

Bigger Than We Thought:

The Early History of the Four-Octave Vibraphone and Arguments for Standardization

(Originally presented by Dr. Brian Graiser at **Dél-Alföldi Ütöhangszeres Szakmai Nap és**

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Despite being one of the youngest instruments in the orchestra, the vibraphone is now considered an essential component of any classical or jazz percussion studio. For most of the past century, the standard range of the vibraphone was considered to be three octaves, F3-F6. However, four-octave vibraphones spanning C3-C7 have actually been produced for quite some time, with Deagan building theirs in 1976, Bergerault building theirs in 1965, and Studio 49 building theirs possibly even earlier, in addition to more recent catalogue models made by Adams, DeMorrow, Marcon, Saito, VanderPlas, and Yamaha. Most people still assume that the four-octave vibraphone is a recent innovation, and that any music written for that range must therefore be quite new. The purpose of this presentation is to reveal the surprising truth to the contrary, which is that music has been written for the four-octave vibraphone for over 90 years, starting with the first *three* orchestral parts ever written for the instrument! I believe that this revelation, along with the rapidly increasing number of available four-octave vibraphones, gives us ample justification to argue that the standard professional range for the classical/contemporary vibraphone should now be four octaves.

When the vibraphone was invented in 1921 at the Leedy Drum Company, it was considered to be little more than a novelty instrument, to the point where Ulysses G. Leedy

didn't even feel it necessary to patent his company's invention. As a result, several other companies, most notably J.C. Deagan Inc., quickly followed in building their own versions of the vibraphone. The range of these instruments would vary from company to company and model to model, with most falling between two and three octaves. The most common three-octave models were built in either the modern standard range of F3-F6 or the higher "soprano" range of C4-C7. Those relatively small ranges were more than sufficient for Vaudeville and jazz musicians who were essentially the only people playing the vibraphone in its first decade, before classical composers began to take notice of the instrument.

Some percussionists mistakenly believe that the first classical composer to write for the vibraphone was Percy Grainger, on the assumption that his writing for "steel marimba" and "steel marimbaphone" was actually intended for the vibraphone. However, this assumption is easily proven false, as the steel marimba and marimbaphone were distinct instruments produced by Deagan prior to the invention of the vibraphone, and there are in fact written correspondences directly between J.C. Deagan and Grainger regarding the development of those instruments. For the most part, percussion historians have long considered the vibraphone's first classical appearance to have been in Alban Berg's atonal opera *Lulu* and the five-movement *Lulu Symphonic Suite* for orchestra, both written in 1935.

Berg's inclusion of the vibraphone was no fleeting whim; the vibraphone can be heard throughout all phases of both works, often presented in conjunction with the celeste and harp. Berg paid close attention to the use of motorized vibrato, agile pedaling, and two-, three-, and four-mallet playing, and shockingly, in both the opera and the *Symphonic Suite*, his vibraphone parts are clearly written for an extended-range, four-octave (C-C) vibraphone! In several

instances, the vibraphone part ventures outside the three-octave range but never strays beyond four octaves, going as low as C#3 and as high as B6. Berg occasionally wrote trills and tremolos in the vibraphone's extended high range to imitate the sound of a phone ringing, but throughout the opera most of the extended-range material, both above and below the standard three-octave range, doubles the melodic material in other instruments' parts, further illustrating that this writing was deliberate and not in error.

However, Berg was *not* the first classical composer to write for the vibraphone. In 1932, three years prior to the birth of *Lulu*, French composer Darius Milhaud included the instrument in his incidental music to Paul Claudel's play *L'Annonce faite à Marie* and its related concert suite. The music was written for a shockingly futuristic mixed ensemble that included a vocal quartet, wind quartet, two electronic ondes Martenot, piano, organ, and two percussion parts, the second of which included a vibraphone.

Of the score's 17 vignettes and interludes, three incorporate the vibraphone. The instrument is primarily used to augment the material in the ondes Martenot parts, although there are fleeting moments of exposure. The part is easily played with just two mallets, and although no pedaling indications are given, Milhaud's rhythmic notation and use of rests makes it easy for performers to decipher his intentions regarding sustain, particularly in the finale of the work. Surprisingly, as with the part in *Lulu*, the vibraphone part from Milhaud's score is *also* written for an extended-range instrument! The entirety of the vibraphone's second appearance, in *Movement III Part 3- Au loin*, consists of two pitches, C#3 and E3, both of which are below the modern standard range but well within the four-octave C-C range. Since the entire 78-measure movement exists outside of the three-octave range, there is more than enough reason to argue

that this was no compositional error, but rather an intentional choice informed by the existence of an extended-range instrument.

The vibraphone parts written by Berg and Milhaud in the 1930's were groundbreaking in many ways, but neither composer was actually the first to use the vibraphone. Instead, that distinction belongs to English composer Havergal Brian, thanks to his use of the instrument in his 1929 comedic opera *The Tigers*. Brian is best known for his 32 symphonies, beginning with his mammoth 1927 *Symphony No. 1 (The Gothic)*, which currently holds the Guinness World Record for longest symphony and calls for a performing ensemble the size of which rivals Mahler's *Symphony No. 8*. Billed as a "Burlesque opera in a prologue and three acts," *The Tigers* was Brian's first completed opera, and took the composer over a decade to finish.

The vibraphone is featured in three musical numbers, all of which are located in Act II, and is deployed as a part of a larger percussive choir which includes celeste, harp, glockenspiel, triangle, gong, pitched bell, and tubaphone (a metal keyboard percussion novelty instrument invented by J.C. Deagan in 1889). Brian's writing for the vibraphone indicates a clear understanding of the damper pedal and the motorized vibrato, and is otherwise noteworthy for the fact that there are *two* vibraphones used at the same time, the first part given in treble clef and the second in bass clef. Although modern four-mallet techniques would enable a single performer to play both parts together, the parts' occasional doubling indicates that the composer did not intend to create a grand staff played by one percussionist, but that he expected each part to be played by a separate performer. And, as you may now suspect, the vibraphone writing in *The Tigers* goes beyond the conventional three-octave range!

The upper vibraphone part given in treble clef poses no questions, but the lower part given in bass clef often ventures below F3 in each of its three appearances. In the majority of those appearances, particularly in the introductory *Andante Pastorale*, which we are hearing now, the second vibraphone plays a series of repeated descending figures which reside largely within the bottom half-octave of the extended range. The second part also frequently doubles the first part at the octave, revealing that Brian's use of this part of the range was deliberate, and not in error.

Unfortunately, as with *Lulu*, Brian's completed opera was not performed until after the composer's death, and the finished manuscript languished in obscurity for decades (and was even considered lost) until its rediscovery and acquisition by the Havergal Brian Society in 1977. The subsequent performance and recording by conductor Lionel Friend and the BBC Symphony Orchestra in 1983 is in fact the only known performance of the complete opera. The poor-to-nonexistent visibility of both *The Tigers* and Milhaud's *L'Annonce faite à Marie* in the decades following their creation surely accounts for the long-held misconception that *Lulu* was the first classical work to incorporate the vibraphone.

The shared characteristics of the vibraphone writing found in these, the first three orchestral works to incorporate the vibraphone, point to several important conclusions. The first conclusion is that these three parts were absolutely written for the vibraphone, despite the extended range of the material. The parts could not have been intended for a different, larger instrument such as a steel marimba or marimbaphone, because all three parts require an instrument capable of producing long sustained notes as well as short notes, and the vibraphone was and is the only instrument with a damper pedal capable of handling these parts. Furthermore,

the parts to *The Tigers* and *Lulu* give specific indications for the vibrato motor, a feature which has long been exclusive to the vibraphone.

A second conclusion to be drawn is that these three vibraphone parts were specifically written for an instrument larger than three octaves. The vibraphone part in Olivier Messiaen's 1944 *Trois Petites Liturgies de la Presence Divine* requires higher notes than F6, which would have been playable on the three-octave "soprano" C4-C7 instruments made by Deagan, Premier, and Ludwig at the time. However, unlike Messiaen, Brian, Milhaud, and Berg all wrote parts that ventured lower than middle C, which the "soprano" vibraphones could not handle. Later works for the vibraphone, such as Milhaud's *Concerto for marimba, vibraphone, and orchestra* and Leonard Bernstein's *Symphonic Dances from West Side Story*, contain isolated notes outside the three-octave range which, due to their singularity, are most likely compositional errors, but since the parts in *The Tigers*, *L'Annonce faite à Marie*, and *Lulu* frequently and repeatedly venture beyond the three-octave range, there can be no doubt that this writing was intentional.

The final conclusion we can draw is that there *must* have been at least one four-octave vibraphone built prior to World War II, most likely residing in London and possibly elsewhere. Havergal Brian, Darius Milhaud, and Alban Berg all shared an understanding of the vibraphone's extended range, which must have been informed by the knowledge of an actual instrument. Knowing that scheduled performances of their works were imminent, Milhaud and Berg in particular would not have written speculatively for an instrument that did not yet exist, and it would defy all logic to claim that all three composers, by sheer coincidence, would have written so much material in the extended range and somehow separately arrived at the same four-octave limit without any knowledge of an existing instrument capable of performing those parts.

The question of *which* vibraphone they were referencing is, unfortunately, one that cannot be concretely answered until further historical discoveries can be made. However, given what we have been able to piece together, I do have a working theory. English percussionist Michael Holloway, a peer of the noted historian James Blades, wrote a letter to the editor which was published in a 1978 issue of *The Percussionist* magazine, stating that “In their 1939 catalogue, Boosey & Hawkes advertised a 4 Octave (C to C) instrument but few, if any, of these monsters were built before the outbreak of War in 1939 stopped all musical manufacture in England & [this] Writer never saw or heard one of these ‘in action.’” Therefore, I believe that in the mid- or late- 1920’s, soon after the invention of the vibraphone, the BBC Symphony Orchestra obtained a custom four-octave instrument, most likely built by Boosey & Hawkes as a predecessor to their 1939 production four-octave model.

Thanks to the historical findings of the Havergal Brian Society, we know that Brian composed his opera in several stages, and that he completed the full orchestration between 1928-1929 while living in London. During this time, one of his apartment neighbors was a popular xylophone entertainer, who has been credited as the inspiration behind the substantial xylophone solo in Brian’s *Gothic* symphony, which was written at the same time as *The Tigers*. It is possible that this neighboring entertainer introduced Brian to a vibraphone in one of London’s music halls, which were the British equivalent of Vaudeville venues, but a more likely explanation stems from Brian’s invitation to attend a BBC New Music Rehearsal in December 1927 for a reading of *Gargoyles*, one of six movements from *The Tigers* which Brian had orchestrated earlier. This visit was likely an inspirational one, as Brian’s very next action was to complete the opera’s full orchestration, and it is entirely plausible that Brian would have

encountered the BBC Symphony's custom Boosey & Hawkes four-octave vibraphone during this visit.

At that same time, Alban Berg was orchestrating *Lulu*, and thanks to his correspondences with his friend Edward Clark, then-program planner at the BBC, we know that he himself visited London in 1931. It is therefore not difficult to imagine an instance where Berg, wandering backstage at the BBC Symphony, also came upon this custom four-octave vibraphone. Or, he would have at the very least received confirmation from Clark that the BBC Symphony could provide such an instrument for its planned future radio broadcast of the *Lulu Symphonic Suite*.

As for Milhaud, who is not known to have travelled to London at that time, we at least know from his letters with Belgian musicologist and pianist Paul Collaer, who was also corresponding with Berg at that time, that both Milhaud and Berg were in attendance at a February 1932 concert in Brussels which featured works by both composers, including the French-language premiere of *Wozzeck*. Knowing that Berg and Milhaud were respectively working on *Lulu* and *L'Annonce faite à Marie* at the same time, is it unreasonable to imagine that Berg could have mentioned this four-octave vibraphone to Milhaud when discussing their current compositional projects, and possibly even opened the door for Milhaud to believe he could borrow this vibraphone, or at least obtain one just like it, for the premiere of *L'Annonce faite à Marie* in the following year? After all, London is fewer than 250 miles from Brussels, which would by no means have been a prohibitively difficult journey, least of all for a noted world traveler like Milhaud.

Unfortunately, we know little else about this instrument, as I have so far been unable to locate concrete evidence of its existence. It is entirely likely that such an instrument would have

been lost or destroyed during World War II, perhaps as a result of the London Blitz or London's scrap metal drive. What we do know for certain is that several instrument manufacturers had to significantly restrict or altogether halt production due to the war, including Boosey & Hawkes, and the production of their 1939 catalogue's four-octave vibraphone was never resumed. My entire theory hinges on several unconfirmed elements falling into place, but the confirmed timeline of all people involved does at least allow for plausibility of this theory.

The bottom line to all of this is that each of the first three classical works to include the vibraphone were written for a range larger than the "standard" three octaves. There will of course always be a need for the 3-octave (F-F) instrument, particularly in the trunk of the gigging vibraphonist or the cramped quarters of the orchestra pit, but these discoveries, along with the fact that a growing number of professional orchestras, university studios, and even school music programs now possess extended-range vibraphones, should give us all the justification we need to declare that, much like the acceptance of the five-octave marimba, the four-octave vibraphone should be adopted as the new professional standard, bringing with it expanded repertoire possibilities and further means of artistic expression. However, the fate of the extended-range vibraphone truly lies in the hands of the broader community of percussionists and composers, who I hope will take up the challenge and join me in exploring the untapped potential of the larger instrument. I urge you all to consider this opportunity, and to leave your mark on the vibraphone's continuing story.