Beiaardkunst

Handelingen van het Tweede Congres 's-Hertogenbosch 1925

Druk van J. J. Arkesteyn & Zoon, 's-Hertogenbosch

Voordracht van den heer William Wooding Starmer, Fellow of the Royal Academy of Music, Professor of Campanology Birmingham University, te Tunbridge Wells (Engeland):

Bells - Bells Music and Carillons of the British Isles.

From the earliest times bells have played an important part in the civil and religious life of the nation.

It is probable that the crotal is the most ancient form of small bell. Such bells were fixed to the shields and spears of warriors as well as to the harness of chariot horses.

At a much later period the small hand bells — made of sheets of metal — bent in to shape and riveted or brazed together where the edges meet, were accredited with miraculous powers. They were frequently enclosed in cases called shrines. These shrines were of beautiful workmanship, profusely ornamented with gold and precious stones. One of the most famous examples is the Bell of St. Patrick, mentioned as early as 552.

There is not the slightest doubt that bells as we now know them, were invented by the Christian Church, though not at the earliest stage of its existence, for then in consequence of persecution no loud summons was possible as a signal for assembling together.

The venerable Bede (680) mentions that a bell was used to call the nuns to prayer.

In 750 the building of churches and founding of bells were much encouraged by a decree which provided that a thane's rank might be obtained by a Saxon churl or franklin, if he were rich enough to possess 500 acres of land and had a church with a bell tower on his estate.

(Thane = Baron. Churl = lowest order of freemen, Franklin = a freeholder — a small land owner.)

Ingulphus tells us that Turketyl, Abbot of Croyland, who died in 975, had large bells cast which produced „the most exquisite harmony", showing that bells then were required to possess definite musical qualifications.

Our most ancient secular use of bells is probably the Curfew — a signal for all fires to be covered. William the Conqueror (1066—1087) enforced this and in so doing is erroneously credited with its introduction.

In many parishes the Curfew bell has been rung continuously from its introduction to the present time save during the years of the Great War. There are many romantic stories connected with the Curfew, the best known of which relates how a lost and weary traveller was guided on the right way by the sound of the bell and as a thank offering for his deliverance eventually left a sum of money for the continuance of its ringing. This of course was at a time when there were few roads and when travel was almost entirely by bridle paths.

As early as the 12th century there was a bell connected with death, called the "passing" bell.

Durandus says that „when anyone is dying bells must be tolled that the people may put up prayers, twice for a woman, thrice for a man, and if for a clergyman as many times as he had orders, and at the conclusion a peal on all the bells, to distinguish the quality of the person for whom the people are to put up their prayers".

A high price was demanded for tolling the largest bell, presumably because its sound could be heard at a greater distance, and thus procure a larger number of prayers on behalf of the dying, and keep the evil spirits farther away. Our forefathers believed that when death took place, the spirit came forth from the body invisibly, although it was treated as a tangible reality. Consequently great preparations were made for getting him away as soon as possible. Doors and windows were opened and other ridiculous things done, such as covering mirrors for fear that anyone using them subsequently should see the dreaded ghostly form reflected therein.

The ringing of the passing bell and the prayers put up by the people in consequence were supposed to prevent demons from stealing the body, which was not considered absolutely safe until buried in consecrated ground where the Devil dared not trespass. It is said that those unfortunate enough to be buried in unconsecrated ground reappeared as fiends!

That bells were efficacious in dispelling storms was universally believed. There was an endowment belonging to old St. Paul's, London, „for ringing the hallowed bells in great tempestes and lightninges". As late as 1852 the Bishop of Malta ordered the church bells to be rung for an hour to allay a gale.

Other powers were also ascribed to bells, as Hering in „Certain Rules Directions

or Advertisements for the Time of pestilentiall Contagion", 1625, recommends that „the bells in Cities and Townes be rung often ..... thereby the air is purified".

All the foregoing references show that not only were bells much employed in secular and religious life but that they were accredited with extraordinary powers.

At the beginning of the 17th century it became necessary that the bells in churches should sound the notes of a particular musical sequence because the art and science of „change-ringing" was then being evolved. This meant that all „rings" or „peals" must produce the notes of the major scale in their proper order, sometimes 5 or 6, later on 8—10 or 12 bells, the largest (the tenor) being the key note. This caused many ancient bells to be recast.

The oldest dated bell in England is at Claughton, Lancashire, 1296.

There are bells of an earlier period, but undated. Their ages can only be approximated.

Change-ringing was definitely set forth by Fabian Stedman, a printer of Cambridge who published his famous work Tintinnalogia in 1668. It is probable that his method was formulated about 1640.

As the effects of change-ringing predominate the appreciation of bell music in the past I will give a short explanation of this art and science.

First of all it is peculiar to our country.

It has a language of its own employing such curious technical terms as „hunting", „dodging", „coursing" etc.

It is a system of producing changes on various numbers of bells from 5 to 12.

To enable the ringers (one to each bell) to manipulate the bells, the latter must be hung so as to be swung and balanced mouth upwards for every blow of the clapper. For each blow of the clapper the bell in its movement completes a circle and comes to a point of rest (the balance) with the aid of a stay and a slider.

For each blow of the clapper the direction of the movement is reversed.

With the full swing of the bell, the clapper strikes with great force and produces a much greater amount of tone than is possible from the carillon clavier.

The rules which govern the system are:

(1) that there must be an alteration in the sequence of the bells at each successive blow of the clapper,
(2) that a bell can alter one place up or down or retain its position.

The art of „striking" the bell at the exact moment of its position in the sequence requires great skill.

The science of change-ringing is purely mathematical and contains no musical considerations whatever.

The possible changes are easily calculated, being the permutations, one at a time, for a given number of bells thus:

4 bells	24 changes
5 bells	120 changes
6 bells	720 changes
8 bells	40.320 changes
10 bells	3.628.800 changes
12 bells	479.001.600 changes

The greatest feats of change-ringing are

(1) a peal of 21.363 changes rung at Appleton, 1922, in 12 hours 25 minutes;

(2) a peal of 18.027 changes rung at Loughborough, 1909, in 12 hours 18 minutes.

Both are wonderful instances of endurance.

In order to facilitate the balance of the bell when hung for change-ringing, our forefathers, instead of improving the method of suspension, indiscriminately shortened the body of the bell in order that greater ease in ringing might be attained. This impaired the symmetrical shape and completely upset the series of harmonic tones.

It is entirely on this account that many of our old bells are poor in tone and out of tune with themselves and with others and also that they differ considerably in contour and dimensions from the bells of Hemony, van den Gheyn or Dumery.

All this has been entirely changed. The difficulties have been overcome and splendid bells as to tone and tune are now being produced, many examples of which you have in Holland.

During the past 35 years much analytical and experimental work has been done so that bells can now be tuned with greater accuracy than ever before, the special mechanical appliances devised making perfect harmonic tuning a certainty.

I hope I shall not be accused of exaggeration in stating that at the present time the best bells in the world are being made in England.

The great advancement made in harmonic tuning is more important than any recent development in the manufacture of other musical instruments.

Next I would draw your attention to our quarter chimes and chime-tunes, for, although a mechanical performance, they have a considerable bearing on the general appreciation of bell music.

The music of quarter chimes — for the hour — is arranged in a melodic sequence of 5 phrases twice played, thus: No. 1 for 1st quarter, Nos. 2 and 3 for 2nd quarter, Nos. 4, 5 and 1 for 3rd quarter, and Nos. 2, 3, 4 and 5 for the 4th quarter. This is the form and plan generally adopted for public and domestic clocks. I will mention as an example the Westminster Quarter Chimes well known all over the world. Their history is interesting. They were composed by Dr. Crotch and first put up at St Mary's the Great, Cambridge, in 1794 and are properly called Cambridge Quarters. It is said that Crotch took the initial 5 note figure from the 5th bar of the introductory symphony of the air „I know that my Redeemer liveth", in Handel's Messiah.

These chimes were played for over half a century before any notice was taken of them. In 1845 they were copied at the Royal Exchange, London, and in 1859 at the House of Commons, since which time they have been reproduced in every part of the globe as „Westminster Quarters".

When chime-tunes are used they are played melody only and on the heaviest bells available. To me, this has the effect of a ponderous bass voice attempting to perform music suited to a soprano.

This is very different from music in 3 or more parts played by the automatic carillon, principally on small bells, with the occasional use of the large ones. We suffer much from the neglect of the chime mechanism and I think that Holland and Belgium are much in the same position with regard to the automatic carillon. For satisfactory automatic playing it is absolutely necessary that the mechanism should receive constant attention and very careful regulation, otherwise the music played is simply a burlesque on the original. With us, owing to the fact that the bells are nearly always the diatonic notes of the major scale, modulation is precluded, which greatly limits the number of available tunes. However the clockmaker, who rarely possesses any musical skill, has no compuction in altering any notes of the melody to suit his mechanism and the bells at his disposal. Probably no tune has been so badly treated as our National Anthem. Here are 3 examples which I think will interest you but which I produce with shame, for such mutilation and distortion is greatly to be deprecated.

I will now deal with the carillons of the British Isles in their proper date order.

I. In 1867 A. L. J. van Aerschodt put in the tower of Boston Parish Church a carillon of 36 bells, the largest weighing only 420 lbs. This was a chromatic series above the existing ringing peal, the tenor of which weighed 3158 lbs. The carillon had no clavier and was played mechanically. It was not a success and the 36 small bells were melted down in 1899 to make 4 ringing bells which were added to the peal.

II. The carillon of Eaton Hall (Cheshire) made by Severin van Aerschodt for the Duke of Westminster in 1879 consists of 28 bells, the largest weighing 4480 lbs. It is played mechanically and has no clavier.

III. In 1882, a carillon of 33 bells by Severin van Aerschodt was put up in a tower specially designed by Sir Gilbert Scott for Cattistock Church. Two bells were added in 1899 by Felix van Aerschodt making 35 in all, largest bell weighing 2200 lbs.

This is the first carillon, with clavier and automatic mechanism on the Continental plan, erected in England.

IV. In 1887 a carillon of 37 bells by Severin van Aerschodt was placed in the tower of St Nicholas Church, Aberdeen. The largest bell weighing 6496 lbs.

This is the second carillon with clavier and automatic mechanism erected in the British Isles.

The clavier (and its connections) has been allowed to become derelict and at the present time the chime mechanism only plays tunes on the largest bells.

V. The first carillon cast by an English bell founder Taylor of Loughborough is that of Bournville, Birmingham, in 1906. Additions have been made in 1923 and 1925, making 42 bells in all; the largest weighing 4581 lbs. In addition to the clavier there is automatic mechanism for quarter chimes and chime-tunes.

VI. The Foundry carillon of Mess. Taylor, Loughborough, begun in 1906 and completed to 40 bells in 1912.

It is erected in a campanile in the works and is one of the most accurately tuned series of small bells in existence. The largest bell weighs 1116 lbs.

It was specially constructed to exemplify the perfect accuracy possible in the difficult harmonic tuning of very small bells.

In addition to the clavier there is automatic electro pneumatic mechanism.

VII. Queenstown Cathedral, Ireland. A carillon of 42 bells by Taylor of Loughborough cast in 1916, the largest bell weighing 7582 lbs.

Clavier and chime mechanism.

VIII. Armagh Cathedral, Ireland. A carillon of 39 bells by Taylor of Loughborough cast in 1921 the largest bell weighing 4830 lbs.

Clavier and Quarter chimes.

IX. Parkgate (Cheshire), Mostyn School. A carillon of 37 bells by Taylor of Loughborough, cast in 1923, the largest bell weighing 2128 lbs.

Clavier.

X. Loughborough War Memorial carillon of 47 bells by Taylor put up in 1923, the largest bell weighing 9284 lbs.

Clavier.

The largest and finest in the British Empire.

When the carillon was first introduced into our country very little notice was taken of it probably due to the fact that it was played mechanically and that the effect was very different from what it was expected to be.

However when the Bournville carillon was erected, with accurately tuned bells — a great advance on the van Aerschodt bells — the musical possibilities of the carillon and the use of bells in combination soon gained public appreciation, and, as a result, we now have the fine carillon already mentioned which, for tone and accuracy of tune, are second to none.

The magnificent carillon of Loughborough, the largest and most important in the British Isles, represents the last word in construction, tone quality, accuracy of tune and other attributes of the English bell founder's art.

The workmanship and materials of the clavier are of the highest quality. The pedals are placed, for the first time in the history of the carillon, in a new and more convenient position, and are 1½ octaves in compass. The utility of a greater compass is doubtful.

The action work is designed on exact mechanical principles, so that the force exerted by the player is conveyed from the key to the clapper with the least possible loss, and is capable of the finest adjustment, ensuring perfect response to the player's touch.

The materials used in this department are more durable than those most frequently employed.

The bell chamber of the campanile is specially designed providing ample openings for the egress of sound so that the small bells shall not be overpowered by the large ones and so that evenness of tone shall be obtained throughout the entire compass of the instrument.

The arrangement of the bells is compact, making the effect of the carillon as a whole entirely satisfactory wherever the listener may be, as long as that position is a sufficient distance from the bells, and avoiding the defects of bells when hung on the outside of the tower, or when divided and placed in sections of the tower a long distance from each other.

At first we were obliged to rely on the best continental carillonneurs, but now we are looking to the Loughborough carillonneurs, Mess. Jordan and Potter and the Bournville carillonneur Mr. Clifford Ball, all receiving the excellent training of the Mechelen Carillon School, to increase the popularity of carillon music and to further the best interests of the carillon art.

Carillon recitals frequently attract audiences of many thousands of people. When the Loughborough carillon was inaugurated by M. Josef Denyn in 1923 it is estimated that over 100.000 people were present.

Without doubt there will be, in the near future, a school of carillon playing in England.

It is very gratifying to me to be able to state that the popular taste constantly demands more and more classical items in the programmes.

For the serious carillonneur there is a rich harvest yet to be reaped from the music of the great composers of every country. I would mention particularly the works of Bach and Handel which are not polyphonic, Scarlatti, Corelli etc. to which I will add the best composers of harpsichord music, music which is well suited to the instrument and of which as yet comparatively little has been played.

On the theoretical side we have raised Campanology to the dignity of a University subject by the institution of a lectureship at Birmingham University, and by making the subject Course V of the Music Section for Second year's course for the Honours Degree of Bachelor of Music.

A course of lectures is given during the first term of the year to which the public are admitted,

The instruction includes bell making and tuning, acoustics of bells, carillons, carillon construction, carillon music, chimes, chime-tunes, automatic mechanism, the composing of bell music etc. with practical illustrations of the technical requirements of the carillon art.

A practice clavier is available for students as well as the carillon of 42 bells at Bournville.

The scheme aims at ensuring that the would-be carillonneur shall be a well

educated musician and a performer on the piano or organ (or both) b e f o r e he is allowed to study the carillon.

Why should not the carillon virtuoso rank equally with the piano organ or violin virtuoso?

Such a position can only be attained when the musicianship is at least equal to the virtuosity. It will be my earnest endeavour to do all I can to induce our best composers to write original music for the carillon. At the present time there is too little of this available.

I am sure that the authorities of Birmingham University would seriously consider the publication of a series of such pieces in the same excellent form as those which are about to be issued by the Mechelen Carillon School.

You may rest assured that I shall ever work most assiduously for the best interests of the carillon art. In conclusion it may interest you to know that I have given on anaverage one lecture per month for more than 25 consecutive years on this subject, before the most important musical and scientific bodies in the Kingdom and I hope I may justly claim that these lectures have been largely instrumental in creating a love for and a keen appreciation of carillon music in my own country.

Wegens ziekte van den heer F. A. Hoefer te Hattem kon de voordracht over „De klokkengieter Geert van Wou" niet gehouden worden.