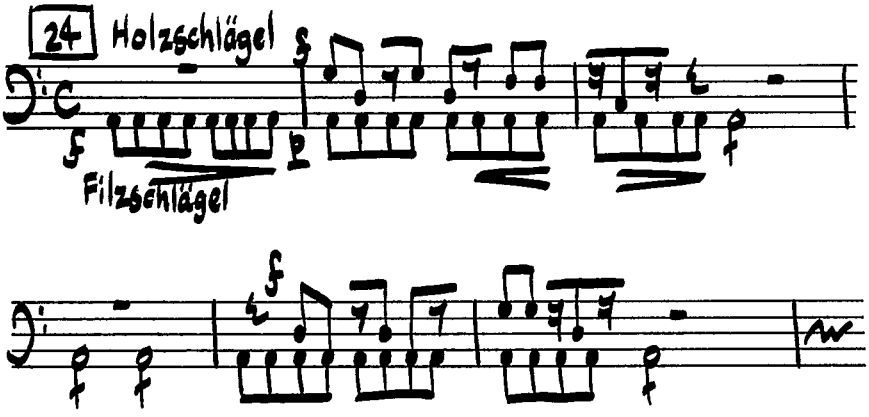
Jay Collins' *Improvisation del Quiché,* a work for four solo timpani and flute, contains very free though strongly suggestive directions in the coda to improvise in free rhythm, use any pitches, perform á la avant garde, and the like.

Other important effects are those obtained by the combination and simultaneous use of relatively common mallets or other implements. For example, the use of a normal felt-covered stick in one hand and a wooden stick in the other is found in Werner Thärichen, *Konzert für Pauken und Orchester* (see example 7) and Harold Farberman, *Concerto for Timpani and Orchestra* (see example 8). Subtle timbral nuances are achieved by Jay Collins in his *Paukenzeit,* an unaccompanied solo for four timpani, by the use of a normal felt-covered stick in one hand and a wire or nylon brush in the other. A unique, almost ethereal effect is produced as a result of this combination. The felt stick maintains an ostinato-like figure while the wire brush produces an arabesque pattern among the four timpani (see example 9).

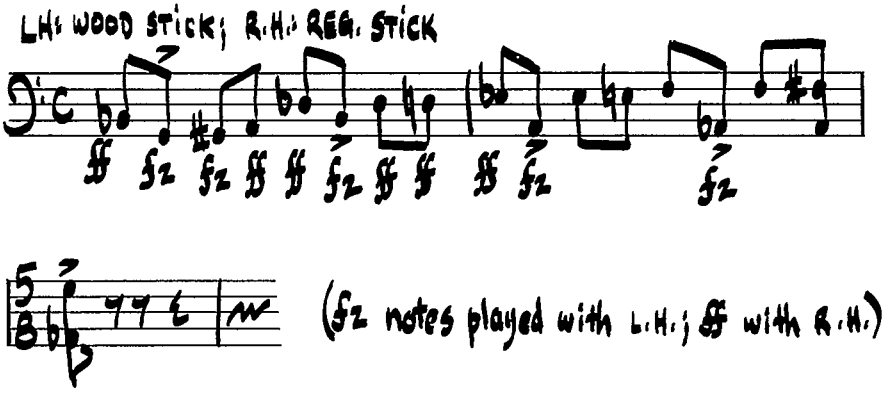
Another effect can be obtained by playing near the edges of timpani heads with thin snare drum sticks. Elgar uses this device in the thirteenth variation "Romanza" of his Variations for Orchestra (*Enigma*). James Blades suggests that "Elgar's request for side drum sticks for this particular tremolo may have been prompted by a desire for an unusual roll to give the impression of the pulse of ship's engines, the drum's purpose being at this point to illustrate this mechanism."[6] Elgar notated the effect as a trill (see example 10) to be played with snare drum sticks, but Blades cites an interesting story in which the timpanist Charles Henderson is reported to have played the passage with coins.[7] Thärichen



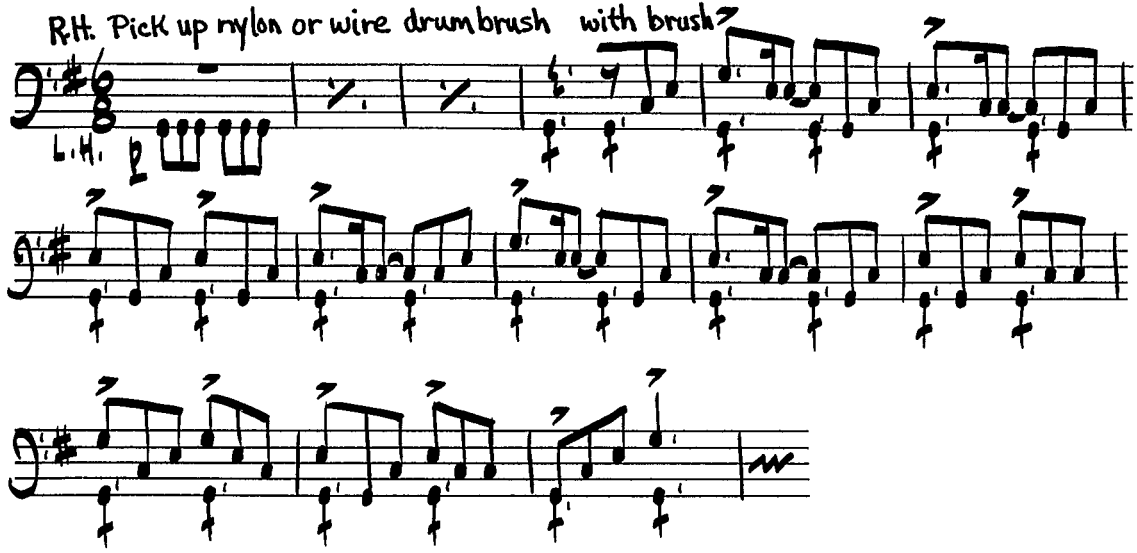
Ex. 6. Elliot Carter, Performance Notes to *Eight Pieces for Four Timpani* (New York: Associated Music Publishers, 1968), p. [2].



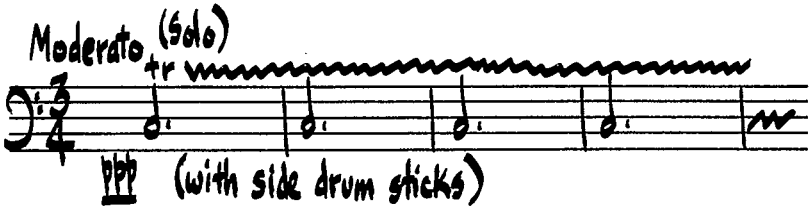
Ex. 7. Werner Thärichen, *Konzert für Pauken und Orchester* (Berlin: Bote und G. Bock, 1956), p. 3, solo pt.



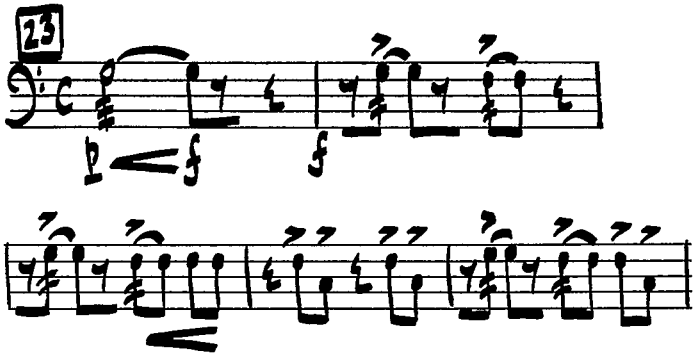
Ex. 8. Harold Farberman, *Concerto for Timpani and Orchestra* (New York: Franco Colombo, 1962), p. 2, solo pt.



Ex. 9. Jay Collins, *Paukenzeit* (Nashville, Tenn.: Newtone Music, 1974).



Ex. 10. Edward Elgar, *Variations for Orchestra* (*Enigma*) (London: Novello and Co., 1899), p. 88.



Ex. 11. Thärichen, *Konzert*, p. 3, solo pt.

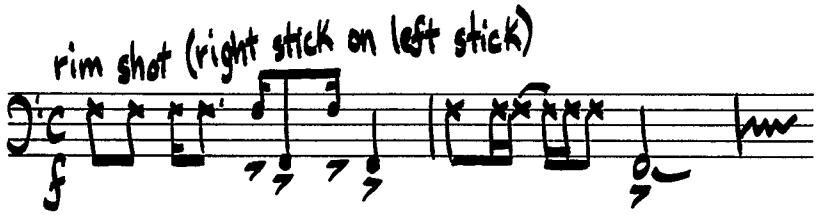
artfully incorporates the use of snare drum sticks on the timpani in the first movement of his *Konzert* (see example 11).

Methods of Striking

An unusual effect possible on the timpani is known as the "dead stick" or "dead stroke" technique in which the mallet is either not lifted or is lifted after a delay following contact with the membrane. The result is a curiously subdued and muffled sound, somewhat akin to *sons étouffées* on harp or finger-muted tones on piano strings. This technique is promimently employed by Elliott Carter in his *Eight Pieces for Four Timpani*. It is notated by DS (see Moto Perpetuo [II], Recitative [IV], and Saëta [I, at end]). Unless otherwise specified, a normal stroke is to be used. The dead stroke is cancelled by the sign NS. For Carter the dead stroke means to hold the head of the stick on the drum after striking to dampen all resonance.

A type of rim shot can be executed on timpani by placing one mallet head on the membrane and striking the angled shaft with the other mallet. The tone of this effect can be varied considerably according to where the stationary mallet is placed on the head. A brief, but nevertheless very effective use of the rim-shot device is specified by John Beck in the second movement of his Sonata for Timpani (example 12). In the Canto [VI] movement of Carter's *Eight Pieces for Four Timpani* the sign ⊗ is used to specify rim shots; in contradistinction, the sign ✝ means play on the rim, not on the drumhead.

Another device calls for the use of both sticks at once on the same drum; it is usually notated by double stems or double noteheads. The result is a thicker and weightier sound. For



Ex. 12. Beck, *Sonata*, p. 4.

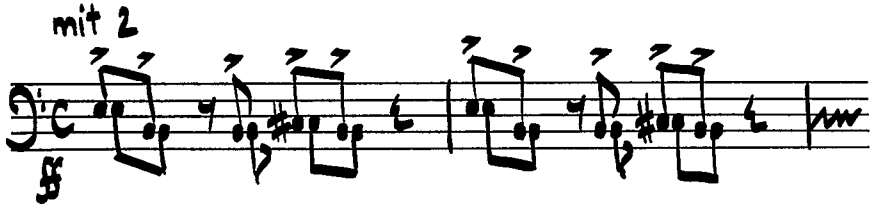
more forceful accents, two drums may be tuned to the same pitch and struck simultaneously, or if one drum is used, both sticks may play on it. Gustav Mahler in the third movement of his *Symphony no. 4* uses this technique to great effect (see example 13). It is also possible to play on two or even more timpani at the same time, e.g., in Richard Strauss, *Till Eulenspiegel* (example 14) and Thärichen, *Konzert* (example 15).

Areas of Striking

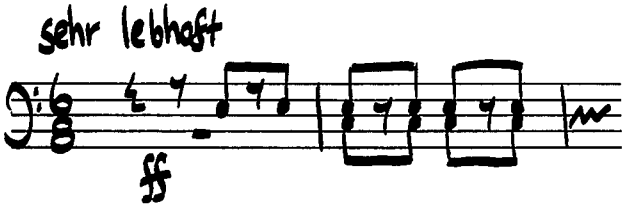
Although harmonics are a technical device that would seem logically restricted to non-percussion instruments, the timpani, among other tuned percussions, can obtain certain partials from a struck fundamental. Specifically, the timpani have octave harmonics present when the head is struck quite close to the rim. This technique is illustrated in the following works: E. Carter, *Eight Pieces for Four Timpani;* W. Kotoński, *Musica per fiati e timpani;* K. Penderecki, *Dimensions of Time and Silence;* and K. Serocki, *Segmenti.* Harmonics sounding an octave above the tuned pitch of the drum may also be produced by pressing one or two fingers on the head of the drum halfway between the rim and the center, and striking near the rim. The harmonic is usually notated ◇ . A brief example from Carter's Recitative [IV] will suffice to illustrate the use of harmonics (example 16). He also uses the device of sympathetic resonance in Adagio [III]. Example 17 shows how this is to be done. Carter explains his notation by the following note:

> The pitch played on the drum notated on the large staff is meant to produce a sympathetic resonance in the drum notated on the small staff below. If this does not occur effectively, with a vibration loud enough to make the small-note glissandi audible, then the drums indicated in small notes should be struck softly at the same time or immediately after the other drums.[8]

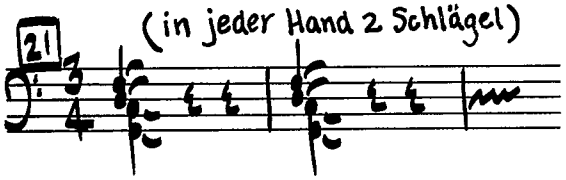
Twentieth-century composers are often very precise in their scores to indicate the area on which the performer should strike a membrane. The performer is also given directions to strike the frame, shell, or casing instead of the normal playing surface. On timpani, for instance, the player may be required to strike the bowl or kettle with a regular timpani stick or even other objects, or to strike the metal rim surrounding the head. Tuning screws can also be struck. The following list contains a representative sample of works that use one or more of these notational requirements: J. Beck, Sonata for Timpani; *Eight Pieces for Four Timpani;* M. Colgrass, *As Quite As;* D. Erb, Concerto for Solo Percussionist, *Symphony of Overtures;* F. Evangelisti, *Ordini;* R. L. Finney,



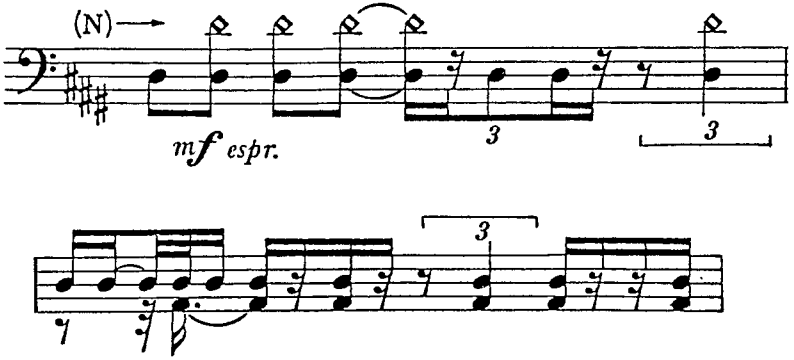
Ex. 13. Gustav Mahler, *Symphony no. 4* (London: Boosey and Hawkes, 1943), p. 98.



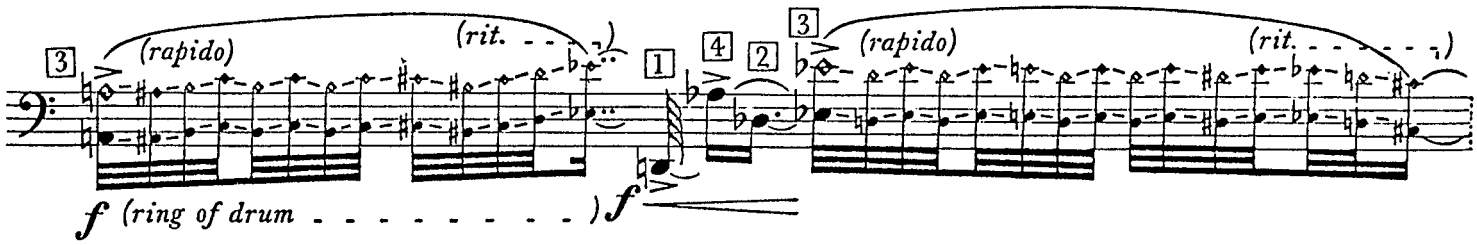
Ex. 14. Richard Strauss, *Till Eulenspiegel* (New York: Kalmus n.d.), p. 32.



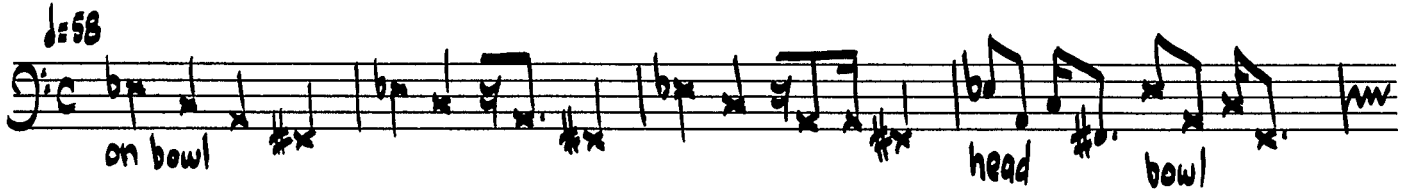
Ex. 15. Thärichen, *Konzert*, p. 3, solo pt.



Ex. 16. Carter, Recitative from *Eight Pieces*, p. 10.



Ex. 17. Carter, Adagio from *Eight Pieces*, p. 8.



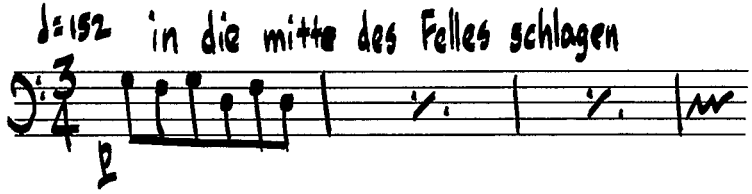
Ex. 18. Beck, *Sonata*, p. 3.

Three Studies in Fours; M. Geilen, *Musica;* S. Hodkinson, *Fresco* M. Kagel, *Sonant;* W. Kotoński, *Musica per Fiati e Timpani;* L. Kupovic, *Das Fleisch des Kreuzes;* G. Ligeti, *Apparitions;* G. Read, *Los Dioses Aztecas;* D. Reck, *Blues and Screamer;* H. Villa-Lobos, *Danses Africaines;* and B. A. Zimmerman, *Canto de Speranza.* In the first movement of his Sonata for Timpani, John Beck includes instructions to strike the sides of the timpani bowls. Good effect is made of the various pitch contrasts, both on the bowls and heads. (example 18).

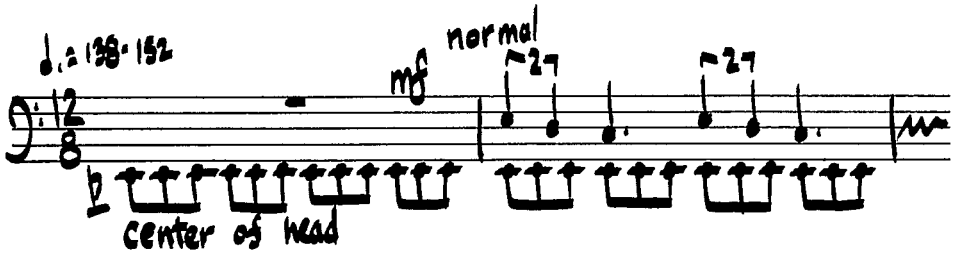
Some composers have moved a step further by specifying the beating spot as well as the mode of attack which results in rather pronounced subtleties of pitch impression being possible. According to Frazeur, the overtones of a well tuned timpano are low in the spectrum of audible frequencies, hence the overall timbre is quite rich, but often nebulous, as are the low tones of the piano.[9]

Werner Thärichen indicates strokes in the center of the head in his *Konzert* by the use of a dotted line and written explanation (example 19). Beck combines two different beating areas simultaneously in his Sonata, the right hand plays in the normal beating spot, the left strikes in the center (example 20). Carter specifies a wide variety of different sound qualities (example 21).

This brief article by no means presents all techniques used or available to contemporary composers or orchestrators. The multiplicity of new and experimental timpani techniques has also resulted in many varied methods for notating the sound objects. It seems as if John Cage's statement of 1937 has been fulfilled: "I believe that the use of noise to make music will continue and increase. . .any and all sounds that can be heard will be made available for musical purposes."[10] Yet caution must be given not to write mere effects and virtuosic passages that are void of musical substance.

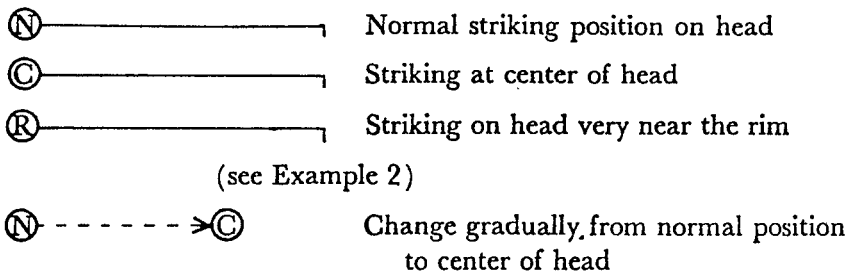


Ex. 19. Thärichen, *Konzert,* p. 2, solo pt.

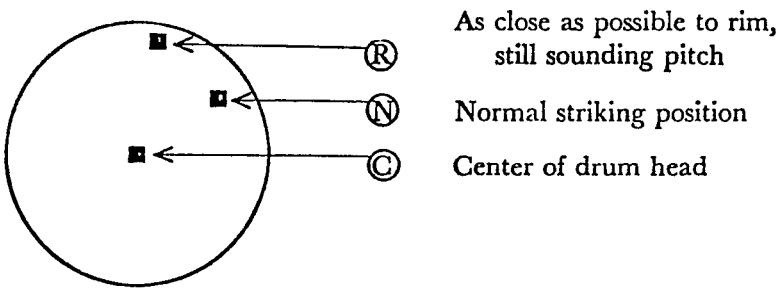


Ex. 20. Beck, *Sonata,* p. 7.

Striking positions on the drum head: To produce a wide variety of different sound qualities, various striking positions are suggested. They are notated as follows:



Striking Positions on Drum Head



Ex. 21. Carter, Performance Notes to *Eight Pieces,* pp. [1-2].

NOTES

[1]Adam Carse, *The History of Orchestration* (London: Kegan Paul, Trench, Trubner and Co., 1925; reprint ed. New York: Dover Publications, 1964), p. 293.

[2]Gardner Read, *Contemporary Instrumental Techniques* (New York: Schirmer Books, 1976), p. 166.

[3]*Ibid.*, p. 169.

[4]David Cope, *New Music Notation* (Dubuque, Iowa: Kendall/Hunt, 1976), p. 84.

[5]Elliott Carter, Performance Notes to *Eight Pieces for Four Timpani* (New York: Associated Music Publishers, 1968), p. 111.

[6]James Blades, *Percussion Instruments and Their History* (New York: Praeger, 1970), p. 331.

[7]*Ibid.*, pp. 331-32.

[8]Carter, *Eight Pieces,* p. [2].

[9]Ted C. Frazeur, "Some Thoughts on Timpani and Intonation," *National Association of College Wind and Percussion Instructors Journal* 18, no. 3 (Spring 1970):17.

[10]John Cage quoted in Read, *Contemporary Instrumental Techniques,* p. 184.

The Viennese Timpani and Percussion School

Richard Hochrainer

Professor Hochrainer was timpanist of the Vienna State Opera and Vienna Philharmonic Orchestras for over thirty years. He was also professor of percussion instruments at the Vienna Academy of Music for twenty years. His career also includes performing all styles of music. He is the author of several texts and instruction books, particularly his *Etüden für Timpani.* This article is an expanded version of a paper read at the Society's International Convention held in New York City in October 1979.

It may be of interest that we at the Vienna Academy of Music for many years have started every beginner on the timpani rather than on the snare drum, as is the old custom. This is the easiest way for all students, even our jazz and rock drummers use the matched grip. A half year later, the students have much less trouble learning the traditional grip for the snare drum. With respect to the often-discussed problem, whether the matched or traditional grip is better on the snare drum, I would like to say that if you have an even head in front of you, you will have a round kettle underneath. The bass drum with two heads stays always verticle, for acoustical reasons. For these same reasons, the snare drum is held forty-five degrees. The sound should never be stopped on the floor. [*Editor's note:* Prof. Hochrainer believes that the sound is projected better into the concert hall because the drum is slanted.] Therefore we still use the traditional grip for the snare drum in Vienna.

Every young drummer should know the precise meaning of the terms *tempo, rhythm,* and *beat.* Frequently in the orchestra, the timpanist or his colleague on the bass drum is responsible to set the right tempo and, even more importantly, to maintain it. Some people believe that the feeling for the musical tempo comes from your pulse, from your heart. That is nonsense! The feeling for the steady tempo must be learned by walking, marching, dancing, counting the bars, and even making music. With his young wonderful heart, a boy can never keep the tempo. Many conductors also have trouble keeping the musical tempo, but interestingly enough the conductors who are over seventy are doing it wonderfully.

To keep a steady tempo is, I believe, the most difficult problem in our music and of utmost importance in the player's and listener's attention. Only in such a right, steady tempo will any ritardando or accelerando have a real effect. If we watch any brass band, we will find an older man on the bass drum, who is responsible for the tempo. The younger man plays the snare drum.

Rhythm is the alteration from heavy to light and from light to heavy. Theoretically we have only two kinds: duple and triple. The rest are combinations of them. These principles are capsulated in both German and English in my text: *Cinellen, grosse Trommel und anderes* (Vienna: Doblinger Verlag, 1975), pp. 4-7. A fine distinction must be made between tempo and rhythm. Tempo is the quantitative subdivision of time while rhythm is its qualitative subdivision. Once I published an article in Germany entitled "Rechts oder links—das ist die Frage" [Right or Left—That Is the Question] *Das Orchester,* December, 1973, pp. 726-27, because it is very important for a drummer to know whether to use the right or left stick to obtain the best articulation in rhythm. The norm is every downbeat right and every upbeat left, except if we are forced to modify it because of the position of our instruments.

Regarding the problem of the left-handed drummer, I must say, after observing many left-handed pupils, that the rhythms they play with their left hand are a little weaker just as in the case of right-handed people. It is clear that a drummer has to exercise both hands very well and a person who is left-handed should often try to execute a rhythm like his right-handed colleague. Thus the left-hander will profit for both hands will be better trained.

What is the meaning of the word "beat"? Maybe you have read my article "The Beat," *Percussionist* 16 (1979): 56-65? A beat means to lift up, to accelerate, and to relax, not impeding the rebound. The vibrations of the head are much quicker than your muscles. Try this experiment: first, hold a timpani stick very tightly with all your fingers as you make a beat, watch carefully the head of the stick; second, hold the stick between your thumb and the first joint of your index finger, perform a beat, watch the free rebound. Note the differences of tone in these two beats.

Now to discuss timpani sticks. The balance must be right, for it is a conical stick. The end is really the end of your hand. Felt or flannel? A little fantastic I like to say, but the fine felt fibre comes even against the head of the drum, while the flannel fibre strikes it at a ninety degree angle, so that the tone gets the better attack. Of course, we need different sticks for different qualities of sound: flannel sticks, felt sticks, wooden sticks, baroque sticks, and microphone [small very hard solid felt sticks for making recordings] sticks. Very often the timpanist must also take into consideration such things as the size of the orchestra, the acoustical properties of the hall, the stylistic feature of the music itself, and the quality of the timpani.

For piano and mezzoforte passages we should take the sticks with the thumb and the first joint of the index finger. Imagine that there is a nail through the fingers and the stick and that the stick rotates on an axis in the same manner as a piano hammer. All playing is primarily a play of our fingers, secondarily of our wrists. For forte playing, we should hold the stick with the thumb and the last joint of the middle finger, remembering to let the stick rotate as freely as in piano playing. To learn these grips practice in the following manner, always allowing the sticks to rebound freely: play a piano roll—on the first joint of index finger—crescendo—change to the last joint of middle finger as

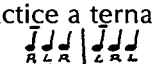
rolling to fortissimo—descrescendo—change to the first joint of index finger—piano roll, and so on, changing the finger positions.

After learning how to hold the timpani sticks, I have my students begin to practice rhythm patterns such as those found in my *Etüden für Timpani,* 2 vols. (Vienna: Doblinger Verlag, 1958-67), 1:4. These are our "scales" which we practice exactly twenty times, right and left, in order to obtain a feeling for the steady tempo and to learn to count. This is absolutely necessary for every beginner to practice. It is a very useful thing to count only until twenty, in a rhythmic manner: one-two, two-two, three-two, . . .elev(en)-two, twelve-two, thir-teen, four-teen, . . . twenty. If you have a rest of thirty-six measures, count to twenty, then to sixteen. This is the easiest way.

Another fine way to practice is to play the hand motions of a rhythmic pattern each hand alone, so that you can learn and notice the different motions left and right. (example 1).

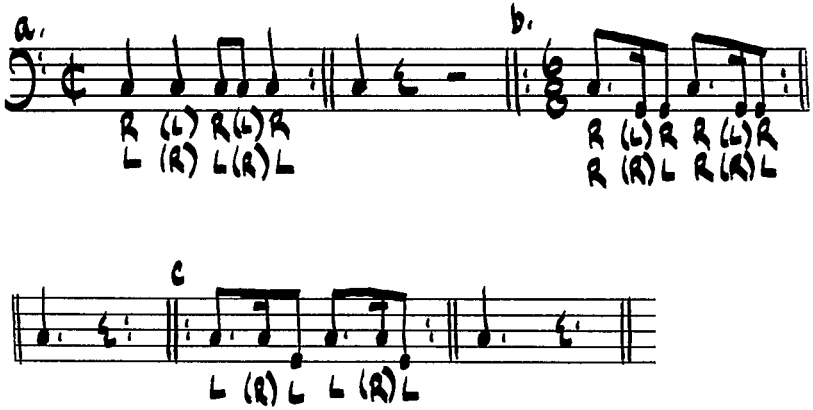
To a pupil with a weak left hand, I often say "Please, when you arrive next time on your doorstep, take the key in your left hand to open the door!"

To learn a well-balanced roll, always practice a ternary pattern:



so that the downbeat is changing from right to left (see *Etüden,* 1:5). A good roll should never be too tight, too even, and it should not sound like a low note on an organ or the fourth French horn. Every roll has to be something exciting with a vibration, a *rrrrr* sound. A roll on two timpani should be played slowly, so that the listener is able to hear both notes. When you want to obtain a fine and full entrance of your roll, start with both sticks at the same time. This may seem silly, but it isn't. The right stick rapidly makes two beats and we are all right again.

In earlier times, the timpanist used a pressroll, as on the snare drum. With the wooden heads of the baroque sticks, it sounded better than now



Ex. 1. Hochrainer, *Etüden,* 1:4, 20, 23.

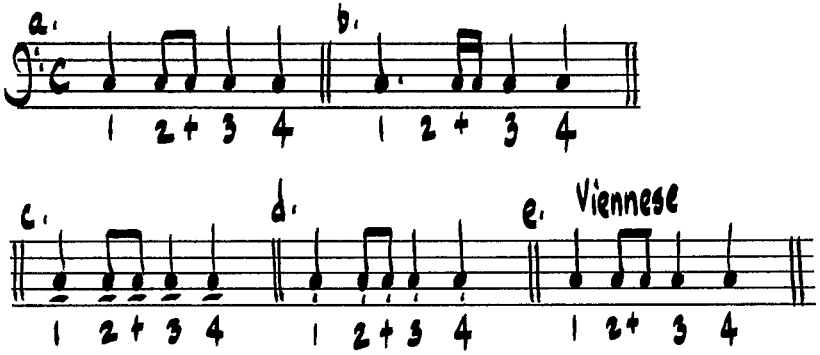
because the timpani, as well as the halls and orchestras, were smaller. The composers, however, were not content with this timpani sound and began to write tremolos instead of trills (see my article "Beethoven's Use of the Timpani," *Percussionist* 14 [1977]:66-71). Since that time we roll with single beats, but once an old friend showed me how to play a fine pianissimo roll, when it is difficult or unmusical to use single beats: pressroll the right stick, but not the left one!

I have often been asked if the Viennese style of playing shortens eighth notes to sixteenths (see example 2b). No, that is nasty. Rhythm expresses many things: melancholy if played broadly (2c), heroic if mathematically exact (2d), Viennese if played just a little shorter (2e).

is thus stopped. I am sure every experienced timpanist knows this.

Another important thing, use all the tonal possibilities of the head and do not play always on the same place. Our natural skin heads become flatter in a short time if one plays in just one place. To avoid this, use different places for playing piano and forte, or to obtain a hard or weak sound. I have only had experience with goat or calf skins, not with plastic, but I imagine that there are similar problems.

Many musicians believe that the sound of the timpani should be dampened whenever a rest is written. No, the value of the note—the eighth, the half note—belongs to the quality of the beat, not to the length of sound. Of course, this depends on the music being performed or, perhaps more importantly, on the good taste of the percussionist. When

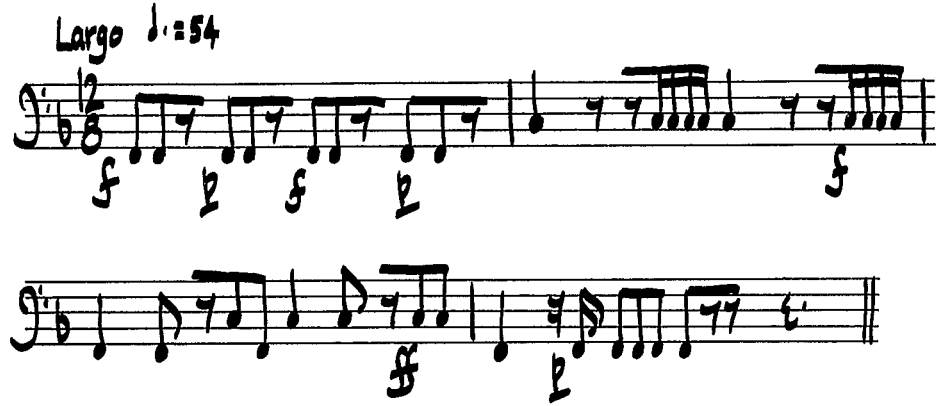


Ex. 2. Rhythmic Modifications

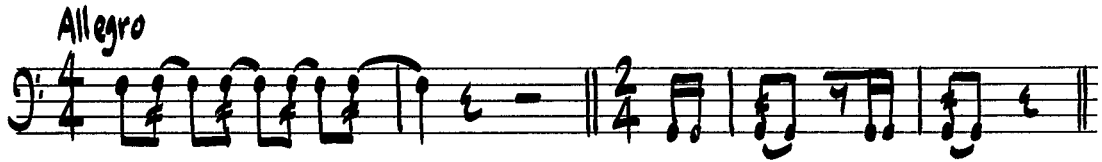
The forte and fortissimo position of the sticks is between the thumb and the end of the middle finger, so we can play the strongest and the loudest beats or rolls without becoming too tired. The sticks swing freely and the timpani have a full and better sound. When we want to play staccato, however, we hold the sticks with our fingers very tightly. The first vibration

we have to dampen, please do it in time—not before the rest—and with your fingers or perhaps in a fine manner with the stick. For example, dampen on the rests with the stick the following passage (example 3).

My pupils must quickly learn the "fingerspringbeat," (I believe that this may be a new English word). My forearm goes down for the beat, on



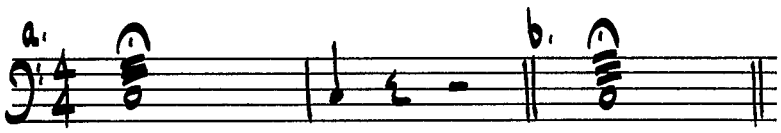
Ex. 3. Hochrainer, *Etüden,* 1:10 (Etude no. 17).



Ex. 4. "Fingerspringbeat" for short rolls.

the way up I quickly close my fingers to make the second beat. With one motion we have two beats. All drumming is a play of the fingers, even in jazz. This finger technique can be used for short rolls at a fast tempo (example 4). But above all the quality of the single beat is most important in all our music. When the timpani part has a roll, the orchestra usually is playing rapid figures, therefore, the roll is often too loud. The most important aspects of the roll are the entrance and the ending. If an ending note is noted, it is never correct to play a beat more. If no final note is written, none should be played (example 5).

the Fifth Symphony of Beethoven is just three frequencies higher than normal pitch, the wind instruments will follow thus destroying the intonation. Once I published an article on this problem: "Das Orchesterstimmer," [The Orchestra Tuner] *Das Orchester,* September, 1970, pp. 410-12. Some advice to all students: never practice with the timpani tuned incorrectly. This disturbs the ear. It is better to learn your technique by practicing on a table, rather than on falsely tuned timpani. Timpani that are consistently well-tuned sound much more beautiful than poorly tuned instruments.



Ex. 5. Roll Endings

Learning how to tune the timpani is another problem. From my old teacher, Prof. Hans Schnellar, I learned to sing daily the intervals in the timpani range, from low *E* to high *f*-sharp, testing myself at the piano. My students do this with the German note names—*ces, c, cis, des, d, dis, es, e, f, fis,* and so on. I have observed that a pupil, after several weeks of doing this ten minutes everyday, will be able to sing each note freely, nearly at absolute pitch. This is not possible with la, la, la or with do, re, mi, fa. Our note names are really impressive, when eagerly exercised.

In every orchestra the timpani pitch is very important. A clear orchestra pitch depends principally on the man on the timpani. For instance, if the *c* in

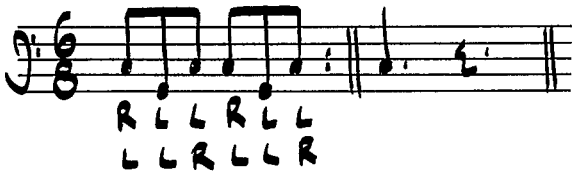
Naturally, for a fine timpanist it is necessary to know the score thoroughly, to know what the rest of the orchestra plays, and to know the function of his note in the harmony. Once when I was young, I wrote my own part to every major work, so that I would know the exact entrance and the function of the note in the harmonic structure of each chord. Some believe that the timpani always plays the fundamental note of each chord. No, how splendid it is when the timpani has the third of the chord, the fifth, or the seventh, or even an ostinato. Sometimes timpanists or conductors like to change the timpani part. No, I know from the tradition that this was strickly forbidden, for example, by Johann

Strauss Jr., in his scores. If you do make a modification, please be very, very careful. The sound of our instruments is very intensive, so we have to watch the greater musical line. For example, when the harmony changes from the key of C major to F major, then the timpani in C reminds us that we are not in F major, but only in the fourth degree of C major. Terrible things can happen. Once I heard the timpani in Franz Schubert's *Unfinished* Symphony changed from *B* and *f*-sharp to *G* and *d*. That is simply impossible! I have also heard many notes changed in the opera *Carmen*. Horrible! It sounds like Richard Strauss, not Georges Bizet. I have played under many world famous conductors, not one of them has ever asked me to make such changes.

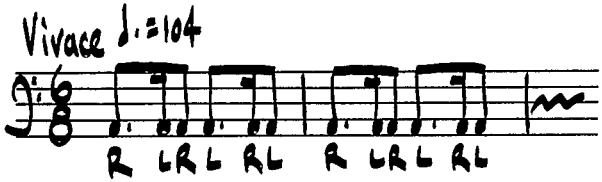
With respect to crossbeats, my teacher once told me that they are wonderful, but only when you are on horseback, not when you are in the concerthall. It looks much nicer to change both sticks very quickly from timpani to timpani (see *Etüden*, 1:17 for practice exercises in etude nos. 30 and 31). If you have a roll on the high timpani that ends on the low, please use your left hand in order to exercise your weaker hand. The following rhythm should not be played with crossbeats because it would sound like a roll on two timpani (example 6). There are relatively few characteristic timpani rhythms that should be played with right hand sticking. Such a difficult rhythm, however, is found in the first movement of Beethoven's Seventh Symphony, written in 6/8. (example 7). Many timpanists play this *r rl r rl*. I believe it sounds much better *r lr l rl*. Then the music sounds easier, more dance-like. Richard Wagner once said that this symphony is the apotheosis of dance (see Richard Wagner, *Richard Wagner's Prose Works*, trans. William Ashton Ellis, vol. 1: *The Art-Work of the Future* [London: Routledge and Kegan Paul; reprint ed., Broude Bros., 1966], p. 124). The compound duple meter of 6/8 lends itself better to the *r lr l rl* sticking.

Should we play any solo passage with only our right stick? No, music means rhythm and that is changing from *r* to *l* and *l* to *r*. Using only the right stick is like the man in the post office who stamps the letters. Of course, if the timpanist does not have his left hand well trained and is nervous, he will play the solo with his right hand alone. [Editor's note: See, for example, the solo at the beginning of Beethoven's Violin Concerto or the transition passage before the finale of his Fifth Symphony.]

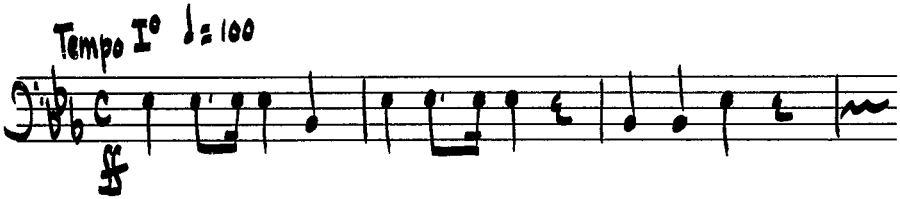
The articulation of a timpani rhythm is extremely important, for through it, the composer will express many ideas such as a thunder crack in the *Pastoral* Symphony of Beethoven or the storm in *Der fliegende Holländer* (*The Flying Dutchman*) of Wagner. Timpani are needed for all triumphal marches; for example, in *Aida* (example 8). Often we hear the trampling of horses, as in *Elektra* (example 9) or *Die Walkure* (example 10). In the dark cavern, the prison for Florstan in Beethoven's *Fidelio*, the waterdrops fall from the ceiling in a diminished fifth (example 11). Herodias sings in the opera *Salome* by Richard Strauss, "how beautiful is princess Salome," accompanied by a wonderful roll on e-flat. Jokanaan sings from the desert against a background of a pianissimo roll on low *F*-sharp. Later, he sings, "There shall come up a multitude of men against her and they shall take stones



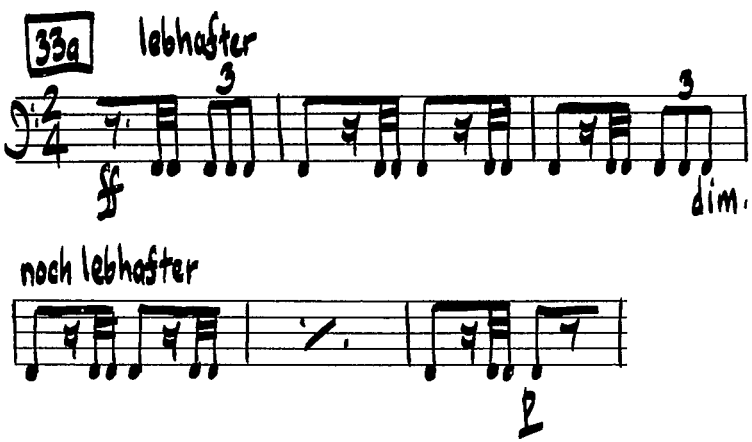
Ex. 6. Hochrainer, *Etüden,* 1:18.



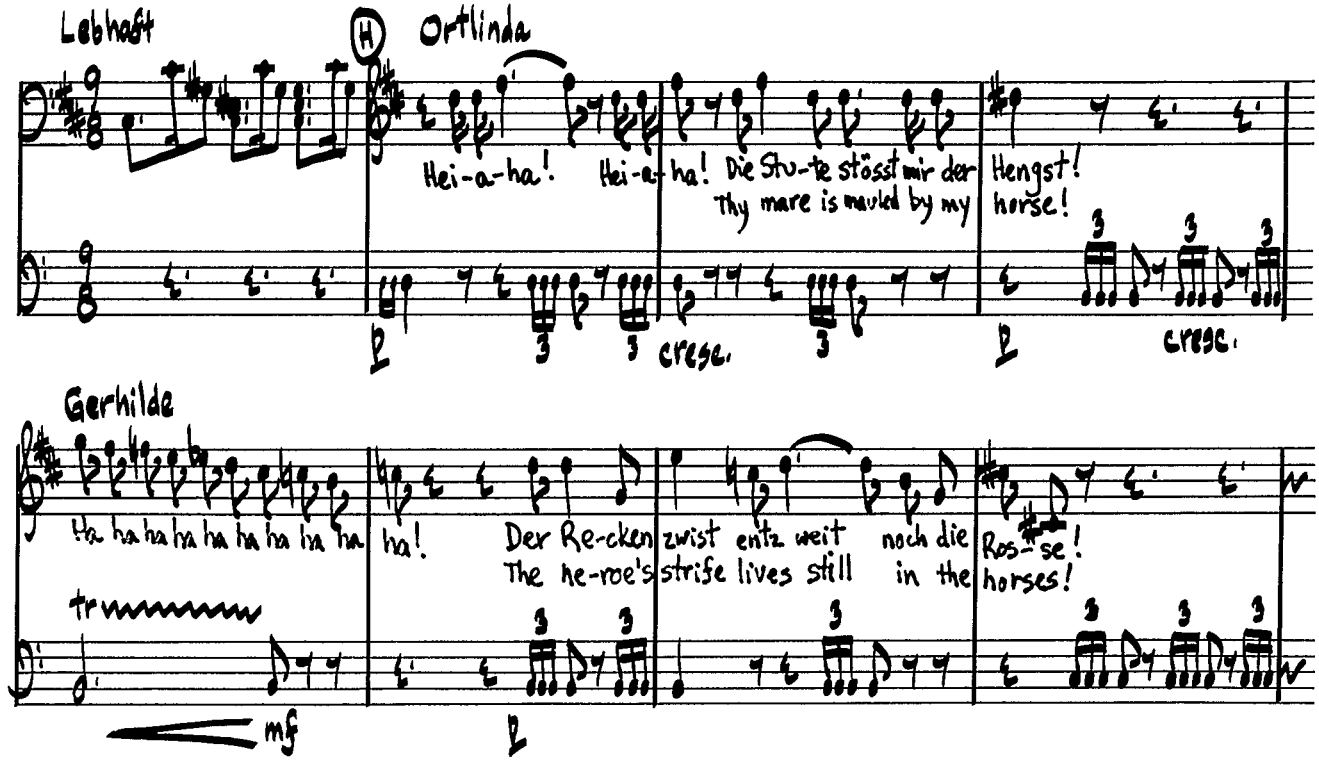
Ex. 7. Ludwig van Beethoven, *Ludwig van Beethoven's Werke,* ser. 1, no. 7: *Siebente Symphonie,* Op. 92 (Leipzig: Breitkopf und Härtel, n.d.; reprint ed., Ann Arbor, Mich.: J. W. Edwards, 1949), pp. 9-10.



Ex. 8. Guiseppe Verdi, *Aida* (New York: Broude Bros., n.d.), p. 256.



Ex. 9. Richard Strauss, *Elektra,* Op. 58 (London: Boosey and Hawkes, 1943), pp. 201-2 (young servant riding away).



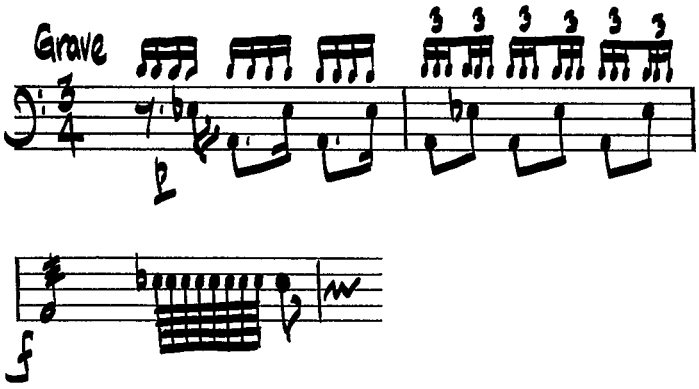
Ex. 10. Richard Wagner, *Die Walkure* (London: Ernst Eulenberg, 1922), act 3, sc. 1.

and stone her, aye and stone her to death (example 12). In this same opera, the barking of dogs is also depicted (example 13).

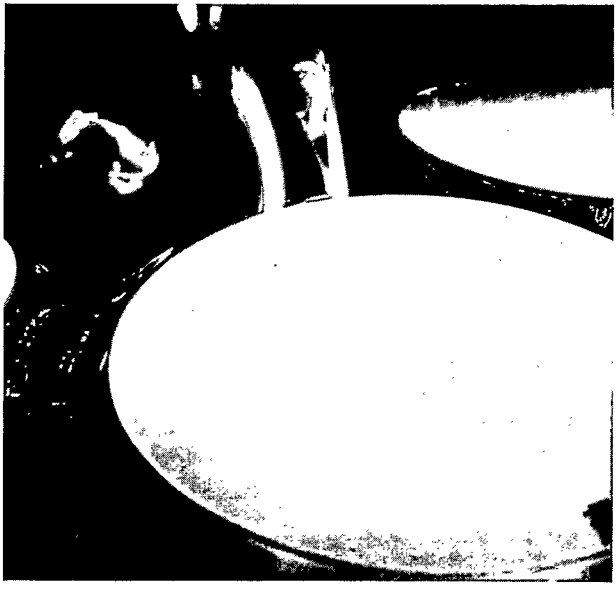
In the ballet, *Josephslegende* (1914), by Richard Strauss the timpani accompany the entrance of the Boxer (example 14).

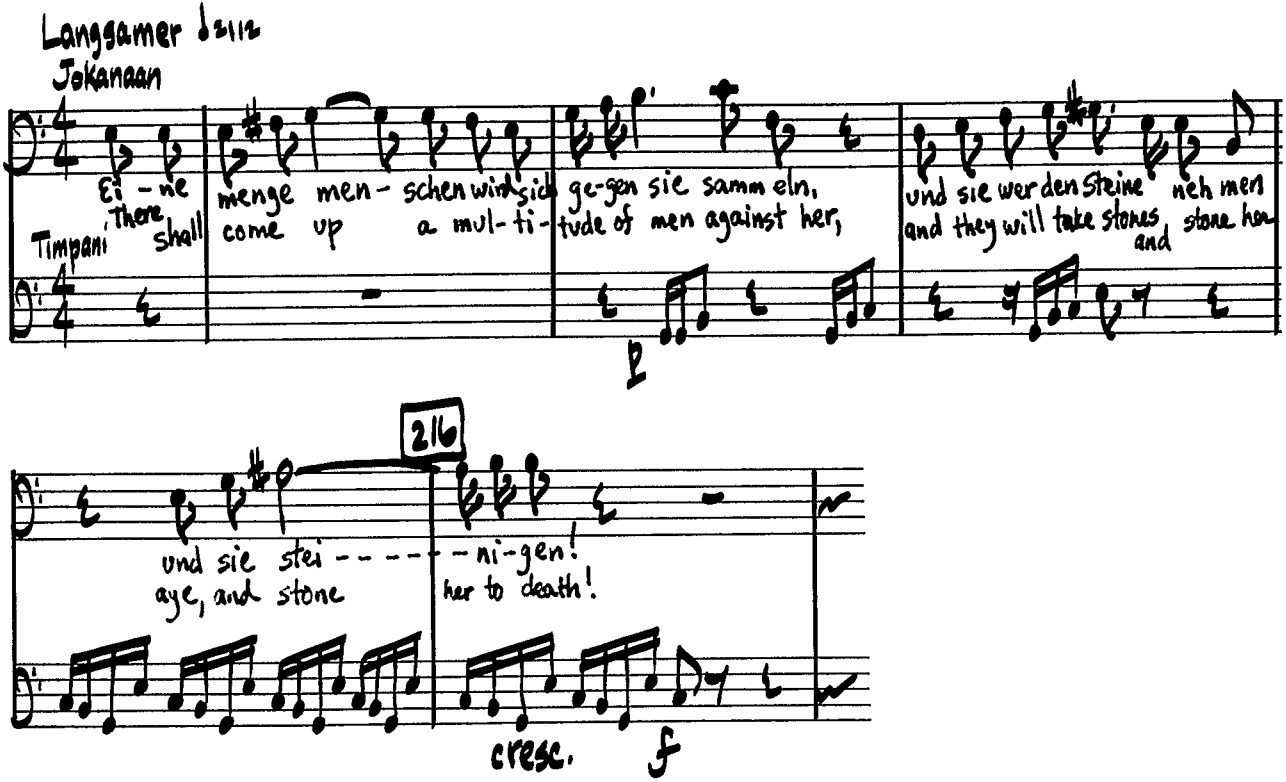
There are numerous examples that might be drawn from the works of Richard Wagner, but let the entrance of the giants, Fafner and Fasolt, suffice (example 15).

The exciting heart beat of Cio-Cio-San in Puccini's *Madama Butterfly* is depicted by a fifth on *B*-flat and *f* (example 16).

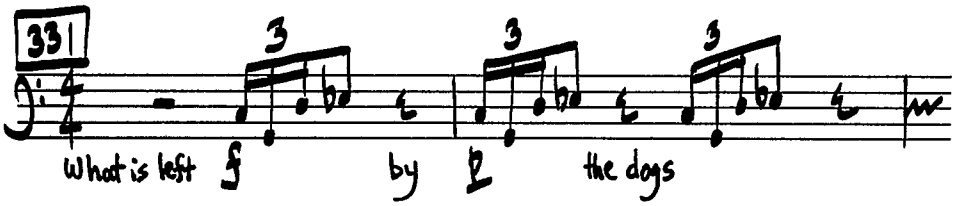


Ex. 11. Beethoven, *Werke*, ser. 20, no. 206: *Fidelio*, Op. 72, pp. 171-72, act 2, no. 11 "Introduction und Arie."

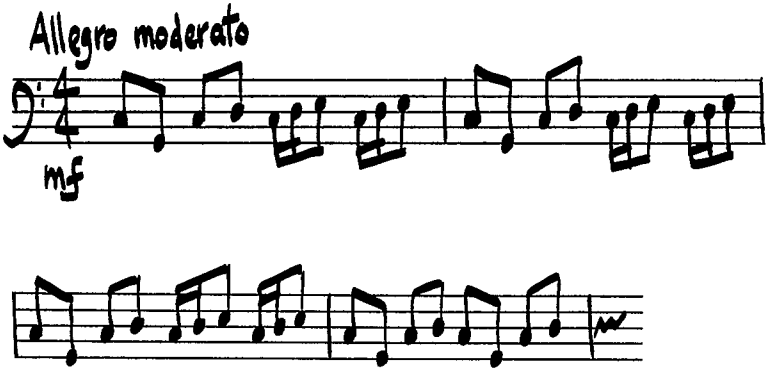




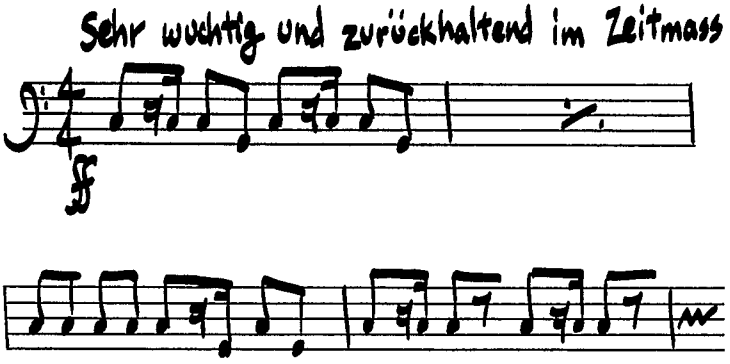
Ex. 12. Richard Strauss, *Salome* (London: Boosey and Hawkes, 1943), 7 mm. after 215.



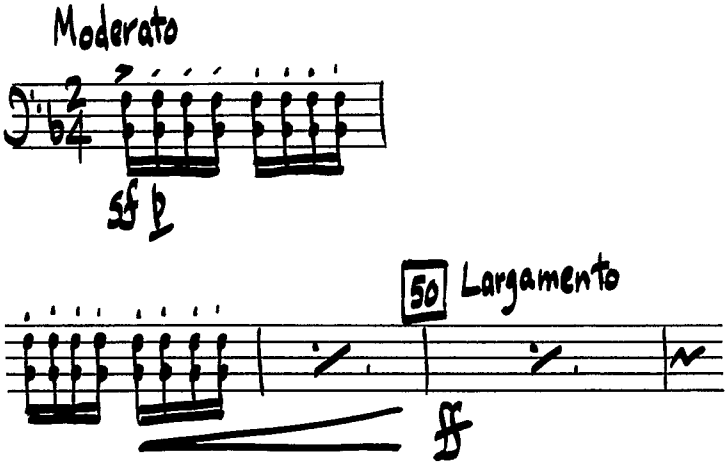
Ex. 13. Strauss, *Salome,* rehearsal no. 331.



Ex. 14. Richard Strauss, *Josephslegende* (Berlin: A. Furstner, 1914), Entrance of the Boxer.



Ex. 15. Richard Wagner, *Das Rheingold* (London: Ernst Eulenburg, [1922]), pp. 218-19.



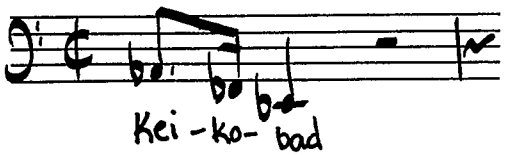
Ex. 16. Giacomo Puccini, *Madama Butterfly* (Milan: G. Ricordi, 1907), p. 465, act 3, sc. 2.

Sometimes the timpani describe the sound of a name, for example, Keikobad in *Die Frau ohne Schatten (The Woman Without a Shadow)* by Richard Strauss (example 17).

These are only a few simple examples. The timpanist should be aware of them, but not overemphasize them.

Sometimes we have to play grace notes on the timpani. One grace note, like the flam, is played with the right stick flat against the head, at about fifteen degrees for weakness. The left stick is a little higher to compensate for the time difference, but is directly struck against the head. Two or more grace notes are played on the timpani separately near the rim followed by the main beat a little towards the center in order to have a full sound (see *Etüden*, 1:27).

A suggestion to teachers: on holidays or vacation times ask your students to write a little percussion solo, at least thirty-two measures for any percussion instrument. However, he must be able to play it. This is not a difficult thing to do. You as teachers then have the opportunity to talk over the problems that frequently occur: sound, technical devices, notation, etc. Most pupils are very proud to have created something new.



Ex. 17. Richard Strauss, *Die Frau ohne Schatten* (London: Boosey and Hawkes, 1946), 4 mm.

Now a few words about the snare

drum, the classic Austrian snare drum. [Editor's note: This is a single-tensioned brass drum about 13" by 5".] I have already mentioned that it is held at a forty-five degree angle for acoustical reasons, and therefore we prefer the traditional grip. The rules for a strong, efficient beat are the same as for the timpani: lift up, accelerate, and relax, so as not to impede the rebound. The correct grip of the sticks depends naturally on the marching position, having the drum on the body. The right stick is held between the thumb and the middle finger, not with the index finger, so that the stick has a free motion. The left stick is in the well between the thumb and index finger. The motion is controlled by the bent fourth finger and the bent tip of the thumb (see my article "The Beat," *Percussionist* 16 [1979]:61-62 for pictures of this grip). The sticks should make more rebound motion than your hands or arms, thus producing a ringing beat. Students should exercise rhythmic patterns (our scales), as on the timpani, as quickly as possible and exactly twenty times, right and left. In earlier times, drummers learned *dada mama* in order to execute a roll. Today we use a much easier method. To produce a multiple bounce or buzz, we stop the first rebound, but only the first, so that the stick will spring more and more. While we practice this right and left, we must take care that one stick stays on the head to fill up the little space of time when the other stick is lifted. I have learned by experience that this is the shortest way to teach a young student how to roll. Of course, later, everyone has to study and practice *dada mama*. As you know from my *Übungen für kleine Trommel* [*Exercises for Snare Drum*] (Vienna: Doblinger Verlag, 1962), the student should begin playing rolls in exact metrical patterns, usually binary (see *Übungen,* p. 8). For unmeasured or free rolls it is useful to play ternary patterns so that the weight goes from right to left and left to right. Thus everyone gets the impression that the roll is even. For very loud rolls play on the complete head by having the sticks bounce across it; almost every particle of the head should vibrate and sound. It is not a good idea to play in just one spot for loud rolls.

In the Viennese school, we use single beats, flams, and drags on the snare drum. We also use a short roll, like the American five-stroke roll, called a *Wirbelrucker*. To play a good flam, the grace note is played by the right stick very flat against the head, maybe at fifteen degrees; at the same moment the left stick is brought a little higher to compensate for the time difference when this stick is struck at ninety degrees against the head. Please notice that it is one motion of the wrists and arms, but the sticks make two beats. My little poem for this is "Right to be weak, go flat; left go high to be late." In German the flam is called a *Schleppschlag*. This means the same as "drag" in English. These words tell us that the grace note has the function of bringing the entrance of the main beat later, but never to make the grace note the main beat. To the question, "When exactly is the main beat?" I say it is between both! The flam (listen to the sound of this word) is something weaker than a single beat, and everything we play with our left hand is weaker. For that reason I always play the flam *rL* and not *lR*. For a splendid Viennese waltz play the grace notes with the right hand up

and down (back and forth across the head), fifteen degrees to the head; the correct flow of this music will then become apparent.

I play the drag with a multiple bounce on the right stick and the main beat left. Germans calls this a *Ruff* and Austrians *Rucker*, this means something exciting, a military call. A very short roll is played as a single beat right, a multiple bounce left, and a single beat right (see *Ubungen*, p. 9).

I hope that this paper has given members of the Percussive Arts Society a better idea of our rich Viennese percussion tradition.

Edited by Harrison Powley

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Notice to Contributors

The *Percussionist*, the journal of the Percussive Arts Society, invites contributions from the variety of specialists whose common interest is the broad field of percussion. Please send all such editorial communications to F. Michael Combs, Editor, *Percussionist*, Department of Music, University of Tennessee, Knoxville, Tenn. 37916.

Contributions should be typed double-spaced throughout—including footnotes and quotations—with ample margins (1 inch) and should conform to the practices of *A Manual of Style*, 12th ed. (Chicago: University of Chicago Press, 1969).

Additional guidelines:

Footnotes must be typed on separate sheets with double spacing.

Tables must be typed on separate sheets. Graphs and diagrams must be in black and white only. Illustrations in continuous tone must be supplied in the form of glossy positive photographs. Tables, graphs, diagrams, and illustrations should be numbered and their desired locations carefully indicated in the text. Their captions should be separately typed, with double spacing.

Musical examples must be numbered and written on separate sheets, with texts (if any) and captions. The desired locations of each example should be shown in the text. The captions and texts for all music examples should also be typed out on sheets of plain paper with double spacing. Generally speaking, a musical example cannot be made part of a sentence in the text. Short examples without staves, however, can sometimes be incorporated in the text. Musical quotations from copyrighted sources should be accompanied by permission from the copyright holder.

All dates, page numbers, titles, and quotations should be checked before an article is submitted.

The author's name and page number should appear at the top right corner of every sheet.

Timpani Talk

Saul Goodman

Mr. Goodman is Professor of Percussion at the Juilliard School and was principal timpanist with the New York Philharmonic Orchestra (1926-1972). He is the author of several percussion works and his *Modern Method for Timpani* has been used by over a generation of timpanists.

"I think you will be all right." This was said to me by Willem Mengelberg, the famous Dutch conductor of the New York Philharmonic, at my first rehearsal on 14 October 1926. I was nineteen years old and had just been appointed principal timpanist of this great orchestra. To say the least, it was "all right" for forty-six years and some 6,168 concerts, not counting the many recording sessions, TV shows, and extra concerts. Playing the timpani under the world's greatest conductors has been an experience for which I am most grateful.

The composer creates new and imaginative techniques; the conductor sees to it that these techniques come through with clarity and musicianship. Therein lies the thrill and feeling of accomplishment on the part of the player to be able to fulfill these demands. Concerning myself, I received very few lessons on how to play the timpani. I had an excellent teacher in the person of Alfred Friese, who was my predecessor in the orchestra. The opportunities for symphonic and operatic training did not exist in my student days as they do today. What made up for this lack of formal training were the many practical experiences of playing in the motion picture theaters where jobs were plentiful. This was a unique type of experience because the percussionist was required to play drum set, mallets, and various sound effects, in addition to the timpani. This was during the last days of the silent film. The musical score for these films required an enormous amount of music, from jazz to symphonic to opera. True, one rarely played through a complete composition (sometimes we played as few as four bars), but the experience of being able to go from one percussion instrument to another with dispatch was unequalled. This was the foundation for what the future had in store for me.

I owe a debt of gratitude to my dear friend and mentor, Oscar Schwar, the celebrated and unique timpanist of the Philadelphia Orchestra, who died in 1945. Back in the late 1920s, I used to meet him every time the Philadelphia Orchestra came to New York City. Schwar had the most beautiful tone of any timpanist I have ever heard. With the encouragement

and cooperation of Leopold Stokowski, he achieved tone colors from the timpani never heard before. He knew how to care for the instrument and how to keep it up to the highest state of perfection in order to produce the best results. In my many conversations with him, especially over a glass of beer, I learned much about these details that are so important for the timpanist.

For the past fifty years teaching has absorbed a great deal of my time. When one has former students like Roland Kohloff (New York Philharmonic), Buster Bailey (New York Philharmonic), Morris Lang (New York Philharmonic), Walter Rosenberger (New York Philharmonic), Gerry Carlyss (Philadelphia Orchestra), Vic Firth (Boston Symphony), Barry Jekowsky (San Francisco Symphony), Eugene Espino (Cincinnati Orchestra), and many more outstanding players, it is obvious that teaching becomes an artistically rewarding activity. When I think of what I actually did to train these highly talented people, I can only say that I gave them what I had absorbed by my exposure to the great musicians of my era.

My general approach to talented students is to make sure that they have a good technical command of the instrument. In order to achieve proficiency I use, in addition to my *Modern Method for Timpani* (New York: Mills Music, 1948), the following texts among others: Vic Firth, *The Solo Timpanist: 26 Etudes* (New York: Carl Fischer, 1963); Jacques Delécluse, *Vingt études pour timbales* (Paris: Alphonse Leduc et Cie., 1968); and Alfred Friese and Alexander Lepak, *The Alfred Friese Timpani Method* (New York: Henry Adler, 1954). I also write technical exercises to suit the individual needs of my students. I make sure that every student has a good fundamental knowledge of intervals. To supplement this study I advise my students to become involved with solfeggio, an excellent training for the timpanist.

After the student secures a good technique, I introduce the study of the repertoire. I start with the classical symphonies of Haydn and Mozart, then we move to those of Beethoven, noting the growth and development of the timpani sound, style, and technique created by this composer. Then we study works by Mendelssohn and Schumann. Following the example set by Beethoven, Berlioz enlarges the role of the timpani in the orchestra. Masterpieces by these composers serve as a source of inspiration and stimulus for students. This music forms the basis of their developing style of playing. We then go on to examine the literature provided by Wagner, Richard Strauss, Mahler, Stravinsky, to name just a few.

During my lessons, I use phonograph records, usually those made by fine conductors and orchestras, so that the student can play along and thus obtain the feeling and character of the music. I try as far as possible to illustrate the conductor's beat. I stress accurate rhythm, phrasing, and general musicianship so that the student must keep these details continually in his mind.

Another important factor for the student to master is the care and mounting of both plastic and calf skin heads. The calf skin head, with the quality that existed before the advent of plastic, is now almost unobtainable. The Kalfo brand made

in the Republic of Ireland is about the best available in the world today. To be sure, they are very expensive, but if one is bent on calf skin, this is the brand to use. The development of the plastic head has come a long way, especially those made by Remo, Inc. This company has produced a product of excellent uniformity and quality. I personally prefer heads with a translucent coating rather than the clear or the opaque white. I think the opaque white head has a tendency to cloud the tone.

Types of mallets are another important consideration. I teach where and when to use the many excellent available today. The recovering of mallets is also shown so that the student learns this most important skill.

Performing in a percussion ensemble is an important part of my students' education. Unfortunately I have found that there are all too few ensemble pieces that are musically worthwhile. In the percussion ensemble, I stress balance and ensemble playing; I try to make the student aware of the importance of balance and musicianship.

In conclusion, today's timpanist is one who not only has technical command of his instrument, but also is an excellently trained musician.

SAUL GOODMAN
Demonstrating for PAS members
at the PASIC '78 in Knoxville

Reflections of a Timpanist

Vic Firth

Mr. Firth is solo timpanist with the Boston Symphony Orchestra and Professor of Timpani at the New England Conservatory of Music. He joined the BSO in 1952, being its youngest member for many years. He is the author of several works for timpani and percussion, including *The Solo Timpanist: 26 Etudes.*

In this essay I would like to reflect on the audition process of the symphony orchestra, choosing a teacher, and how to obtain experience—all topics that I hope will be interesting and informative to aspiring timpanists and percussionists.

Auditions

The subject of auditions is fraught with gossip and rumor. We sometimes think that candidates are chosen and decided upon even before the audition takes place. This is not so! Never let anyone discourage you from attending an audition because you believe it is already settled. I have taken part in all auditions for principal players and some non-principal openings with the Boston Symphony Orchestra. We have a panel of about ten people who sit behind a curtain, totally isolated from the contestants on stage. We know them only by number and we are interested in one thing—the quality and musicianship of the player. Even if a member of the panel could recognize a contestant's style and falsely give him a high rating, the contestant would have to contend with the votes of the nine other judges. When one falls short of the standard, a rejection will certainly occur during the preliminary audition.

My musical colleagues have extremely high standards and are very critical. We in the Boston Symphony take great pride in our work and in the fine players who work with us. We would be foolish not to select the most qualified performer. The same basic philosophy is held by conductors. They may have someone in mind or know of a certain

musician's reputation, but when it is a matter of final selection, they choose the one they feel is the finest available. I cannot remember one instance of a performer "who had the job sewed up," who obtained it. Be well-advised that when there is a position that appeals to you—and you feel well qualified—go after it with all your musical taste and personal vigor.

In preparing for an audition, leave no stones unturned. Know all the standard repertoire at your disposal. Inject your musical personality into your performance by allowing the music to project your emotions. Let your playing mirror your seriousness, wisdom, sense of humor, humility, and other feelings. It is important to remember that musical performance must arouse some emotional experience within the listener. Whether the listener is a conductor, a panel of musicians, ad admissions director, a dean, a friend, or a concert audience, you must arouse something in them in order to be successful. Your sensitivity to the meaning of the music you play will enable you to project this interpretation. It matters not whether the listener laughs or crys, or thinks the music is vulgar, serene, or dramatic. What is important is your ability to create these emotional states through your playing. I believe there is fairness, honesty, and integrity still left in the world; success usually results for those who are prepared to work very hard to obtain it.

Choice of a Teacher

Choosing a teacher means choosing a style, a standard of interpretation, a concept of sound, and in the widest sense a musical and technical foundation. Each of us at some time has been impressed by a great performer. It matters not whether it was Buddy Rich, Saul Goodman, or a local professional; when you heard him play you were eager to emulate his style. Your musical sense told you that this person was an expert at making music. The problem is now how to approach him for advice and instruction. If this person lives in your area it may be relatively easy. Do not be afraid to telephone or write him a letter. Ask to be able to play for him. Then ask for criticism of your playing. If his criticism seems constructive and aware of your strong and weak points, he may be qualified to improve your playing. If he has very little to say and his criticism is weak, the chances are that you could give him a few lessons!

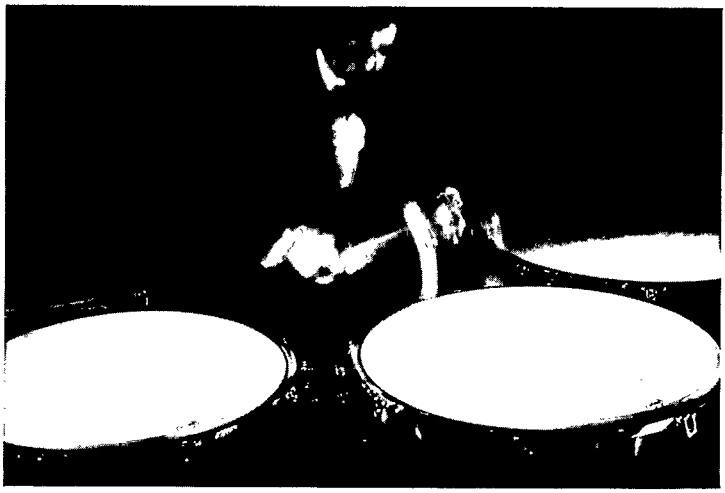
We should always remember that in the student-teacher relationship, the student's ability is very important. A great teacher can do something for a mediocre student, but a mediocre teacher can do nothing for a great student. The combination of an intelligent teacher and talented student can result in musical success. Once you have mastered the basic techniques under the guidance of a good teacher, you can begin to enjoy the fine art of performing. In the beginning you will imitate your teacher's style. Later as you mature, you will develop your own personal style. This style will be the result of many things, but in the end it will be you. The development of a concept of sound will follow a similar route. Your understanding of tonal coloration, sound production, and rhythmic projection will come from many hours practicing and then by applying the results of this work to actual performance situations. My advice is to play and perform as often as possible in all styles of music, e.g.,

chamber music, jazz, symphonic, rock, and so forth. Do not limit yourself, but perform and experiment with music from all musical style periods. Be imaginative and try new ideas. The key to accomplished artistry is hard work motivated by an inspiring teacher who is able to guide you by providing technical, stylistic, and interpretative models.

Experience

One of the most overworked words in the music business is experience. It seems that when a musical organization is searching for a quality player, he must be twenty years old and have thirty years of experience! Perhaps by reviewing the beginnings of my own career I will be able to give some insight into this problem of having experience. I was twenty-one when I was engaged by the Boston Symphony. But my credentials regarding experience may appear over-powering. I had played eight years with a jazz combo, and seven years with a fifteen-piece dance band. In spite of these advantages, I still prepared and played a solid audition. I made up for my lack of symphonic experience by doing a number of things. First, I made sure I was technically proficient of mallets, percussion, and timpani. I became totally familiar with the standard repertoire, at least as knowledgeable as one could be without having actually performed it all. To do this I studied scores, listened to countless recordings with scores, and attended as many concerts as I could afford (or sneak into). I brought as many of my own personal instruments to the audition as I could transport, e.g., snare drum, marimba, cymbals, tambourine, triangle, castanets, my own sticks and beaters, and a few miscellaneous tricks. I even brought my own parts to certain scores. I performed a solo piece that I thought showed my abilities in all categories. I was extremely well prepared, having practiced fourteen hours the day before the audition. My normal practice routine was six to ten hours a day anyhow. I was organized and moved efficiently and positively, but always in a gentlemanly manner. My father, a musician who knew the business, was a strict disciplinarian. At the audition, when asked to play a specific piece or passage, it was played correctly the first time, i.e., all notes, dynamics, color, shadings, and the like were included. At my audition everything that should have been there was present except experience. Obviously because of a successful audition, I was offered a contract. Everyone knew that if I had the necessary potential, the experience was the easiest thing to acquire once I had the job. I do not want you to think I am bragging and patting myself on the back, I just want to emphasize that the talented young have the whole musical world ahead of them if they just have the dedication to work toward their goals.

A lack of experience should not inhibit your desires. Youthful exuberance can make up for lack of experience in a dozen different ways. You should have nerves of steel and the technique to back it up. Always conduct yourself in a courteous manner and have a good personal appearance. Remember, if two players are absolutely equal musically, the conductor is more likely to engage the one who is polite and neatly dressed rather than the one who is rude and unkempt.



Finally, about the thirty years of experience mentioned above, you acquire fifteen years of it your first year and another ten years during the next three or four. This, of course, depends on how serious you are and if you continue to study, practice efficiently, and set high standards for yourself. This accounts for twenty-five years of experience. During the last five years of experience earning, finesse begins to emerge—finesse in style and interpretation, and in the actual knowledge of the music you are performing. (All these numbers are hypothetical, but their relative proportions perhaps are correct.)

As you begin your career, you are engrossed in playing in tune and making correct entrances. As you mature musically, this almost becomes second nature. What then becomes terribly important is your ability to listen—not only to what you are producing, but more importantly to what everyone around you is doing. The importance of listening cannot be over emphasized. As a performer in an orchestra or any ensemble, listening reflects the single most important aspect of your musical experience. When one has experience, playing "in tune," "in time," and "in the right place," become second nature. Listening means playing with musical expertise and finesse. This is really the only aspect of "experience" with which an inexperienced player has to be concerned. As you practice and perform during your student and training years, address yourself as much as possible to this area of musical development.

To summarize the above, artistic achievement on any instrument requires great determination and endless hours of hard work. All this assumes that the necessary God given talent is present. I still get great pleasure and joy from a musical, exciting, and exhilarating performance. I also receive great satisfaction from all of my students and their musical endeavors. I derive excitement and pleasure from all my students who have worked hard and play well. Continue to be devoted, devoit, and devoid of discouragement. If you do, you will succeed with your musical and personal ambitions.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