THE IMPORTANCE OF EARLY RECORDINGS FOR THE INTERPRETATION OF LATE NINETEENTH-CENTURY FRENCH FLUTE

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Abstract: The characteristics of early recordings will be analyzed as evidence of the musical reality in which they were recorded. They will be then compared with the score and the Flute treatises of the time to understand any inconsistencies and limits.

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In Historically Informed Performance[1] early recordings have become a primary source of musical research. They are precious evidence of a performance that took place from the end of the 19th century onwards, which we can use to understand the interpretative and aesthetic style of this specific era. It is the earliest period from which the primary source material has survived. For earlier periods we have documents and instruments, but not performances. Therefore they integrate everything we can learn from a treatise of the time by giving us sound feedback. But recording is a technological process mediated by the technological equipment both for recording and for playback. It is therefore legitimate to ask the question of how much can a recording be a photograph of a live performance and which are the peculiarities and limits of an acoustic recording as evidence of a live performance. The process of recording is not neutral but has a creative dimension because the technical decisions made by the sound engineer are also aesthetic choices. The producer is the supervisor and can influence the choices of repertory, quality of sound or editing. He is the privileged listener that mediates the relationship between the score, the performer and the technologies.

Nowadays digital technology can manipulate all aspects of sound or can even design it from scratch, so that the original performance can be irrelevant or very different from the final result. Since modern editing techniques were not available for early acoustic recordings because technology had big limitations, we expect a result that is more similar to reality.

Let's have a look at what was the process in the past. In the acoustic recording era, between 1890 and 1925, sound vibrations were transmitted via a conical shaped funnel (horn) to a sensitive membrane attached to a stylus. The stylus, moved by sympathetic movements of the membrane, etched the sound waves onto a blank wax rotating disc. From the etched groove an electroplated matrix was made that was the negative of the recording, with outward jutting ridges rather than inward grooves. From this negative, positive records were pressed in shellac compound.

The engineer's decisions about the quality of the horn, its placement and the unsteadiness of the cutter determined the quality of the sound and some aspects of the timbre of the record.

The speed of the recording turntable regulated the recording pitch. The standard pitch in 1919 was 78 rpm[2].

The process to play the recording was reversed by a mechanical reproducing machine, the gramophone. Every time the needle passed over the engraved parts it created the same vibrations but this time it dispersed them in the environment in form of sound. Unfortunately, the reproduction of these records had background noises caused by the graininess of the original etched surface, mixed with noises caused by the record's material.

To understand the restrictions of acoustic recording technology it is crucial to access the record's faithfulness to a live performance.

The acoustic recordings could record and playback only a spectrum from 100 to 4000Hz, which represents only a small part of what the ear can detect, as the human spectrum ranges from 20 to 20,000 Hz. It means that a great deal of information heard in a live perfor-

1 Historically Informed Performance (HIP) is an approach to the performance of classical music, which aims to be faithful to the manner and style of the musical era in which the work was originally conceived [Wikipedia-HIP]

2 rpm: revolutions per minute.

mance was lost, including the brightness of the flute's sound or the lower notes of the piano, the dynamics and the nuances.

Since no microphones or any electronic tone control existed at that time, all the adjustments to the sound were achieved by altering the performer's position relative to the horn or by varying the size of horns and the thickness of diaphragms. Sometimes the performer needed to modify his performance using less dynamic than in a concert because when the sound became extremely loud it could make the needle jump and damage the vax.

The recording conditions were very uncomfortable for performers: sometimes they had to play motionless in front of the funnel and they were confined within a small space where their movements were limited, therefore the recording could lack a sense of depth. Pianists were encouraged to play loudly on upright pianos with hardened hammers and missing backs. Although playing loudly was considered necessary, pianists had to be careful because making extra loud sounds or violent accents could break off the wax and nullify hours of hard work (Hambourg 1931, p. 291).

Accentuation, articulation and pedalling was very difficult to record in piano playing (Da Costa 2012, p. 6). Violinists often played Stroh violins with metal sound boxes because the sound of the strings was difficult to capture as it was rather soft; pizzicato, vibrato, glissando had to be heavily exaggerated in order to be heard (p.18).

The soprano Adelina Patti[3] had to sing into a small funnel while remaining stationary to preserve dynamics truthfully, but she was placed on a small movable platform so that she could be pulled away from the horn when a loud note approached and towards it for a quiet note. As a matter of fact, the recorder needle was so sensitive that an extra-loud sound would have made it jump causing a tiny bit of wax to be chipped out. If this occurred the recording had to start all over again. But although this procedure may have ensured some dynamic variations, it could also lead to artificial results.

The pianist Alfredo Barili[4] who was accompanying Adelina Patti was placed with his piano on boxes towering above Patti. From this position, further from the recording horn, he was instructed to play consistently loudly without dynamic shading because such subtleties would not have been picked up (Cone 1993, p. 246).

I couldn't find any evidence of French flute's recording environment, but it could have been very similar to that of Adelina Patti, considering that flute and voice are very similar.

Recordings by 1903 to 1940 lasted up to 4,5 minutes, depending on record diameter. Cutting of the musical text was a common consequence of it. We can find an example in Philippe Gaubert's recording of F. Doppler's Hungarian Pastoral Fantasy (Gaubert 2021). It lasts 4'22" (the integral length should be 12' ca) and some parts are missing. He cuts the first eight bars of piano introduction, then from bar 29 to 42, all the central part "Andantino moderato" from 49 to 117 and eventually from bar 169 to 196. The final Allegro is played very fast and near the end it seems almost rushed. It is possible that Philippe Gaubert had to accelerate in order to suit the restricted playing time and maybe he would have played the Allegro at a different speed in a concert.

Gaubert's recording *Sur la plaine* (Gaubert 2006) lasts 4'30", the maximum duration allowed. The piece has been played in full version but the quavers played by the piano in the

3 Adelina Patti (1843-1919), Italian soprano.

4 Alfredo Barili (1854-1935) Italian-American pianist, composer, and pedagogue.

last bars, instead of dissolving as required by the music, are slightly accelerated, probably to stay within the limits of length.

Not only the interpretation but also the choice of the repertoire may be influenced by these restrictions of duration and frequency, opting for short brilliant pieces with robust sonorities and few nuances. These choices were probably very appreciated by the producer because they were more commercial.

It has to be said that the acoustic recordings we are now listening to, are almost a digital conversion of gramophone records and this process involves a further technical intervention that filters and interprets the original performance. It is nevertheless very important because it allows the possibility to restore, preserve and place on the market deteriorated recordings that otherwise would have been lost. This process involves further technical / interpretative manipulation which has to be considered.

In CHARM (Center for the History and Analysis of Recorded Music) website there is a detailed description of the problems that a conscientious digitization involves.

The sound we hear has a development in time and to be faithfully reproduced it needs to have the same development in time. The essential condition for a repetition of a recorded event is that the reproducing apparatus is able to interpret the carrier correctly. Changing the speed of reproduction will influence the result noticeably. Acoustic records were not all recorded at the same speed; the earliest discs from the beginning of the century were recorded at 68-70 rpm. Eventually the speed was standardized at about 78 rpm, but sometimes other speeds were used but not always indicated. The most difficult task for a technician is to pitch the recordings correctly, to be as faithful as possible to the original sound. He needs to work out what they were in each case, based on knowledge, taste and guesswork.

To achieve that, the turntable for transferring the disk must have speed stability and variable speed from 60 to 100 rpm to reproduce everything recorded. The pick-up arm should be capable of hard work and with removable head-shell system to use a wide variety of styli because the grove-wall dimensions of the discs were not standardised and one needs to find the one that suits it best.

There are different restoration software to filter and minimize different categories of noises reproduction, the constant background noises that the stylus makes in the groove and the clicks caused by the scratches on the record. After removing noise and clicks, one may adjust the volume and equalize the frequency profile.

Listening to different digitized recordings of J. S. Bach's Badinerie and Gaubert's Madrigal both played by Gaubert himself, we can notice that they sound different despite being taken by the same gramophone record. The first one is a track of a CD dedicated to Philippe Gaubert and produced by Alpha Classic, the other one is a digitization of Ashot Arakelyan's private collection made by himself. In the latter there is more background noise but one can hear more clearly the sound of the flute with more softly accompanying piano, whilst in the Alpha's version there is less background noise, the sound of the flute is more muffled but more balanced with the piano. Each of them communicates a different idea of sound and a different balance between piano and flute. Reading Patti's and Barili's testimonials, the Arakelyan's version seems to be the closest to the original record. On the other side, Alpha Classic's version is closer to the expectations of a modern audience. It shows clearly that the digitization process is very important.

Given all the considerations made above, we can state that early acoustic recordings are complex documents that demand interpretation in the same way written texts do. They

are surely "a partial representation of what the musicians would have achieved in a concert performance, adapted to suit the limitations of the recording machinery of the day" (Philip 1992, p. 28).

A flutist's recording environment was surely different from a concert performance. Probably he was forced to stay motionless in front of the funnel playing dynamic or articulations differently from those he usually would have done. He increased the speed of some bars that he would probably have played more comfortably in a live performance, to stay within the time of the record. His live sound may have been more brilliant, expressive and balanced with the piano, but through these recordings we can have an idea of his personal sound, vibrato and musical personality. Gaubert's playing is very different from other contemporary flutists such as Adolph Hennebains[5], George Barrère[6], who have done acoustic recordings as well. In spite of all the limitations of this type of recordings, we can distinguish the sound for each of them and a particular colour and vibrato. We can perceive their musical personality, for example Gaubert's vibrato is very fast and almost imperceptible unlike that of the others, which is more pronounced. Gaubert's sound is darker, full-bodied and powerful; his articulation is very precise and clean. He shows clear musical ideas and a strong character.

Comparing recordings with written, a controversial issue, in which we find apparent contradictions between the text and the recordings, is that of the use of vibrato.

Gaubert's *Complete Method for flute* co-authored with his teacher Paul Taffanel in the chapter on Style and Interpretation says: "With Bach as with all the great classical composers, the player must maintain the greatest simplicity. There should be no vibrato or any form of quavering, an artifice used by inferior instrumentalists and musicians. It is with the tone that the player conveys the music to the listener. Vibrato distorts the natural character of the instrument and spoils the interpretation, fatiguing quickly a sensitive ear. It is a serious error and shows unpardonable lack of taste to use these vulgar methods to interpret the great composers. The rules for their interpretation are strict: it is only by purity of line, by charm, deep feeling and heartfelt sincerity that the greatest heights of style may be reached. All true artists should work towards this ideal." (Taffanel and Gaubert 1923, p. 186) About the interpretation of Gluck's "Dance of blessed spirits" he writes: "Here Gluck uses the flute to sing of the grief of Orpheus. This piece must be played with restraint, without emphasis or vibrato. Keep the tone pure avoiding any exaggerated nuances which spoil the line of the melody and make the style affected" [p. 187]

After reading these instructions, if one wanted to follow them faithfully, he would play the music of Bach and Gluck with a sweet sound but totally without vibrato. But recordings of French flutists of that time shows the contrary. Gaubert in his recordings of Bach's Polonaise and Badinerie (Gaubert, 1919), uses a very light and fast vibrato almost imperceptible and sparingly, as an aid to phrasing.

Barrère in his recording of Bach's Sonata BWV 1031 (Barrère, 1937) and Gluck's Dance of blessed spirits in 1916 uses a shallow and very fast vibrato almost constantly also in fast movements in the long notes.

Moyse playing Bach's Sarabande from Partita in A minor (Moyse, 1935) and Gluck's Danse of Blessed Spirits (Moyse, no date) uses a very fast and light vibrato, slightly more prominent and continuous than Gaubert and Barrère.

5 Adolph HENNEBAINS (1862-1914) French flutist and teacher at Paris Conservatory.

6 George BARRERE (1876-1944) French flutist that 1905 moved to US.

Barrère himself in April 1944 wrote an article that testifies to his stylistic and aesthetic ideas totally consistent with those of his teacher Taffanel and his concern about the constant use of vibrato which was already widespread in those years: "Music with permanent *vibrato* is bound to win and hold a permanent business." Strings were in competition with winds to produce more vibrato because vibrato was confused with expressiveness. "This theory is so thoroughly accepted today that to declare that Expression might sometimes be achieved just by the *absence of vibrato*, would only earn an incredulous frown. Isn't it still possible to express Beauty by pure lines, such we find in ancient Greek marbles? Can't the moonlit night be expressed by a noble *sostenuto* free of that reduced-price *vibrato*? [...] For the fifty years I had been tooting on my instrument, my daily care was to *avoid* the *vibrato*.[...] Once I literally scared an audience by asserting that *vibrato* was produced by taking a pure tone and moving it above and below correct pitch at a certain rate of speed, thus indulging in playing more or less out of tune [..] Since it is true that *vibrato* is the result of a mixing of different pitches, any slight exaggeration of it becomes dangerous and nefarious. Good taste must prevail. As with all necessary evils, sane judgement must be used [...] Can one deviate from the straight line and be called honest? [...] Beauty is natural. The same is true of expression." (Barrère 1944, pp. 193-194).

Barrère believed that vibrato should reflect the natural life and expression within the sound. He explained that when the flutist understood the musical lines from an emotional standpoint, the vibrato would then be a sincere result of the phrasing rather than a technical or mechanical skill that it thoughtlessly added to the music. This type of artificial expression was detestable to him as he believed that it signaled a lack of true musical expression (p. 194).

I have looked for an explanation of these contradictions between what is written and musical practice because I can not believe that prominent musicians and great flautists like Philippe Gaubert and George Barrère could be so inconsistent. If one might think that the acoustic recordings were not faithful regarding *vibrato*, a study made in 2020 by Joshua Glasner and Johnson Aaron, which involved twenty opera singers who recorded a *messa di voce* on different notes into an Edison Home Phonograph, validates that vibrato rate as measured from historical recordings can be viewed as an accurate representation. (Glasner and Johnson 2020, pp. 464-478)

The answer lies in semantic value of the word *vibrato* which at that time had a different meaning from ours. Today, we consider every sound that is not fixed to be vibrato. In the past only a more pronounced undulation of the tone, produced by the fingers or by the air, was considered by them as vibrato that was an ornament to give more emphasis to the musical phrase. A very slight and imperceptible tremor in the sound was considered a natural condition of beautiful sound in France. Louis Fleury[7] in his article on flute co-authored with Taffanel, wrote: "The search for the timbre, the use for this purpose of a light, almost imperceptible vibrato depend much more on intelligent empiricism than on precise rules." (Lavignac 1927, p. 1523). We know from Robert Philip's book on *Early recordings and musical style*, that French woodwind players used a very light vibrato in their playing in the early years of the twentieth century, differently from other European schools as the English or the German whose flute sound was still and less bright. (Philip 1992, p. 111)

7 Louis Fleury (1878-1926) – French flautist, Taffanel's pupil.

It must be said that France was the first nation to officially adopt the metal Böhm flute in 1860. The sonic qualities of metal are very different from those of wood which is less bright but warmer, sweeter and softer. A fixed sound in the metal flute certainly has a harsh and strident character that does not suit the aesthetic idea of that era in which the flute was considered "a pastoral instrument, with which one must seek more to please than to astonish; that one must express only sentiments that are sweet, tender, expressive, passionate, and not those by which one would want to paint anger or tempest. It requires, therefore, above all, a beautiful quality of sound, or, to say it in a better way, a beautiful voice, a voice that approaches as much as possible the human voice." (Tulou 1852, quoted in Giannini 1993, p.126). A slight vibration would therefore have given warmth to the sound of the metal and would have made it more similar to the human voice. In the original French text of the Gaubert Method he uses the word *vibrato ou chevrotement*. In the "Dictionnaire de l'Accademie Francaise", in the editions of 1835 and 1878, under the heading *chevrotement* we find *T. de Musique. Action de chevroter. Les chevrotements sont désagréables* (T. of Music. Action of quavering. The quavering noises are unpleasant). Under the heading *chevroter* in the edition of 1718 we find *On dit qu'Un homme chevrote en chantant, que sa voix chevrote, pour dire, qu'Il chante par secousses et en tremblotant.* (It is said that a man quavers while singing, that his voice quavers, to say, that he sings by jerks and trembling). In the edition of 1878 we find *T. de Musiq. Chanter d'une voix tremblotante comme le cri de la chèvre.* (T. de Musiq. Singing in a trembling voice like the cry of the goat). Therefore for *vibrato* Gaubert intended a pronounced and irregular vibration of the sound. The slight vibration in the sound of Gaubert, Barrère and Moyse playing Bach was not considered as *vibrato*. It is therefore very important when approaching a musical treatise from another era to consider the semantic evolution of words which in different eras can take on different meanings. Analyzing recordings and scores we noticed that early twentieth century playing was characterized by the use of substantial tempo changes to signal changes of mood; varieties of tempo rubato which included not only detailed flexibility of tempo, but also accentuation by lengthening and shortening individual notes, and the dislocation of melody and accompaniment; and a tendency, in patterns of long and short notes, to shorten the short notes and to over-dot dotted rhythms. Early recordings are evidence of a world where the performers were heard only in actual performance and when playing for an audience, the most important thing was the communication of the musical message, each performance occurred only once therefore the technical accuracy and perfection were not as important as nowadays. By the 1930s onwards the trends have changed: the use of a continuous and slower vibrato starts spreading; the tempo starts to became stricter, controlled and slower to allow better technical precision, more literal interpretation of notes value and the avoidance of rhythmic irregularity and dislocation. The existence of the recordings themselves influenced the change of trend towards an accurate reproduction of the musical text and detailed clarity and control because we can be recorded at any moment and the recording immortalizes the particular moment. The actual recording process in a recording studio is totally different from a performance in a concert hall, movement and sections can be assembled from the best parts of different takes and the priority is to get each section right at least once. The result is a technically perfect product, therefore the expectation of the current audience is very high regarding technical perfection even when they go to listen to a concert. Although the Gaubert's Method also gives stylistic and interpretative indications on how to approach the flute repertoire, it can only give us a vague idea of how to play it. The record-

ings have preserved the general performance practice of the period in great detail and the detail includes habits which are scarcely mentioned in written documents. The recording therefore shed light on the limitations of documentary evidence in any period. Recordings also show how performance has gradually changed from the early twentieth century to our own time. They demonstrate how the practices of the late twentieth century, including those which we take entirely for granted, have evolved. They are therefore a vital key to our understanding of past and present performance practice. They show us how much the aesthetic ideal changed throughout the 1900s and how different the idea of a beautiful performance is from the beginning of last century.

Being performers and audiences born in an environment very different from the past and having unconsciously assimilated it, a question arises: is an *authentic* performance of music from the past really possible?

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