The Royal College of Organists.

The Timpani,

with special reference to their use with the Organ.

TWO LECTURES DELIVERED AT THE COLLEGE,

ON FEBRUARY 1ST & 8TH, 1908,

BY

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The Timpani, with special reference to their use with the Organ.

Two Lectures delivered at The Royal College of Organists,

BY MR. G. GORDON CLEATHER.

FIRST LECTURE.—1ST FEBRUARY, 1908.

Before entering upon the subject on which I am to speak to-day, I desire to express my thanks to the Council of The Royal College of Organists for giving me this opportunity of pleading before so representative a gathering the cause of an instrument which I believe to be—except in a few rare cases—rather neglected by the schools. I would beg to be believed when I say that I am fully sensible of the honour that they have conferred upon me, for I am a mere executant on what has been described (though wrongly, I think) as the humblest instrument in the orchestra. I also wish to thank Dr. Huntley for his great kindness in presiding at the organ to-day.

It ought, I suppose, to be easy for me to talk about drums and the playing of them, for I have studied them with affection for over thirty years, but I never expected to get anybody to listen to me, and certainly never anticipated facing such an audience as this. Therefore I feel, I must confess, a little embarrassed, because I would gladly learn all about music that this audience had forgotten, and the subject I am to treat of is generally considered—again wrongly, I think—so small and unimportant that I may find a difficulty in securing for it any serious consideration. This seems especially likely because I must ask you to listen to details which may seem very trivial, but which yet, added together, would make the assets of an ideal Timpanist of an ideal orchestra, and this is after all what I suppose we all desire that there should be.

I hope you will not expect anything in the way of a learned discourse. The drum has a history, no doubt, and has played

many important rôles—no pun intended—in battles, etc., but the only drums I am concerned with to-day are the modern orchestral kettle-drums, or timpani, as they are now generally called. But a traveller, on hearing I was to talk "drum" to-day, has been good enough to send me this instrument, which comes from the West Coast of Africa. Forty of these, of various sizes, I am told, go to make up the Native Chief or King's band; and they are its only instruments. I understand that the King's drummers in West Africa are very highly thought of. I would also draw your attention to the fact that these West Africans are quite aware that drums have notes, and can be tuned, which is more than is generally known in England. The player places this drum under his arm; and by pressing the cords he can raise the note. Both the cords and heads have become slack from our moist climate, but you can see how it works.

Now, let me premise that I propose to deal with my subject under the following heads :—

1st. The rhythmical side of the instrument, the music to be played, and the technique required for the proper playing of it.

2nd. The artistic side, including (*a*) the question of tuning, and (*b*) the matter of tone-production, touch, musical accent, and temperament.

3rd. The construction of the instrument, noticing some of the efforts that have been made to overcome what seems to be a great stumbling-block to some players—the difficulties of tuning.

4th. The necessity of establishing a recognised school and standard of Timpani-playing, so that the present haphazard manner of taking up the instrument may be done away with, and a Timpanist may come to be recognized as something more than a "drummer," and as much entitled to be termed a musician as the player of any other instrument.

5th. The use of Timpani in Churches and Cathedrals, with the organ, either in combination with other instruments or with the organ only.

Now, as accuracy is the first requisite for the player of musical instruments, I would ask, what is a "drummer"? My dictionary gives four meanings to the word :—

(i.) "One whose office is to beat the drum, as in military exercises and marching."

Exactly; that is a drummer. He is not necessarily a musician,

and the drum he beats (note, not plays) is one drum, and that the military or side drum, and on it he beats the military duty (and a most difficult and intricate duty it is, that takes him years of practice, and one that very few orchestral players could beat), but he does not play from music.

(ii.) "One who solicits custom; a commercial traveller."
(iii.) "A fish that makes a sound when caught, as (*a*) the Squeteague, (*b*) a Californian Sculpin."
(iv.) "A large West Indian cockroach which drums on woodwork."

The term "drummer" therefore does not seem to me to be either a correct or dignified one to apply to the Timpanist of an orchestra. People seem to look upon a "drummer" simply as a beater of drums, never realizing that there is music in rhythm (Göethe has written that "there is a magic in rhythm; it can even make us think that the sublime is within our reach") and that there are notes in the timpani; also that they are "played" not "beaten." It seems to be generally supposed that "drummers" are paid less than other musicians, and that they are scarcely entitled to share the name. We may *make* less money, because we rarely get any teaching; but we are entitled to, and receive, the same salary as any other principal in an orchestra, and are, if anything, more entitled to it, because from one point of view the Timpanist is the only soloist in the orchestra; no one else is playing his music, and he has to rely upon himself alone. In Italy the two most highly paid musicians are the first Horn and the Timpanist.

Now, first, as to the rhythmical side of the instrument. The music looks so easy to play to those who have eight fingers and two thumbs, and perhaps two feet to use, and whose notes lie immediately under those fingers and feet; and no doubt it *is* generally easy to *read*. But when you come to the practical playing of it, and find that you have only two sticks to execute it with, and that your notes are some 1, 2, 3, or 4 feet apart, and that the higher note is sometimes on your left hand and sometimes on your right, you begin to find out that what looked so easy on paper presents difficulties of fingering of a surprising kind. A novice, *e.g.*, would be utterly floored in the opening of the Overture to Zampa, and the Allegro of the 7th Symphony of Beethoven would take him months of study. Then there is another difficulty which is peculiar to Timpanists, and that is the being constantly compelled to look off, and the ever-varying distance of the eyes from, the music; sometimes you are looking at it straight and at a distance say of 3 feet, the next moment

in the time, and in a tone soft, round, mellow and vibrating. I will not believe, unless told so by an equally high authority, that it makes no difference in the playing of the Timpani part, say of the Scotch Symphony, whether it is phrased and accented correctly, with all the nuances marked, as well as played exactly as it is written; or, in other words, that the temperament which the conductor must possess, if he is to get something better and higher than a soulless, steely performance of a great work, is not to permeate the whole orchestra and be shared by the Timpani equally with the other instruments.

I cannot believe that it makes no difference in the playing of the Scherzo of the Great Choral Symphony whether it is properly accented, by emphasizing and dwelling slightly on the high F so as to make it stand out, and then keeping the low F, by comparison, slightly subdued. Nor can I believe that no added solemnity can be imparted to that wonderful timpani part, of the second and third movements of Brahms' immortal Requiem, by the proper playing and phrasing of those triplets, and the proper, throbbing rhythm of those 36 bars, of four groups of sixes in each bar, which I am told is often degraded by being played as a roll. There is one other instance of musical accent to which I should like to draw your attention, and that occurs in a great Timpani passage in the "Dance Bacchanal" from Saint-Saens' music to "Samson et Delilah." It is this:

It is sometimes played:

Is that correctly accented? Is it not a two bar rhythm, and is not the weird character of the Bacchanalia better described by accenting it as such? thus:

Remember, there are some 40 bars of it, which go on underneath a weird chant that sounds as if it might be hummed by coloured folk through closed teeth.

Well, then, if phrasing does matter (you cannot impart touch and teach temperament, I know) how is it to be taught when there is no recognised school or standard of Timpani playing? Is it right that a conductor should sometimes have to choose between putting up with wrong phrasing, poor tone, and inaccurate tuning, or stopping the whole orchestra to tell the player of things which should be assured in him, the method of mastering them having been acquired from his teacher?

And now, as to the question of construction. Some years ago there was a craze in England for making Timpani with very deep shells. I had to play on such a pair one day, and found that if struck moderately hard they gave out a very much flatter note than when struck softly, and the harder they were struck the flatter they sounded, particularly the smaller one. This is of course true of all Timpani, but not by any means to the same degree as of those with abnormally deep shells. To test this deep shell idea practically, I made a brass ring about six inches deep and fitted it with brackets for the tuning screws, hoop, head, etc., so made that I could fit it easily on to shells of the same diameter. The shell was much too deep, and was cut and cut, and the note tested at each depth, until the best was obtained. I found that large drums, from which low notes are required, are the better for a shell proportionately deeper than the shell of small drums that give the higher notes. I tried various shells and found that brass gave too harsh and metallic a tone, soft copper a dead tubby tone, and hard hammered copper the purest and best tone. I have tried a shell made of wood lately, but have not yet experimented sufficiently to be sure whether a material which is the best for the 'cello and double bass may not also be best for the drum. It is here to-day for you to see and hear.

There is a good article in Sir George Grove's "Dictionary of Music and Musicians" by my friend, the late Mr. Victor de Pontigny, on the drum and methods of tuning it. This is no doubt known to every one present who may be interested in the subject, and therefore I refer to it only to point out three things. First, that I can find no allusion whatever to the question of tone; secondly, that I do not think the writer is correct in saying that "Very large drums below F have not a good musical tone, but produce mere thunder"; thirdly, I do not think the proper place to strike a kettle-drum is, as the article says, at about one fourth of its diameter, but nearer the rim. As a matter of fact there is always one particular place in every drum where it sounds better than anywhere else, and that is the place to aim for; it is generally about three or four inches from the rim.

As to tone I note with regret that the importance of this is quite ignored, for to me it is of great importance, and I think that it must surely be a matter of satisfaction to the conductor when he hears a good toned bass to his brass, and more so when the Timpani have a soft solo passage, as in the slow movement of the Scotch Symphony, and in the passage of Sir Charles Stanford's "Revenge" already alluded to. Therefore the great objection in my eyes to all mechanical contrivances for rapid tuning is not only that they never can tune the instrument evenly all round, on account of the head's being an animal membrane and requiring more tension at one point than another, but also that the mechanism so loads up the drum that the vibrations are damped and the tone deadened.

Then as to the very large drums below F—let us try a roll on the low E, or even D, on this 32-inch drum, and see whether the note is clear, or the sound "mere thunder." I may not be able to judge because I am too near, but you can, and I will abide by your judgment. Is it all right? Yes? Well, then, I must ask you to note that my drum is clear of all machinery, that the shell is very thin, and made of well-hammered copper, and that it is egg-shaped. I have found that for the low notes, from A downwards, it is better to have the shells deep and egg-shaped, but for the high notes the shell should not be too deep. My reason is that I have noticed that if a high-toned drum has a very deep shell it will be much flatter when struck loudly, so that a roll with a big *crescendo* ending on a climax, if begun in tune, will be nearly a half-tone flat at the finish. I believe that the egg-shape in the very large drum overcomes this tendency to some extent.

Various contrivances have been designed to overcome the difficulty of tuning rapidly, but none, so far, which in my opinion have been successful while preserving the pure timpani tone at the same time. I propose to notice three of these. The first, or one of the first, was I think Ward's patent, alluded to in the article in Sir George Grove's Dictionary, of an endless cord round the drum, working on pulleys and controlled by one screw. Of course, the cord would stretch and be least effective at the point farthest from the screw; it could not strain the head evenly and the machinery killed the tone. The second was a contrivance by which the drum itself was turned round to right or left on a screw attached to machinery which tightened or loosened the head; but, inasmuch as the head has to be tightened more at one point and less at another because of its variation in thickness and elasticity (unless it happened by the merest accident to be put on exactly true to some note in the

first instance) it could never even be started true. This was greatly improved upon by putting tuning screws on as well, so that you could tune your drum truly to its lowest note, and then trust to the mechanical process to tune it up. But it does not follow that the same relative straining of the head of a drum to produce A will, if increased evenly all round, produce a pure D, and again the ponderous machinery killed all the tone. The third is the pedal arrrangement in use in the Queen's Hall Orchestra. Certainly it seemed to me that the machinery for the rapid tuning of these drums was as complete as it could be.

It includes three distinct adjustments: 1st, the usual tuning screws all round the drum; 2nd, the pedal arrangement for raising or lowering the note; and 3rd, one adjusting screw which might be termed a "weather screw," which on a damp day could be used to instantly adjust the pedal so as to bring the head of the drum to the same relative tension that it would have on a dry day. You can tune these drums very rapidly therefore, and can even play tunes on them if only the tune is slow enough to allow the vibrations from one note to die away before the next is sounded; otherwise it would be like playing on the piano with the loud pedal down continuously. So that for rapid passages the tuning arrangement, excellent as it is from a mechanical point of view, and leaving everything else out of account, is of no value, and moreover, unless the manipulator is very expert, may be of worse than no value, for if he presses a notch too far an entirely wrong note is produced. Per contra, the real, pure timpani note is not to be obtained; it is, I suppose, smothered entirely by the machinery, which is so heavy that it takes two men to lift each drum.

This absence of full, round timpani tone is more conspicuous in the large drum than the smaller one. Each drum weighs about 196 lbs.; therefore they are troublesome to move about, and unwieldy travellers. (The drums in front of you weigh from 36 to 60 lbs each, excepting this experimental one, which weighs only 20 lbs and is especially designed for travelling.) I was curious to know whether the passage from Tschaikowsky's 4th Symphony before alluded to, could be played on these pedal drums, and I was informed that it could not, because it was in too rapid a *tempo*. I may be wrong, but my own view is that if a conductor wants the pure Timpani tone, and music and poetry, out of his drums, he will keep to the old style of hand tuning, and if two drums are not enough have three, and if three are not enough, four. And after all, four drums would only weigh about 150 lbs. and cost, say, £50, while these two pedal drums cost £56 and weigh about 196 lbs. each!

In the illustrations which are now to be given, that from the second movement of the Brahms German Requiem shows the solemn atmosphere that can be produced by the Timpani when written for by such a master. The pedal piano sketches of Schumann for which the Timpani parts have been written—and surely beautifully written—by Dr. Sawyer, show the use of Timpani in little solo passages and in the marking of themes; and here I venture to think they *do* help the organ. The Funeral March of Mendelssohn, again, seems specially to lend itself to timpanic treatment. In the "Berceuse" of Gounod they ought to be soothing (if I can make them so) and mingle with the organ as if they were another stop. If the presence of Timpani were unknown to the audience and I could possibly create the impression that you were listening to an organ with an unusual stop, I should have succeeded in using Timpani in what I think is a very musical way. In the "Flambeaux" of Meyerbeer the Timpani are no doubt intended to be rhythmically martial, and this is just what the organ cannot be without their help.

The Timpani, with special reference to their use with the Organ.

SECOND LECTURE.—8TH FEBRUARY, 1908.

In beginning my lecture to-day, I have first to thank you for the very kind reception accorded me on the previous occasion. Also to thank Dr. Richards for so kindly presiding at the organ to-day. I think it is a most gracious act on the part of Dr. Huntley and Dr. Richards, and just such an one as the great ones of the profession are always ready to show towards us—the lesser ones, and I am sure it will be appreciated by all Timpanists. I also wish to thank Messrs. Hawkes & Son for kindly lending me a drum to take the place of one I had in use in my regular engagement, so as to release my own for use to-day, and also for the excellent heads they have provided, which I have

never seen surpassed for quality or for the exceedingly neat and workmanlike manner in which they have been put on. Secondly, I must allude to a letter addressed to me by Dr. Buck, raising several very interesting scientific questions. "Is there," he writes, "any acoustical reason why a drum should sound flatter when struck loudly than it does when struck softly?" (In passing, may I say how delightful it is for me, as an old Timpanist, to find my humble instrument at last taken seriously and scientifically!) I would suggest in reply that possibly the harder blow, since it displaces the vellum head more, may make it vibrate more slowly than when struck softly, and hence the lower tone. That it *does* become considerably flatter you shall hear for yourselves.

Dr. Buck asks further, "Does the metal shell vibrate, or only the air inside?" I would suggest that inasmuch as the metal of which the shell is formed materially alters the sound, as I explained last week, the metal must co-vibrate with the air. Then Dr. Buck asks, "If it *does* vibrate, could the "nodes," or points of rest, be utilised for the holes to hold the legs?" This is a scientific question which has yet to be examined, together with a further one suggested by Dr. Sawyer, viz.: "Since, by strewing sand over a metal plate and setting it in vibration by rubbing the edge with a violin bow, the sand will form figures showing the nodes of the plate (commonly known as 'Chladni's figures'), if sand were thus strewn over the drum-head and the drum struck, would similar figures be formed? If so, might not the best point to strike the drum be scientifically obtained, on the basis that the simpler the figure formed, the purer the tone?" These two questions are both worthy of experiment, and it is delightful to find doctors of music treating the drum as worthy of thorough scientific consideration.

On Saturday last I endeavoured to demonstrate—I hope not unsuccessfully—that if kettledrums are properly constructed and free from machinery, and properly tuned, and played with a method that will secure full vibrations, they are really musical instruments with notes as definite as those of the 'cello and double bass. Also, that it was a mistake to suppose that they cannot be effectively used for notes below F below the stave; they can be taken down even to pedal C, giving a perfectly pure note of good tone. This last I think is very important in relation to the subject I am to treat of to-day, viz. "The use of Timpani in Cathedrals and Churches"—for while the high notes are brilliant, the low notes are sonorous, grand and solemn, and so eminently suited to the service of the Church. Curiously enough, when I left this room last Saturday I went straight to

capable (if he has reasons for so believing), so inspire him that he *makes* him capable, almost in spite of himself. To my mind Timpani are never more effective than when they are soft. Of course they make a grand bass for the brass, and they have a wonderful way of blending and mingling with other instruments if only they are not banged—but it always seems to me that the beauty of the instrument is shown in the soft passages, and more so in the simple passages, and I have found that whenever people have been affected by the Timpani it has always been in passages of this character, never by the loud, troublesome and difficult ones.

An example of what I mean will be shown in the slow movement of the 2nd Organ Sonata of Mendelssohn which we are to play presently, where the Timpani have the simplest passages but where all the effect depends on the tone; and that is why I feel so strongly on this question of tone-production, especially in playing with the organ, because on these pedal notes the Timpani can vary the amount of tone with each phrase as it seems to be called for, whereas the organ can*not*, and that makes all the difference. If I can succeed in playing these simple notes as I feel them (to use Sir Charles Stanford's beautiful phrase) they ought really to help the organ, and just complete the phrasing of that slow movement.

Some little time ago I read of an edict from Rome forbidding the use of what it termed "bizarre" instruments in the service of the Church. This seemed to me to make both for reverence and for true art; but unfortunately it went on to classify the instruments which it termed "bizarre," and in this classification included kettledrums. Now it so happens that the kettledrum is the only instrument in the whole orchestra to which the term "bizarre" cannot by any straining of the meaning be applied. It is impossible to make a harsh, disagreeable or "bizarre" noise upon a kettledrum, and, besides its many dignified and refined qualities, it is the only instrument whose technique can be learnt without making a noise! Timpani can be used in a variety of ways, and to give musical expression to various emotions Hence, it occurred to me about twenty-three years ago that they could be most usefully and effectively employed in Churches. The only thing that an organ really lacks is the power of giving rhythmic accent. The Timpani supply this, and therefore no organ is quite complete without them, for occasional use, that is.

Have you ever stood in the chancel and listened to a congregation singing a hymn? Take the hymn: "How sweet the Name of Jesus sounds." Did you ever hear a congregation

take the fourth minim in time at the beginning, or give the full value to the dotted semibreve at the end of the second line? Well, if an organist has a Timpanist with him he can so mark the rhythm that the congregation are almost obliged to keep his time; and, properly used, Timpani add a solemnity and grandeur to the musical service of the Church which I have found recognised and appreciated wherever I have played. I played twice every Sunday for fifteen years at the Church where I first introduced them. I do not know whether the use of Timpani with the organ needs any justification here. I believe I am correct in saying that organ-builders have been endeavouring for some time to include a drum stop, and that organs in Bohemia are frequently fitted with bass drum and cymbal attachments for the sake of rhythmic attack—also that if you had a stop called "Timpani" you would occasionally draw it. Bass drum and cymbals are a very poor substitute for Timpani, but how you are ever to get these included in an organ I do not know.

The organ-builder has succeeded, more or less, in imitating all the instruments of an orchestra except two only—the Harp and the Timpani. And what would happen to the poor sensitive Timpani if three or four of them were crowded among the diapasons I really do not know. On one occasion I was engaged to play in a service at a Church and they put me and my drums into the organ, and into the great organ of a great organ at that. I have counted bars under disadvantageous circumstances before, but I never underwent a more trying experience than this! The bellows creaked and groaned. Every time an additional loud stop was drawn another sound, from some unexpected quarter, was literally hurled at me, until at last the Mixtures were drawn and completed the pandemonium and fairly startled me out of my count. Now and then a cold blast of air would rush out at us, and down would go my Timpani while (shiveringly) I would screw them up again, and at the end I felt in a state of nervous collapse. I asked the organist plaintively, afterwards, if I was anywhere near it, for I hardly knew what I had been doing. He replied, "My dear fellow, it sounded splendid from the outside." I said, "You should have been inside."

So I hope if you want the Timpani you will not try to make a stop of your Timpanist and put him inside the organ, but trust to his artistic sense so to control his instruments as to make them blend with the noble instrument under *your* control. He can certainly only do this when he can hear the organ from a safe distance.