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The horn of Leutgeb and Mozart

Investigation and experimentation



Thesis for the obtention of the Master in Early Music - Natural Horn



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INTRODUCTION

As a horn player, the music of Mozart has always been the backbone of my artistic repertoire. As a *historical* horn player, it has become a much more intimate and deeper matter. For some time I had been wondering *how* to play Mozart, and researched traditional classical execution : articulations, tempi, etc. But as I moved to natural horn - and in the end, to many different natural horns -, I became more and more interested in the very material aspect of the question. While playing a Mozart concerto on a French romantic hand horn, I started to wonder : am I really doing the right thing here ? Apart from music theory, am I sounding on this horn the way Mozart should sound ? And from *how* to play Mozart, my question became *which horn* to play Mozart on.

Mozart's horn concertos were written between 1781 and 1786 for his horn player friend, Josef¹ Leutgeb, whom we don't know much about. Lesser is known about the horn he may have played. Besides the theory, was the instrument Mozart wrote for - the one Leutgeb played - different from what we may think ? My preliminary investigations have shown that there is no actual certitude about this.

From this first question came an other, even more ambitious : how does such a horn feel like ? Is it different in terms of sound, articulation, tone colour, dynamics, and does it affect the way I play Mozart's music ? The idea is to use the instrument as an *urtext*, and see if the question *what to play Mozart on* can answer the question *how to play Mozart*.

To sum up, the problematics of this research are : **What was the horn Mozart and Leutgeb knew ? How does such a horn impact my interpretation of Mozart's music ?**

Obvioulsy, these two questions have to be treated separately and in this order. To begin with, a historical research about what horn Mozart actually knew is necessary. Eventhough an exact answer is probably impossible, I intend to get as close as possible to the horn Leutgeb played ; this will be the first part of this study, in which I will investigate horn history, manufacture, iconography etc., and of course Leutgeb's life. After this historical part, my purpose is to find such a horn in playing condition. I will then analyse the response of this instrument when playing Mozart's music, compare it to what we are used to, and eventually record it.



¹ About Leutgeb's real first name, see the chapter « Researching Leutgeb » p.10.

Part 1

Historical Investigation



Short (as possible) history of the horn's evolution

To begin with, I will set the background of my research : the evolution of the instrument, from the hunting field to the concert stage. This is important to understand what where the horns involved during the living time of Mozart and Leutgeb. This description of the horn's evolution is as short as possible ; it stops before the invention of the valve in 1814 for it is no longer relevant after Mozart's death. I based this synthesis on the books by Tuckwell, Morley-Pegge, Humphries, Baines and Geringer² in order to confront as many versions as possible ; historical instruments in museum catalogues were also helpful. Nevertheless, some details will always be open to discussion or update.

Before the end of the XVIIth century, the horn was specifically used on the hunting field and hardly meant for anything else : one did not need to read music to play it, hence the difficulty for composers to develop the « instrument »'s repertoire. The earliest notated horn music we know may be from 1639, in a fanfare by Cavalli³. But before the turn of the century, when the Count von Sporck from Bohemia heard the French « *trompe de chasse* », he sent two of his musicians to Paris to learn the instrument, which was then brought back to central Europe. There, the interest for the *Jagdhorn* flourished.

The instrument was meant to be played on the back of a horse : very wide hoop (double or even single coiled), small bell throat and flare. With their loud, bright and extremely typical sound, they were at first used as a powerful and impressive effect. But soon the horn in an ensemble became a problem : they were impossible to tune and a different instrument was needed for each key.

Leichambschneider introduced crooks very early in the XVIIIth century : the earliest known crooks are dated 1703⁴. They consisted in a terminal master crook in which the mouthpiece fitted, and then additional crooks placed between the horn and the master crook to play in the desired pitch. Tuning was achieved by inserting small bits of pipe between the mouthpiece and the master crook. Meanwhile, horns gradually became smaller (more coils for smaller hoops).

² Complete references of these works will be found in the bibliography.

³ Humphries, J. (2000) *The Early Horn : A Practical Guide*. Cambridge University Press, London, p.7. The Fanfare is « Le Nozze de Teti e di Peleo ».

⁴ Baines, A. (1978) *Brass Instruments - Their history and development*, Faber&Faber, London, p.156.

Around 1750⁵, it is said that Anton Josef Hampel (1710 - 1771) introduced the hand-stopping technique : by putting the hand in the bell of the horn, one can modify the pitch of the natural harmonics in order to play notes that one could not reach before (it is not entirely true that Hampel « invented » this technique, since inserting a hand in the bell had already been attempted by trumpet players in the beginning of the century.). From then, one must keep in mind that horn bells will slowly and gradually become wider and larger to make the hand technique easier.

In the same period, in 1754, Hampel designed a horn with the manufacturer Johann Georg Werner in Dresden, called *Invention-Waldhorn*. This horn had pitched crooks designed to fit in the center of the body, held in place by a pin. On some models, crooks higher than F had their own independant mouthpipe ; when using them, the player would thus find himself with two lead-pipes in his hand. Tuning bits would be used between the crook and the mouthpiece to tune the instrument.

In the 1760's, Johann Gottfried Haltenhof (ca1701 - 1783) developed the tuning slide in Hanau am Main. Some sources date his invention in 1776, but there is a Haltenhof horn with a tuning slide dated 1761⁶. Tuning slides will then progressively appear on Invention-Horns, but also on terminally crooked horns. Those horns (with tuning slide and terminal master-crook and coupler system) are called *Kirchenhorn* by Fitzpatrick⁷, but somehow they were also called *Cor d'Anglais* at the time for their origin was believed to be English, which is probably wrong⁸. These horns may be mistaken with XIXth century French hand-horns in appearance, however they are different as explained below.

⁵ This date is quite uncertain and « mid-century » would be the only way to mention it without beeing mistaking for sure. Some sources state 1760, other even 1740 ; in his article « The Evolution of the Modern French Horn from 1750 to the Present Day », Morley-Pegge writes « about 1752 » (in *Proceedings of the Musical Association*, 69th Sess. (1943), pp.34-55, p. 36) ; but most sources choose the date 1750 and this will be the one used in this work. Very likely, Hampel experimented on hand-stopping and then wanted to make a horn designed for this technique ; thus his experimentations certainly took place before the Invention-Horn was made, before 1754.

⁶ Listed in *The New Langwill Index* of W. Waterhouse (Tony Bingham, London, 1993) under the Haltenhof section. It is supposedly kept in Bochum, Germany ; I located it in the Grumbt Collection, Städtisches Musikinstrumentensammlung, in the Schloss Kemnade. Unfortunately their website is not operative and I was not able to gather any more information about this horn.

⁷ H. Fitzpatrick (1970) *The Horn and Horn-Playing*, p.139 (reference from R. J. Martz's website (2011) : *Dick Martz, his collection of strange and wonderful horns* [http://www.rjmartz.com/horns/Orchesterhorn_035/]). Also in his article « Some historical notes on the horn in Germany and Austria » (1963), in *The Galpin Society Journal* vol. 16, pp. 33-48. This type of horn was very popular in church music, thus the name.

⁸ B. Tuckwell (2002) *Horn*, Kahn & Averill, London (2nd ed.), p.30.

It is also interesting to note that in *Les facteurs d'instruments de musique*, Constant Pierre says about the French maker J.-F. Cormery : « [he] was specialized in horns called à l'anglaise or à la Punto, this means they were equipped with a slide to lengthen or shorten the pitch of the instrument » (1976, Minkoff reprint, Geneva, p.150, my translation.). It seems that for a while, *cor à l'anglaise* was used to describe any horn featuring the Haltenhof tuning slide. As for the relationship with the player Punto, I have no explanation. Was he known to play one ?

In 1781, the Raoux manufacturers in Paris and the horn player Carl Türrschmidt created an improved version of the *Invention-Horn*, the *Cor Solo*⁹. This model features body crooks similar to the previous version, but they are built with Haltenhof's tuning slide and the lead-pipe is fixed and unique. Türrschmidt contributed with his idea to cross the tubes leading to the slide, enhancing the stability. Palsa, Punto and Türrschmidt all played a silver Raoux *Cor Solo* made in 1781¹⁰ ; later, Gallay and Dauprat are known to play similar horns.

As explained above, terminal crooks are in use since the beginning of the XVIIIth century. In fact, many fixed-pitch horns during the second half of the century were turned into terminally crooked horns by cutting the lead pipe and changing it into a socket that could receive crooks¹¹ ; this shows how numerous fixed-pitch horns were at the time¹², and the raise of interest for crooks. These horns are considered as « transitional » instruments, but were also manufactured as such in the last part of the century.

Around the 1790's, pitched terminal crooks begin their appearance ; they will soon equip the *Kirchenhorn* at the place of the master-crook system, and with the addition of the crossed legs of the tuning slide will emerge the French romantic orchestral horn of the XIXth century as we know it.

One will clearly see from this horn history that by the time Mozart wrote his horn works for Leutgeb, several types of horns (fixed-pitch, simple master-crook, *Invention-Horn*, *Kirchenhorn* - with and without pitched crooks -, even the *Cor Solo* and the French orchestra horn) all coexisted at the same time. The purpose of this study is now to investigate which of those have the greatest chance to have been played by Leutgeb.

⁹ This horn had only five crooks to play with : D, Eb, E, F and G, the « soloist » keys. Therefore it was more suited for soloists than for orchestra work where other keys were needed. Hence the name, and the differentiation with an « orchestral » horn.

¹⁰ B. Tuckwell, *Horn, op. cit.*, p.31, and R. Morley-Pegge (1973) *The French Horn*, Ernest Benn Ltd, London (2nd ed.), p.22.

¹¹ Many of the historical instruments I encountered in my research had been transformed this way ; this will be developed later.

¹² *Cf infra.*

About horn manufacture in the XVIIIth century

To be aware of which horn was present when and where, sheds light on several horns that may have been Leutgeb's. But it is also important to know if these horns differ in their conception from the « regular » French instrument of the XIXth century, and if they do, to what extent these differences in horn manufacture have an impact on the sound.

Today, the regular yellow brass metal (laiton) most of the horns are made of contains 70% of copper and 30% of zinc. But until the XIXth century, when the extraction of zinc was not as easy as nowadays, yellow brass was made of copper and calamine. Also, during the XVIIIth century it was common to have instruments made of 100% copper. Silver instruments were rare due to the difficulties to work such a metal¹³.

We do know the effect of having more copper in the alloy : in the modern time we call it « goldmessing » and the alloy is around 80% copper and 20% zinc. Goldmessing produces a rather darker, mellow sound ; we can imagine how a horn made entirely of copper would sound. Unfortunately, I am unable to tell how the use of calamine would impact the playing.

Furthermore, De Pontécoulant wrote about the horn player Lebrun, saying that around 1807 he had been able to improve the instrument by altering the thickness of the metal¹⁴ ; but I do not know in which way. Did he make it thinner or thicker ? A question I was not able to answer yet. But it seems that there was indeed a difference of thickness between XVIIIth and XIXth century horns.

I had been wondering if horns had lacquer back in the days ; a varnished horn may not sound the same as an unvarnished horn. In one of his articles from the *Galpin Society Journal*, Horace Fitzpatrick wrote :

¹³ All these informations about metal alloys are from Morley-Pegge (1973) *The French Horn*, Ernest Benn Ltd, London (2nd ed.), p.121. Note that the apparition of Punto, Palsa and Türschmidt with their brand new silver *cors solos* as mentioned earlier was quite spectacular at the time, as described by Park in *Musical Memoirs* : « [...] the most striking part of their [Palsa and Türschmidt] exhibition was their horns, which were made of silver. » From Morley-Pegge, R. (1943) « The Evolution of the Modern French Horn from 1750 to the Present Day », in *Proceedings of the Musical Association*, 69th Sess., pp.34-55, p. 43.

¹⁴ De Pontécoulant (1972) *Organographie*, Frits Knuf, Amsterdam (reprint), Vol.2, p.110. Lebrun was first horn of the *chapelle du Roi* of Prussia. He is also credited for the invention the same year of a coating that protected the inside of the instrument from copper oxyde ; and in 1786 he crafted a mute to play echo effects (Vol.1, pp.205 and 300).

« Shaving was the eighteenth-century method of finishing brass instruments by scraping the surface lightly with a sharp knife of triangular cross-section. Abrasive cloth was not known until the early 1800's. Goldsmith's polish would have no effect upon the tough black oxide formed by repeated heating, but skilful shaving could produce a velvety sheen. Further polishing was the province of the court orchestra lackey-factotum (Kalkant) who was armed with pumice, chalk, oil, and much cloth. Shaving marks are useful in dating instruments as the process had disappeared by 1820¹⁵. »

It seems that before the beginning of the XIXth century, horns were given a polished aspect by what Fitzpatrick calls shaving (*brossage* in French), but lacquer was not used.

Tuckwell do writes that the three Cors Solos made by Raoux in 1781 for Türirschmidt, Palsa and Punto were « beautifully finished with lacquered bells¹⁶ » ; but he may be referring to the fact that they were made of silver and thus shiny. In any case, he describes it as a very uncommon thing, which only support what is said above.

Whether lacquer has an effect on the sound of the horn and the way it feels or not is a rather counterversional subject. It is generally said among people who believe there is a difference that the unlacquered instrument has more harmonics (overtones around one note), a more free vibration ; the lacquer makes it brighter and clearer. If difference there is, it is plausible to say that the first option would be the one heard in the time of Mozart.

¹⁵ Fitzpatrick, H. (1963) « Some historical notes on the horn in Germany and Austria », in *The Galpin Society Journal*, Vol.16, pp.33-48, p. 38.

¹⁶ Tuckwell, B (2002) *Horn* (2nd ed.). Kahn & Averill, London, p.31.

Researching Leutgeb

Little is known of Josef Leutgeb¹⁷ (1732 - 1811), Mozart's horn player friend. The horn concertos numbered 1 to 4 and the quintet for horn and strings were written for him between 1781 and 1786 in Vienna. The *Fétis* and *Choron & Fayolle* dictionaries have nothing on him ; The *Grove* has a short biography and some amusing details about Mozart's and Leutgeb's friendship, not worth being written down once more here ; but there is of course no clue of the instrument he may have played. I have searched the entire correspondence of Mozart, hoping for a letter about Leutgeb, the horn or the concertos. The name of Leutgeb appears throughout the whole correspondence, but the one and only mention made of horn matters is a letter dated december 1st 1777 from Leopold to Wolfgang, where the father writes to the son that Leutgeb is asking for a horn concerto¹⁸.

Later I found two pieces of information worth of interest :

- In his facsimile of the manuscripts of Mozart's horn works, Pizka writes that Leutgeb was playing on a mouthpiece with « very fine rims¹⁹ ». I was not able to investigate his sources and this is not exactly about the horn itself, but this tiny bit of information, if true, can still give us an idea of the sound he may have produced, regardless of the instrument.
- In his book *The Early Horn : A practical Guide*, John Humphries suggests that Leutgeb may have played a Bohemian horn²⁰. This statement caught my attention, for according to Horace Fitzpatrick in an article published in the *Galpin Society Journal*, Viennese and Bohemian schools of horn making were quite different in the XVIIIth century²¹. What was Leutgeb's connection with bohemian horns, knowing he was born in Vienna and played there ? Only one way to know more about it, I asked Mr. Humphries, who kindly answered my questions :

¹⁷ Even the very name of the horn player can lead to confusion : in his article from 2013 « A little Leutgeb research » In *Michael Lorenz, Musicological Trifles and Biographical Paralipomena* [<http://michaelorenz.blogspot.com/2013/04/a-little-leitgeb-research.html>], M. Lorenz brings proof that Leutgeb has never been named Ignaz. Also, the viennese pronunciation of the name, Leitgeb, can be encountered.

¹⁸ W. A. Mozart (1987), *Correspondance*, Harmoniques Flammarion, Mayenne, vol.2, p.151. The letter is fully quoted later.

¹⁹ Pizka, H. (1980) *Das Horn bei Mozart* [facsimile] Hans Pizka Edition, Munich, p. 7. No source is mentioned and the information is thus to be considered doubtful.

²⁰ J. Humphries (2000) *The Early Horn : A Practical Guide*, Cambridge University Press, London, p. 12.

²¹ H. Fitzpatrick (1964) « An eighteenth century bohemian school of horn makers », in *The Galpin Society Journal*, vol.17.

"I wrote that book 20 years ago, now, and every time I look at it these days, I find something else I don't agree with any more ! [...] I suspect I wrote "Bohemian" just to make it clear that he would not have been playing on a French instrument²². »

By « Bohemian », Mr. Humphries certainly meant central Europe as opposed to France, instead of the particular region that was named Bohemia at the time. In conclusion, Leutgeb probably did not play a Bohemian horn as there are no connections between them ; he more likely played Viennese as shown later.

I focused my interest on Leutgeb's travels and concerts, in order to think of them later in relation with other information. Here are all Leutgeb's whereabouts we know of :

1732 : Born in Vienna.

1754 : Played a concert in Vienna (prince Hildburghausen's orchestra). Earliest clue of Leutgeb performing.

1763 : - Playing in Salzburg, with the Band of Prince Archbishop of Salzburg ;

- Playing with Esterházy Orchestra.

1770 : - Solo concerts in Frankfurt ;

- Solo concerts at the Concert Spirituel in Paris.

1773 : Concerts in Milano, Italy²³.

1777 : Definitely established in Vienna. (Blindengasse 20, Vienna²⁴).

1779-82 : Hornist of the Burgtheater in Vienna.

These markers will be useful later.

²² J. Humphries, personal email from May 22nd 2019, with his kind permission.

²³ The date is from James MacDonald (1975) « Leutgeb's legacy : the Mozart horn masterpieces », in *The Horn Call* vol.5, n.2, pp.29-35, p.30. Also, Leutgeb's presence in Milano at this date is confirmed by Mozart's correspondence, for instance in a letter of Leopold to his wife from Milano dated February 13th 1773 : « Mr. Leutgeb arrived eight days ago [...] he is staying at the painter Martin Knoller's place, where he is housed for free [...] the archduke [...] wants to hear him ». W. A. Mozart (1987) *Correspondance*, Harmoniques Flammarion, Mayenne : vol.1, p.264. My translation.

²⁴ From Lorenz, M. (2013) « A little Leutgeb research » In *Michael Lorenz, Musicological Trifles and Biographical Paralipomena* [<http://michaelorenz.blogspot.com/2013/04/a-little-leitgeb-research.html>]. Leutgeb's earliest documented residence is Neustiftgasse 18, Vienna. These are the modern addresses that would correspond today to the addresses at the time.

Interesting Family connections : Leutgeb, Starzer, Ferber, Leichambschneider and Kerner

I made significant discoveries from the very interesting article by Lorenz, « A Little Leutgeb Research » (2013). In this paper he sheds light on the connections between the families of Leutgeb, Starzer and Ferber :

« On 28 October 1771 Rosina Starzer served as godmother to Leutgeb's daughter Rosina. Not only was Rosina Starzer the sister of the composer Joseph Starzer (1728-1787), she was also the daughter of the horn player Thomas Starzer (b. 14 November 1699 in Niederaltaich [Niederaltaich, Tom. 1, 220], d. 17 April 1769, Vienna), who may well have been Leutgeb's teacher. Rosina Starzer herself was the goddaughter of Rosina Ferber (A-Wd, Tom. 69, fol. 224v), the wife of the horn maker Adam Ferber (1700-1749)²⁵. »

Hence, Leutgeb was bounded to the viennese horn maker Ferber, who had a quite short production from 1745 to 1749 when he died. But the name Starzer caught my attention ; I remembered seeing this name when researching viennese horn makers : Carl Adam Starzer (1733 - 1789), who manufactured horns from 1767 to 1789. Was he part of the same family ? I investigated this lead and found my answer in both the *New Langwill Index*²⁶ and the *Oesterreichisches Musiklexikon Online*²⁷ : Carl Starzer was indeed son of Thomas, and brother of Joseph and Rosina. The information is later confirmed by Helene Starzer in her paper *Herkunft und jugendzeit des Komponisten Joseph Starzer*²⁸.

It is indeed a fact that Leutgeb had a family bond with the maker Starzer ; not only was this connection closer than the one with Ferber, but Starzer had a greater importance in the world of horn-making. In his *Staatsverfassung der Oesterreichischen Monarchie im Grundrisse*²⁹, Joseph Freiherr von Lichtenstern makes this statement :

²⁵ Lorenz, M. (2013) « A little Leutgeb research » In *Michael Lorenz, Musicological Trifles and Biographical Paralipomena* [<http://michaelorenz.blogspot.com/2013/04/a-little-leutgeb-research.html>]

²⁶ Waterhouse, W. (1993) *The New Langwill Index*, Tony Bingham, London. Carl Starzer is mentioned to be Joseph's brother (p. 382).

²⁷ Dagmar Glüxam & Christian Fastl (2015) « Starzer Familie ». in *Oesterreichisches Musiklexikon Online* [https://www.musiklexikon.ac.at/ml/musik_S/Starzer_Familie.xml].

²⁸ Starzer, H. (1998) « Herkunft und jugendzeit des Komponisten Joseph Starzer ». In *Studien zu Musikwissenschaft*. Hans Schneider : Tutzing. The name is probably a coincidence.

²⁹ Joseph Freiherr von Lichtenstern : *Staatsverfassung der Oesterreichischen Monarchie im Grundrisse*. Vienna : Kleinmaier, 1791. Accessed via the website of Dexter Edge & David Black (2014) : *Mozart : New Documents. - Mozart as a leading composer and "bewunderungswürdiger" pianist (I)*. <https://sites.google.com/site/mozartdocuments/documents/1791-staatsverfassung>

« The viennese trumpets and horn are especially famous, essentially those made by the deceased Starzer, and the surviving Kerner³⁰. »

Lichtenstern seems to place Starzer brass instruments on the same level of quality than Kerner's, which is quite meaningful since Jean-Benjamin Laborde, in his *Essai sur la musique ancienne et moderne* (1780), describes the kerner horns as follow :

« The horns from Vienna in Austria, made by Mr. Kerner, are the best for concerts³¹. »

Also, there is evidence that the orchestra of the court of Esterházy played on horns made by Kerner : Richard Maunder's article displays Kerner's receipts for repairs and sales to the court from 1768 to 1782³².

It is then of course relevant to think that Leutgeb may have played a Kerner since those instruments were quite famous ; but his relationship with the Starzer's cannot be ignored. In fact, there are more clues of their close bond. For instance, Joseph Leutgeb and Joseph Starzer were both members of the *Tonkünstler Societät*, a benevolent society for musicians in Vienna which existed from the mid-XVIIIth century to the mid-XXth century. J. Starzer actually participated to the creation of the society in 1771³³, and Leutgeb became a member in 1787³⁴. Not to mention the possibility that Joseph Starzer's father, Thomas, who was a horn player, may have been Leutgeb's teacher according to Florenz³⁵.

Furthermore, Thomas Starzer seems to have worked closely with Johann Leichambschneider, first of his name, famous horn manufacturer of the first half of the XVIIIth century. Helene Starzer even writes that Leichambschneider housed the Starzer

³⁰ « Die Wiener Trompeten und Waldhorn sind besonders berühmt, wesentlich die von dem verstorbenen Starzer, und dem noch lebenden Kerner verfertigten. » From the *Zweite Abtheilung, "Kultur, Gewerbe, Künste, Wissenschaften und Handlung," dritter Abschnitt, "Künste," section II, "Kunstgewerbe"* (on instrument makers, 134). This reference is the one given by Dexter Edge & David Black on their website *Mozart : New Documents* [<https://sites.google.com/site/mozartdocuments/documents/1791-staatsverfassung>]. My translation.

³¹ « Les cors de Vienne en Autriche, fait par M. Kerner, sont les meilleurs pour les concerts. » Laborde, J.-B. (1780) *Essai sur la musique ancienne et moderne*, Ph. - D. Pierre, Paris, vol.1, p.255. My translation.

³² Maunder, R. (1998) "Viennese Wind-instruments Makers, 1700-1800". in *The Galpin Society Journal*, n.51, pp.170-191, p. 176.

³³ Mozart, W. A. (1987) *Correspondance*, Harmoniques Flammarion, Mayenne : vol.3, p.348 ; and D. Glüxam & C. Fastl (2015) *Starzer Familie*, in *Oesterreichisches Musiklexikon Online* [https://www.musiklexikon.ac.at/ml/musik_S/Starzer_Familie.xml].

³⁴ The name of Leutgeb (with the mistaken Ignaz firstname) appears with his birth date and his enrolment date in a member list of the society in : Pohl, C. F. (1871) « Denkschrift aus Anlass des hundertjährigen Bestehens der Tonkünstler-Societät », in *Selbstverlag des "Haydn"*, Wien, p.107.

³⁵ I tried to contact Mr. Florenz regarding this matter, asking for any evidence he may have. Unfortunately he never answered. Hence I have no actual proof that T. Starzer taught Leutgeb ; but their connection is obvious.

family in June 1732³⁶. Besides, Thomas Starzer bought two Leichambschneider horns in C from Franz in 1754, and his son Carl played professionally side by side with him³⁷. The influence of Leichambschneider horns on Carl Starzer is then certain ; and this influence may have been the same on Thomas' hypothetical student Leutgeb.

Not only was Johann Leichambschneider good friend with Thomas Starzer, he was also the godfather of Joseph and Carl³⁸! The same Carl Starzer who, later in 1767, took over the business of Franz Leichambschneider, son of Johann³⁹.

Finally, it is interesting to add here that Anton Kerner Sr. took over the business of Ferber in 1751 after he probably married his widow⁴⁰, and that his son Ignaz Kerner took over the business of Starzer in 1790⁴¹...

It is incredible to see how connected these important people were. All those relationships are summed up in the following table.

There is no doubt that, if Leutgeb was connected to one or several horn makers, there is a greater chance he might have played one of their instruments. This if of course only a theory, but which shall absolutely not be neglected.

We may add that it was not uncommon for makers to gift instruments to players for various reasons at the time, a scenario that is plausible between Leutgeb and Starzer. Furthermore, orchestra musicians would often use instruments that belonged to a patron, for instance the orchestra of Esterhazy who's business with Kerner is documented as early as 1768. Leutgeb played in Esterhazy in 1763 : is it plausible that he played the orchestra's Kerner horns ?

³⁶ Starzer, H. (1998) « Herkunft und jugendzeit des Komponisten Joseph Starzer ». In *Studien zu Musikwissenschaft*, pp.77-94, Hans Schneider, Tutzing ; p. 81.

³⁷ *Idem*, p. 83.

³⁸ Dagmar Glüxam & Christian Fastl (2015) *Starzer Familie*. in Oesterreichisches Musiklexikon Online [https://www.musiklexikon.ac.at/ml/musik_S/Starzer_Familie.xml] ; and Starzer, H. (1998) « Herkunft und jugendzeit des Komponisten Joseph Starzer », In *Studien zu Musikwissenschaft*, pp.77-94, Hans Schneider, Tutzing ; pp.78-79.

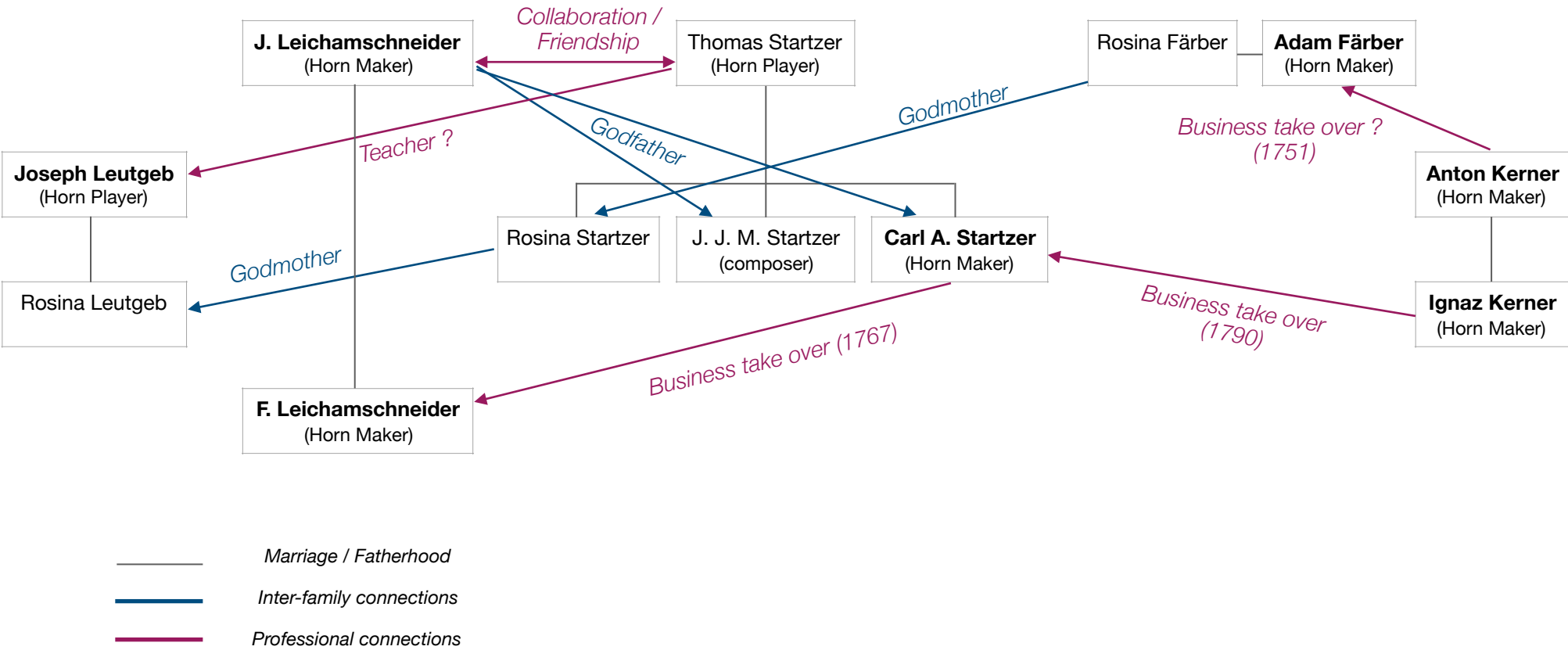
³⁹ Glüxam & Fastl, « Starzer Familie », *ibidem* ; and Starzer, « Herkunft... », *idem*, p. 87.

⁴⁰ Maunder, R. (1998) « Viennese Wind-instruments Makers, 1700-1800 ». In *The Galpin Society Journal*, n.51, pp.170-191, p. 174.

⁴¹ *Idem*, p. 175. It was indeed Ignaz Kerner, and not Huschauer as written sometimes elsewhere ; Huschauer (who very likely worked for Starzer and learned from him) only bought instruments from the sell of Starzer's effect when he died to re-sell them.

Family bounds and connections between the Leutgeb, Startzer, Färber, Kerner and Leichamschneider families

By Nicolas Roudier



Iconography of the XVIIIth century horn

Nothing can inform a researcher better than a picture. I started to seek horn iconography of the XVIIIth century very early in my research and did not know what to expect. The results are extremely uplifting. Here are some of the pictures I found, dated from around the 1760's to a few years after Mozart's death. Most of them come from the Facebook group « Portraits of Unknown Baroque & Classical Era Musicians », and the very recent iconography website of John Manganaro⁴².



Nicolaes Aartman, *Interior With A Musical Gathering*, ca1720-1760.

Whereabouts unknown. Two fixed-pitch horns, played bells up.

⁴² All pictures' references are also from the websites they are taken from.

Manganaro's website : <http://horniconography.com/>

Facebook group : <https://www.facebook.com/portraitsunknownbaroqueandclassicaleramusicians/>



Pietro Longhi (1701-1785) : "Ritratto di musico"



Portrait of Luigi Brizzi (1737-1815), Bologna. Most likely second part of the XVIIIth century.



Peter Jacob Horemans (1700-1776) : Musikstilleben mit Waldhornist Joseph Ignaz Aughauser (1724-1794), **1765** (Bibliothèque nationale de France)



Louis Carrogis Carmontelle (1717-1806) : A concert (Messieurs Duport, Vachon, **Rodolphe**, Provers, et Vernier) - **1768**. Detail showing Rodolphe playing hand in the bell.



L. G. Blanchet : Portrait of the horn player **Rodolphe**, **1759**.
Fixed-pitch horn confirmed. Notice the very large mouthpiece.



Giovanni Michele Granieri (1708-1762) : "Lucio Papirio", **1752** (detail). Glorious fixed-pitch horns played bells up toward the public (to the left).



Court Musicians, **ca1770** (detail).



François-André Vincent (1746-1816) : Un concert, **ca1780**. Fixed-pitch, but we start seeing the bell down.



After Francesco Guardi (1712-1793) : Concerto in the San Benedetto Theatre, **1782** (detail). The horns (in the center) are now played bells down in the orchestra. Hard to tell if the players use their hands in the bell ; but the horns are fixed-pitch.



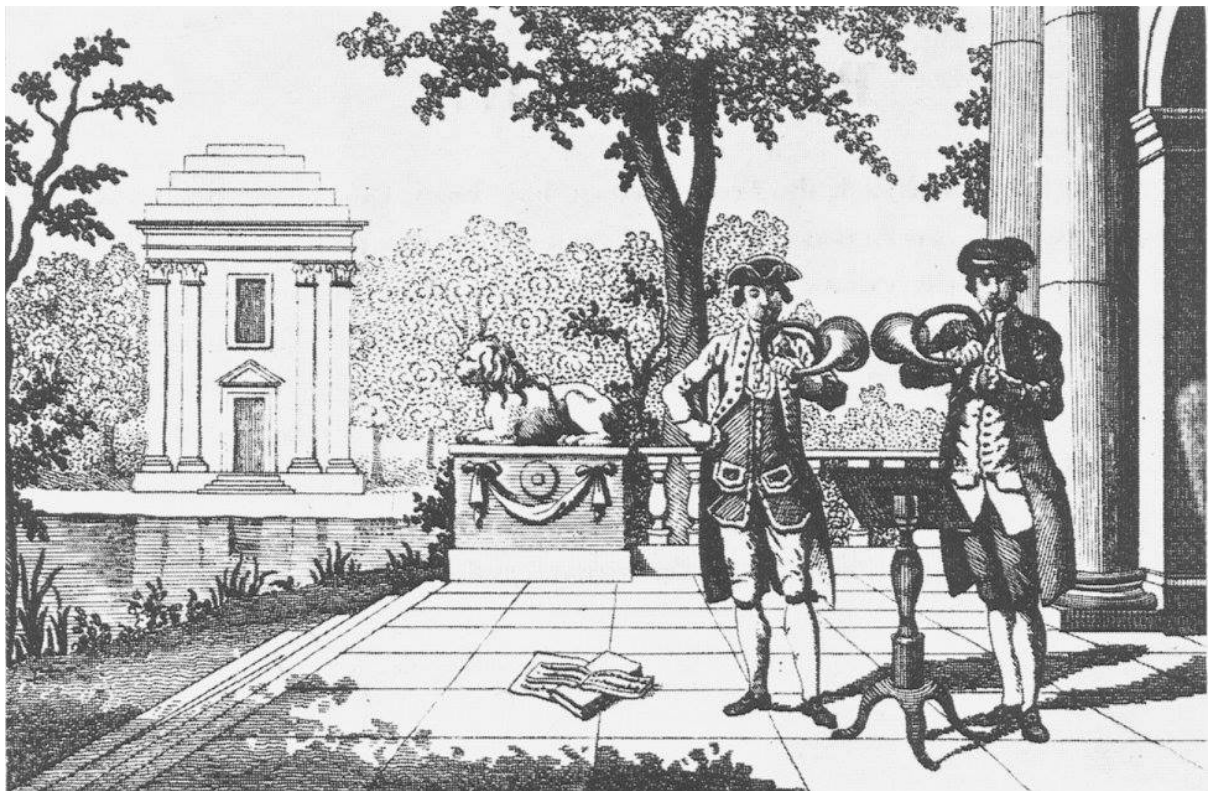
Detail of an Orchestra, Anonymus, **ca 1770** (previously attributed as a young Mozart in Concert painted by John Zoffany). The horns are played bells down and the player on the foreground even seems to use crooks (notice the spare crook on the stand), tho left-handed. They do not seem to use the hand in the bell.



Johann Rudolf Holzhalb (1723 - 1806) - Klavierkonzert in der Züricher Gesellschaft auf dem Musiksaal (detail), **1777**. This time we can clearly see the hand in the bell, but the horns are still fixed-pitch.



Edward Francis Burney (1760-1848) : "Garrick memorial concert at Drury Lane Theatre », **1779** (detail). Very interesting picture : the first horn plays bell up while the second horn is obviously playing with the hand in the bell. This is easily explained by the different amount of stopped notes each of them has to play. The horns do not seem to be crooked, but we can clearly see something inside the hoop. Maybe a tuning slide ?



Horn duo printed in "New Instructions for the French Horn", **ca1780**. Fixed-pitch, bells up.



Giovanni Battista Bagnasacco (fl. 1777-1799) and Giovanni Comando (1746-1822) :
 "Veduta del salone centrale della Palazzina di Caccia di Stupinigi », **1798** (detail).



Giuseppe Servolini (1748-1834) : Secular concert, Lisbon, **ca1785**

One could go on forever with horn iconography, but the purpose here was to give the reader a taste of what I found. If one kept looking for images of the XVIIIth century, one would keep seeing the same thing over and over again in a very large majority of them : fixed-pitch horns were, even years after Mozart's death, still played in ensemble concerts... and played bells up. Exceptions are rare. Crooks, and even hand-stopping technique, are almost never pictured (the reader has probably seen them all here). This is 50 years after Hampel improved the hand technique, and 90 years after the invention of crooks.

Other clues in favour of fixed-pitch horns

In his *Darstellung des Fabrik und Gewerbswesens in seinem gegenwärtigen Zustande...*, Stephan von Keess states that horn players needed three horns to play in all keys, and that those horns were somewhat smaller⁴³. An information supported by Richard Maunder in his article *Viennese wind-instrument makers, 1700-1800* : in Mozart's opera *Le nozze di Figaro*, one can find quick changes of key that require an incredibly fast change of crooks from the horn players ; Maunder suggests that they would not switch crooks at the time, but instruments instead⁴⁴.

Furthermore, in the same article Maunder writes a few words about Starzer's death and the sell of his effects, which shows that fixed-pitch horns had still a great importance at the time :

« The announcement of the sale of Starzer's effects in 1790 shows that, up to his death the previous year, he was still manufacturing horns in a variety of fixed pitches as well as Invention horns with changeable crooks⁴⁵. »

The instruments sold are then listed by Maunder : 36 fixed-pitch horns (plus 4 hunting horns), and only 6 Invention-Horns⁴⁶. The difference in numbers is astonishing. Obviously fixed-pitch horns were not just « still around », they were the most common thing one could find in a horn-manufacturer's shop like Starzer's in 1790. This is one year before Mozart's death, and almost 40 years after the Invention-Horn's appearance in Dresden.

Finally, when searching for historical XVIIIth century viennese horns, I encountered many master-crooked horns which, originally, were actual fixed-pitch horns transformed at some point in their existence to receive crooks, by cutting the lead-pipe and transform it into a socket. As an exemple, I found several historical Kerner horns (there is no surviving

⁴³ Mörschner & Jasper, Vienna, 1824. I got this information from the lecture of Ulrich Hübner at the 51st International Horn Symposium in Ghent, on July 4th 2019.

⁴⁴ Maunder, R. (1998) « Viennese Wind-instruments Makers, 1700-1800 », in *The Galpin Society Journal* vol.51, pp.170-191, p. 171.

⁴⁵ *Idem*.

⁴⁶ *Idem*, p. 179. Maunder's source is the *Wiener Zeitung* of April 17th 1790. The horns are listed by pairs and pitches.

Starzer horn⁴⁷). Those horns were all master-crooked horns, but all without exception started their existence as fixed-pitch horns ; some of them still are. I found only one Kerner Invention-Horn⁴⁸.

Again, even in urtext-instruments, fixed-pitch horns are quite dominant ; but those massive transformations also demonstrate the need for crooks at the time. To conclude, fixed-pitch horns and « transitional » master-crooked horns are strong leads.



⁴⁷ A horn bearing the name of Starzer is kept in the Carse Collection of the Horniman Museum in London. But after writing to the curator, I learned that the garland with Starzer's name was added years after the making of the horn, which is now attributed to Lausmann, 1770.

⁴⁸ Located in the Galleria dell'Accademia di Firenze, Italy ; date uncertain. The inventory number is 1988/195 Cherubini. Central crooks, no lead-pipe.

The question of temporality

The iconographic experience and the apparent dominance of fixed-pitch horns (in the sell of Starzer's effects) lead us to the question of innovation versus time : There is always a delay between an innovation and the moment it will spread and get known. We can obviously expect this delay to be greater back in the XVIIIth century : news did not travel as fast as today.

Let us take the hand-stopping technique as an exemple : it was improved in the 1750's in Dresden, Germany, but the very first known written source to mention this technique is the *Essai d'instruction à l'usage de ceux qui composent pour la clarinette et le cor* by Valentin Roeser, in 1764⁴⁹. It was shown for the first time in Paris by the horn player Rodolphe in 1765⁵⁰, 15 years later ; and for the first time in England by Spandau, in 1773⁵¹... 23 years later. Not to mention that hand-stopping had been attempted before Hampel perfected it.

If hand-stopping took this much time to spread through Europe, we can reasonably assume it was the same for all horn innovations. Thus for instance, the Hampel-Werner *Invention-Horn* invented in 1754 in Dresden, must have been still a « new thing » in Vienna in the 1780's...

As a matter of fact, « new mode Horns » are the exact terms used in a bill from the horn maker Balthas Fürst dated June 30th 1781, in Ellwangen, for the making of two crooks⁵².

This question of temporality alone allows us to state with reasonable certitude that Mozart and Leutgeb did not know the Cor Solo created in Paris in 1781, date of Mozart's first horn concerto. Neither did they know the French orchestral horn developed in the 1790's, but they probably encountered the previous version of this model, the Cor d'Anglais. However, this type of horn was mainly encountered in France and England.

⁴⁹ Baines, A. (1978) *Brass Instruments - Their history and development*, Faber&Faber, London, p.159. Also confirmed by John Manganaro in his lecture at the 51st International Horn Symposium in Ghent, on July 4th 2019.

⁵⁰ Morley-Pegge, R. (1973) *The French Horn*. Ernest Benn Ltd, London (2nd ed.), p. 89.

⁵¹ Tuckwell, B (2002) *Horn* (2nd ed.). Kahn & Averill, London, p. 128. Spandau was the first horn of The Hague Electoral Orchestra.

⁵² Fitzpatrick, H. (1963) « Some historical notes on the horn in Germany and Austria », In *The Galpin Society Journal*, Vol.16, pp.33-48, p. 35.

Financial matters

Carl Starzer advertised his Invention-Horns for sale as early as 1771⁵³. I thought about the price of such instruments and wondered if it had been an obstacle to their purchase. Could Leutgeb afford one ?

It is necessary to make a short reminder on the viennese currency of the XVIIIth century : the unit was the Gulden (simplified « fl » or « f »), which was divided in 60 Kreutzen (« xr »). 1 Ducat was worth 4 fl and 30 xr (a Gulden and a half)⁵⁴. To give the lector an idea of the value, I will simply quote Richard Maunder : « A rough modern (late 1990's) equivalent, in terms of both purchasing power and middle-class earnings, would be about 1f =£25=\$40⁵⁵ ». \$40 in the 1990's represent more or less €33 in 2019⁵⁶.

In his advertisement mentioned above, Starzer announces a price of 45 Ducats for a pair of Invention-Horns (202 fl and 30 xr). In 1807, we have a bill for a pair of Kerner⁵⁷ Invention-Horns for 280 fl⁵⁸ ; another from Huschauer, dated 1808, for 200 fl the pair⁵⁹. Kerner charged 21 fl 20 xr for a horn with a complete set of crooks in 1773⁶⁰, but since the price is quite different it probably wasn't an Invention-Horn, maybe a master-crooked horn.

What do those figures mean at the time for a musician ? We can have an idea thanks to an article by Otto Erich Deutsch, *Austrian Currency Values and Their Purchasing Power (1725-1934)*. Centered on the musical world, the article gives the amount of money certain artists, mainly composers, earned with their work at the time, and the meaning of

⁵³ *Wienerisches Diarium*, september 14th 1771, Nr.74, pp.7-8.

⁵⁴ Those numbers are from Hellyer, R (1975) « Some documents relating to Viennese Wind-instrument purchases, 1779 - 1837 », in *The Galpin Society Journal*, vol.28, pp.50-59, p. 51.

⁵⁵ Maunder, R. (1998) « Viennese Wind-instruments Makers, 1700-1800 ». In *The Galpin Society Journal*, vol.51, pp. 170-191 : p. 172.

⁵⁶ Calculation done with the online historical converter fxtop.com.

⁵⁷ Anton Sr. and Ignaz ; collaboration of the father and the son.

⁵⁸ Hellyer, R (1975) « Some documents relating to Viennese Wind-instrument purchases, 1779 - 1837 », in *The Galpin Society Journal*, vol.28, pp.50-59, p. 53.

⁵⁹ *Idem*, p. 55.

⁶⁰ Maunder, R. (1998) « Viennese Wind-instruments Makers, 1700-1800 ». In *The Galpin Society Journal*, n.51, pp. 170-191 ; p. 172.

those figures. The article provides us with the very interesting budget of a typical mid-class bachelor in Vienna for the year 1786⁶¹ :

Room	60 f
Light and firing	24 f
Winter clothes	40 f
Summer clothes	30 f
Best suits	60 f
Underclothes	30 f
Washing	10 f
Board	180 f
Service	30 f
Sundries	61 f
<i>Total</i>	<i>525 f</i>

Deutsch makes it clear that those figures barely change from 1725 to 1785, and thus they are considered relevant for the whole XVIIIth century⁶².

It is then possible to state that a pair of Starzer's Invention-Horns from 1771 costed almost half the budget of a mid-class bachelor at the time⁶³. That is quite a price, so one needed a strong budget.

According to Helen Starzer, from 1752 Thomas Starzer was earning per year an average of 150 fl as first horn of the orchestra of the *Deutschen Theaters nächst Kärntnerthor*. (From 1754 his salary was raised to 180 fl⁶⁴.) We know for a fact that the same year, Leutgeb was playing in the orchestra of Prince Hildburghausen in Vienna ; we can then have an idea of his salary. Even if it was a bit higher than Thomas Starzer's, a « new » Invention-Horn would still represent a year-salary to him.

⁶¹ Deutsch, O. E. (1934) « Austrian currency values and their purchasing power (1725 - 1934) », in *Music & Letters*, vol.15, Nr.3, pp.236-238, p. 237.

⁶² *Idem*, p. 238.

⁶³ However it is not quite clear in Deutsch's article, I assumed this model of budget was for a year.

⁶⁴ Starzer, H. (1998) « Herkunft und jugendzeit des Komponisten Joseph Starzer ». In *Studien zu Musikwissenschaft*, pp.77-94, Hans Schneider, Tutzing, p. 83.

Later in 1779, Leutgeb became hornist of Vienna's Burgtheater, and earned an annual 350 fl during the 1782/3 season⁶⁵. An Invention-Horn represents over two thirds of this salary.

Of course, he probably made much more money from his solo-concerts in Paris and Milano. And yet, Leutgeb financial situation was not comfortable in the 1780's. In the letter mentioned earlier [see the *Researching Leutgeb* chapter], we know that Leutgeb owed money to Leopold Mozart :

« Mr. Leutgeb, who has now bought in a suburb of Vienna a cheesemonger's shop the size of a snail's shell, wrote to us both after your departure, promised to pay me in due course, and asked you for a concerto⁶⁶. »

In Lorenz's paper, we have evidence that Leutgeb had never been in charge of any cheeseshop⁶⁷. It is a myth which started with this very letter from Leopold ; Lorenz suggests that it was « part of a scheme to elicit money from Leopold Mozart » ; this is how badly Leutgeb needed money.

Mr. Lorenz adds that Leutgeb also borrowed money from a butcher of Penzing to buy his house in Vienna in 1777 ; a house he had to mortgage at a 4% interest rate on July 1st 1778 !

And finally, in a letter dated May 8th 1782 (right during the horn concertos time), Mozart writes to his father :

« Have a bit of patience about the poor Leutgeb, I beg you ; if you knew his situation and saw how he has to cope with it, you surely would pity him. I will talk to him and I am sure he will pay you, at least bit by bit⁶⁸. »

To sum up, not only were Invention-Horns not so successful in Vienna, they were also quite expensive ; Leutgeb probably did not have a significant salary and we know for sure that his financial situation was precarious. Thus, he probably did not have the resources to buy such an expensive horn, particularly when fixed-pitch horns were all around.

⁶⁵ Edge, D. (1992) « Mozart's Viennese orchestras ». In *Early Music* vol. 20, pp. 64-88, p. 71.

⁶⁶ Letter from Leopold Mozart to W. A. Mozart, 1st december 1777.

⁶⁷ The cheeseshop did exist, but belonged to Leutgeb's father in law, Biagio Placeriano. When he died in 1763, his widow kept the shop running until she sold it to a certain Johann Rotter in 1764. Joseph Leutgeb, who was in Salzburg this whole time, had nothing to do with it.

⁶⁸ W. A. Mozart (1987) *Correspondance*, Harmoniques Flammarion, Mayenne : vol.4, p.47. My translation.

CONCLUSIONS OF THE INVESTIGATION

It is time to bring together all the clues I found so far and have a larger view of the picture. To do so, I constructed a timetable of horn (at the end of this conclusion) which enlightens the relations between the instrument's evolution, horn players, composers, makers, and important events.

The preliminary conclusions below are not definitive and will be altered by the practical experimentation.

Leutgeb was in his twenties when Hampel improved the hand-stopping technique ; and he was already playing professionally shortly after that (1754). He then most likely started to learn horn earlier, around the 1740's. Therefore he came from the old school of horn (old, compared to the time of Mozart), and witnessed the development of hand-stopping and the most crucial period of horn evolution.

There is a great chance he started to play on fixed-pitch horns. If Thomas Starzer was indeed his teacher (that I have no proof of), and since Leichamschneider was already famous at the time, these horns were possibly made by him and would be similar to this one :



Natural Horn by Michael Leichamschneider, 1721 (Moravian Museum - Department of Music History, E 170)⁶⁹

⁶⁹ Picture from : Berdychová, Tereza (2014) « Lesní rohy Michaela Leichamschneidera v českých sbírkách » [« Horns by Michael Leichamschneider in Czech collections », my translation], p. 8. Accessed via https://cdk.lib.cas.cz/search/img?pid=uuid:77e5d7bb-fefd-4fbb-b23a-8fe6643d8e97&stream=IMG_FULL&action=GETRAW.

From there, several scenarios are possible. He may have played his fixed-pitch Leichambschneiders his entire life, iconography is there to suggest so. But Leutgeb has been moving a lot as a soloist and travelling with three or more horns was probably not convenient, he must have used crooks at some point. He may have had one of his fixed-pitches cut to receive terminal crooks ; in that case his horn would look very much like this 1721 modified Leichambschneider :



Natural Horn by M. Leichambschneider, 1721 (Wallerstein Collection)⁷⁰

In another scenario, Leutgeb buys a new professional horn at mid-career to answer the changes of horn esthetics, repertoire and technique. Then he may have bought a Starzer terminally-crooked horn, or maybe a Kerner. There is helas no surviving Starzer, on the contrary of Kerners. This is the one dated 1760 copied by Richard Seraphinoff :



Horn by Anton Kerner, 1760 (Mährischen Nationalmuseum, Schloß Jevišovice, Brno)⁷¹

⁷⁰ From [French-Horn.net](https://french-horn.net/index.php/biographien/117-leichambschneider.html) : <https://french-horn.net/index.php/biographien/117-leichambschneider.html>

⁷¹ From : Seraphinoff, R. (2014) « re-inventing the classical horn », in *Natural horns* by Richard Seraphinoff [<http://www.seraphinoff.com/content.php?p=b1a1a1e0-8b93-43be-96cb-ce80378b255d>].

These are to me the most probable scenarios. However, there is a small possibility that Leutgeb knew the early developement of the tuning slide ; after all, he was in Frankfurt in 1770 when Haltenhof was working on it and horns with tuning slides are listed in Vienna around this date (although nothing is yet certain). From there, a less probable alternative is that Leutgeb played a Viennese *Orchesterhorn* or *Kirchenhorn* (probably made by Starzer) such as this one :



Anonymous Kirchenhorn⁷².

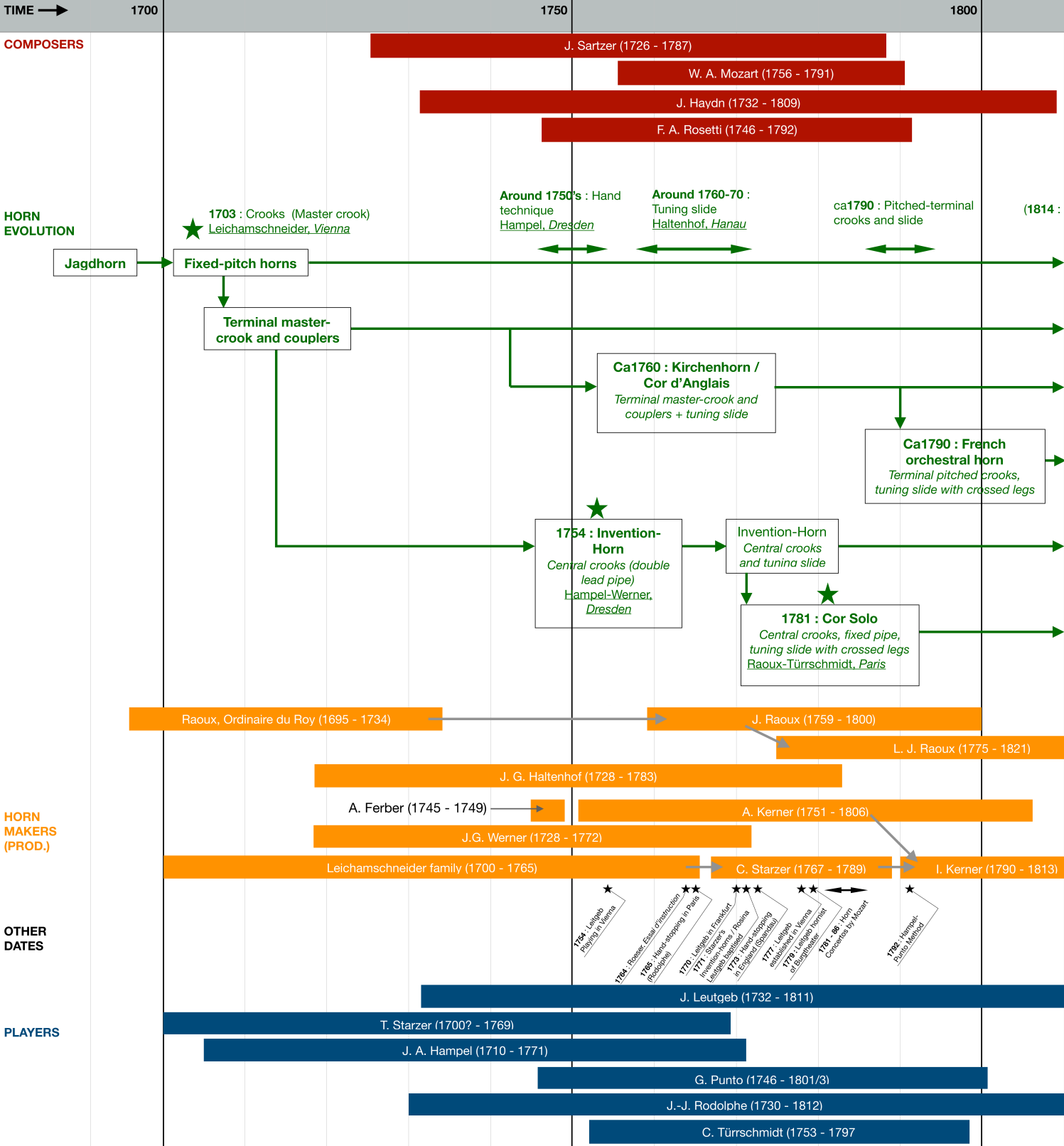
In my opinion, the chances that Leutgeb played on a body-crooked Invention-Horn are close to zero. However, here is an exemple made by Kerner. The date is though uncertain.



Invention-Horn by Anton Kerner. Galleria dell'Accademia di Firenze⁷³

⁷² Picture from : http://www.rjmartz.com/horns/Orchesterhorn_035/

⁷³ From the website Musical Instruments Museums Online. <http://www.mimo-international.com/MIMO/>



Time Table of Horn Evolution

In relation with composers, makers, players and significant events from the 1700's to the 1800's

By Nicolas Roudier

Part 2

Practical Experimentation



Disclaimer

With the help of Claude Maury, Ulrich Hübner, Michael Latcham, Barbara Willi, and Johannes Boer on the behalf of the Early Music Department of the Royal Conservatory, I sent requests to many museums and collections in order to have a closer look to their instruments for this research. I knew this was an ambitious idea which could easily lead to failure, considering that even great professionals themselves were often denied access.

But after many unsuccessful attempts, I was finally able to approach four exceptional instruments in The Hague's Kunstmuseum, Netherlands, and Jevisovice Castle, Czech Republic ; in the following I will describe my experience with them in the same order I discovered them.

My journey to Czech Republic was organized with only a minimum of preparation and time. I wish the conditions had been more favorable and that I had more time to do things properly (when it came to crooks for instance), but I had to do with what I had on the spot, and did my best with it.

I am forever grateful to the people who, by their efforts, kindness, patience and musicianship, made this experimentation possible.



Approaching a 1798 Haltenhof French horn

To begin with, I had the great chance to have a close look at a beautiful Haltenhof French horn dated 1798 from The Hague's Kunstmuseum (number 0840286)⁷⁴. This instrument is German, made after Mozart's death and is an early French style horn. It is then a very good example of what Mozart did *not* know, which is yet not irrelevant : it is like a compass pointing to the south.



⁷⁴ All my gratitude goes to Milly van Houten-de Kom, keeper of the collection, who was kind enough to let me try the horn and give me informations about it. Photographs with her permission.



The bell diameter is 28,5 cm. It is a typical large German bell as opposed to the Viennese instruments. As a result, the sound was large and mellow, even with the B-flat crook (the only crook available, therefore I couldn't play some Mozart on it). The horn was easy-blowing, with few resistance, which makes me think that viennese instruments may have been different with their smaller bells, allowing an easier high range (which is about to be confirmed in the following).



« Macht Johann Gottfried Haltenhof in Hanau Am Main 1798 »

However, I noticed a detail that the museum was apparently not aware of, and which made the instrument more interesting to me. There was a second inscription on the other side of the bell : C. A. Ziegler . N.1.



« N.1 » probably refers to the fact that horns were often sold by pairs⁷⁵. « C. A. Ziegler » is more mysterious. It could be either the name of the owner/player, or the name of the dealer⁷⁶. I did not find any trace of a horn player named Ziegler. In the *Langwill Index* however, several makers are listed. None of them have the initials « C. A. » in their names ; but one does have the initial « C. ». It could be the same Ziegler without the middle name ; there is no certitude at all.

This C. Ziegler was registered as a woodturner in Vienna⁷⁷. If this is the same man, we can imagine that this horn was actually once sold in Vienna ! This would have of course happened somewhere in or after 1798, long after Mozart died ; but the horn is then not so irrelevant, it was once played in Mozart's city shortly after his death. This is only a hypothesis, more investigation is to be conducted on this C. A. Ziegler.

⁷⁵ Numbers 1 and 2 are sometimes encountered on historical horns of the XIXth century. On certain pairs, the number 1 would be the *cor alto* and number 2 the *cor basse* (implying a difference in the width of the bell throat).

⁷⁶ Instrument makers would often brand other instruments they sold. This of course makes the identification of certain instruments harder.

⁷⁷ W. Waterhouse (1993) *The New Langwill Index*, Tony Bingham, London, p. 443. Of his activity period, only the date 1827 is known.

Playing the 1760 Kerner horn

Thanks to Bart van Oort, Barbara Willi and Frantisek Maly, I had the privilege to go to the Jevisovice Castle to play the original early classical 1760 Kerner (Inventory number 33.732, E254) of which Richard Seraphinoff is now making copies.



For the record, this horn was originally a horn in G with a fixed lead-pipe. According to the restoration report made by Stefan Katte⁷⁸, the lead-pipe had been at some point cut off and the first hoop of the horn was probably removed. A socket was put in place to be able to add crooks on the horn. It is then not in a fully original state, but it illustrates this transitional period that was described in the historical part of my work. This also means that the horn probably wasn't meant to be played with hand technique at first ; but the transformation it has been through reveals that players had different needs at a certain time, and my experimentation on it (which I am about to describe) show that hand technique is absolutely not a problem on this horn.

No crooks survived : I had to deal with a couple of baroque crooks I brought with me, and eventually recorded the horn with a crook from a Egger hand horn that Mr. Vaclav Luks kindly lent to me (I was only able to play in E-ish). This was of course far from being historically appropriate, there is probably no way to know the exact original sound of this horn ; but I did my best in the very short amount of time and organization I had. There is always a way one could do things better ! However, the experiment was still enlightening.

⁷⁸ I do not own the restoration report even though I asked for it ; some of the details above were kindly given to me by Ulrich Hübner.



« Antoni Kerner in Wienn 1760 »

Picking up the horn, I was amazed by how light and small it is. The corpus is only 245 mm wide, and the pipes keep a very small diameter until the bell's tail. As for the bell itself, the flare was only a tiny bit larger than my hand, and the throat very narrow. I was surprised by the thickness of the metal : I was genuinely expecting something thinner.



I blew in it and it rang like a bell. Right from the first sound, it was obvious how free-blowing and easy to play it was ; it felt immediately responsive. Its vibration was very powerful. Every harmonic was very centered, easy to hit, in tune. The precision and clarity of the horn was astonishing. I think it would be very accurate to say that the horn sounded as it looked like.

The hand technique felt very different. Because of such a narrow bell, I could only insert my fingers inside, leaving most of the hand out, on the « surface » of the bell.

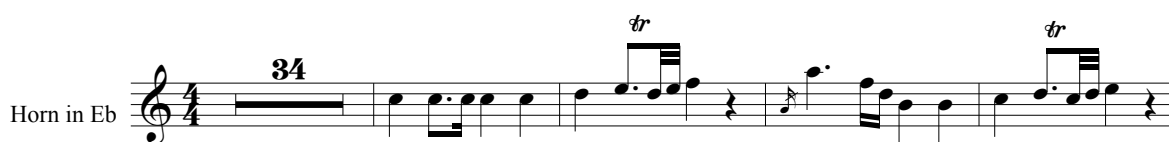


As a result, the hand technique (read as : the possibilities of movement) was limited : one could only use a quick and small move of the wrist to close the bell. Fingers had to stay still. I have the habit to use all sorts of different hand moves and « fingerings » in larger French horn bells in order to get the best sounding stopped notes or to vary their colours : this was nearly impossible here. As a consequence, I could not rely on the hand as much and most of the work had to be done with my embouchure, tongue and air.

This could very well show that the horn was not meant for hand technique at first ; however, after a minute of adaptation, hand technique proved to be fluid and 100% operational, even in the difficult middle range, and definitely sounded charming (except for the third line B which somehow demands a lot of attention). Besides, the trace of use inside the bell (in yellow) demonstrates that hand technique had indeed been used on this horn.



Another consequence is that the naturally flat harmonics for which we usually need to open the bell completely (B flat, F sharp, A...) suddenly required less movement from the hand, because it is already so out of the bell. Their use was then not such a big deal at the time because they required less work on this horn ; I even suspect they would barely correct those notes by moving the hand at all. It now makes the opening of the fragment in E flat (which I considered tricky) very easy.



Mozart - Fragment of a horn concerto in Eb K470b [completion by Anders Muskens] ;
1) Allegro - very beginning.

The high range appeared to be very easy due to the small bore (as suspected when I tried the 1798 Haltenhof). Somehow it had the same intensity and colour than the middle range. This easiness certainly explains why so many horn works of the XVIIIth century are so high. However, I noticed that high range was easy as long as I kept the volume down. It was somehow more comfortable to not use much air pressure.

The horn sounds very bright and clear and general (as one could expect from reading the chapter about manufacture, p. 8 - 9), and it is actually not easy to use different ton colours. One could at best get a richer and more intense sound, but always staying on the bright side. I was able to give the stopped sounds a sort of darker quality, but as I said before it had to come entirely from my embouchure and not from the hand. That gives us an idea of how hornists played at the time, probably using phrasing, articulation etc., more than different sounds.

It was even brighter in the middle range, giving it a more dramatic incisive colour. Hence, this gives a new character to places in Mozart's horn concertos such as :



Mozart - Horn concerto K447 in Eb ; 3) Allegro - from bar 174.

The Kerner has more clarity than weight in the sound. Its lightness, easy-response , clear tonguing and agility, made me wonder about ornamentation, which was a very common thing to do during the course of the Classical period. This horn makes it quite easier and would explain its importance. There is a lot to learn from this for players.

Fast scale passages were all of a sudden incredibly easier, clear, without any struggle. This, combined to the easy open A note, made for instance this place in concerto #3 a lot more fluid and comfortable :



Mozart - Horn concerto K447 in Eb ; 3) Allegro - from bar 182.

The easiness of this instrument also enhanced my trills, in particular the stopped trill on written B - A that always demanded much more attention to my taste on other horns. On the Kerner, it had more sound, was faster and easily regular, giving a new advantage for passages such as this one :



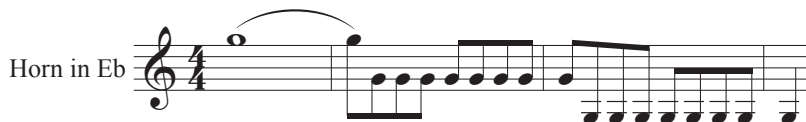
Mozart - Horn concerto K447 in Eb ; 1) Allegro - from bar 67.

Same thing for this tricky part of the second concerto : the multiple trills became so easy to do (particularly the top one), and it was even tempting to play them longer and faster to enjoy them.



Mozart - Horn concerto K417 in Eb ; 3) Allegro - from bar 142.

The clarity of tonguing extends even to the low range. To repeat a low G quickly, with a nice sonority while keeping it very clean and centered, was absolutely no problem. Again, another detail of Mozart's music that suddenly makes sense :



Mozart - Horn concerto K495 in Eb ; 1) Allegro Maestoso - from bar 129.

The more I played the horn, the more I got used to it. Because of its clarity and precision, the horn was actually *demanding* more definition from the player. More attacks, more articulation, an active tongue and embouchure.

At the same time, the absence of any gap or difficult step between notes made it very comfortable to play a lyric legato (given that one gives stopped notes the work they need). This echoes one of the rare known facts about Leutgeb's playing : after one of his performances at the Concert Spirituel in Paris in may 1770, one could read in an article in the *Mercure de France* :

"[...] his oustanding quality is to 'sing' the adagios as perfectly as the most mellow, the most interesting, and the most accurate voice⁷⁹."

Historical sources and practical experimentation thus match here. A fluid, light and legato phrasing was one of Leutgeb's specialities, and this is exactly what a player would get when playing the 1760 Kerner.

In terms of volume and presence, the horn could play respectably loud and soft, but its projection was its main particularity. This makes me think that even if it could play with a soft dynamic without any strain, it could still be easily audible in either a small or large ensemble.

⁷⁹ McDonald, J. (1975) « Leutgeb's legacy : the Mozart horn masterpieces ». in *The Horn Call* 5, n.2, pp. 29-35, p.30.

Quick look at a 1810 Kerner horn

Along with the 1760 Kerner was another from 1810, unfortunately unplayable because of the broken socket in which crooks are to be inserted.



1760 Kerner on the left, 1810 Kerner on the right.

Although the corpus was the same size and the pipes were the same diameter as the 1760, the bell was much larger and deeper. This illustrates without a doubt the development of the hand technique over a 50 years period.



1810 on the left ; 1760 on the right.

This particular horn itself is a bit out of subject since by 1810 Mozart has been dead for 20 years ; but it can be used as a clue. If the 1760 is the « before » and the 1810 the « after », we could imagine that the bell of a horn made in the 1770's or 80's (when the horn concertos were written) would be somewhere in-between those two bell sizes.

Also, is it not interesting to notice that :

1. in 1810, something like 50 years after the invention of the tuning slide, horns of this very simple type, without any slide (maybe fixed-pitch ?) were still being made, showing - again - how popular it was ?
2. In 1810, Kerner was still using the pattern of the corpus he used in 1760. Same size, same diameter of pipe, only the bell changed. Was Kerner trying to keep a certain esthetic of definition, clarity and lightness of playing, while answering the needs of the development of the hand technique ?

Thus, the « in-between horn », perfect for Mozart's concerto, would be just like the 1760 Kerner but probably with a bell a bit larger for an improved hand technique.



« Anton Kerner 1810 in Wienn »

Quick look at a 1721 Leichamschneider fixed-pitch horn

Last but not least, I had the privilege to hold in my hands, still from the Jevisovice collection, a horn made by Leichamschneider in 1721 (inventory number E170).



« Macht Michael Leichamschneider in Wienn 1721 »

As for the 1795 Haltenhof and the 1810 Kerner, this horn takes us somewhat out of subject since it is way too early for Mozart, but it can be used as a clue for more understanding.

This Leichamschneider is a fixed-pitch in G, unfortunately unplayable. We are now much closer to what we can see in horn iconography. I was extremely surprised by how heavy it was !

As expected, one could immediately see that hand technique was absolutely impossible on this horn due to the angle of the bell (see picture below, where I am having to badly twist my arm and shoulder). On the contrary, the long neck of the bell (and trace of use there) made it obvious that it was to be played bell up, like - again - what has been seen in the iconography.



The dimensions of the bell, however, were surprisingly similar to those of the 1760 Kerner.



From these observations we can deduce the following :

1. The hypothesis exposed in the conclusion of the historical investigation that Leutgeb may have played such a Leichamschneider and then had it transformed, is no longer valid since the hand-technique is not possible on it (although the angle could be changed by cutting the lead-pipe, but the neck of the bell is still very long). If Leutgeb started his career on such a horn, he most certainly changed instruments by the time Mozart wrote for him.
2. The similarities between the bells makes the 1760 Kerner closer to the Leichamschneider in terms of bell / hand technique development (as discussed earlier with the 1810 Kerner). In other words, the bell of the 1760 Kerner is still an early bell from the first half of the century. This somewhat confirms the idea that the ideal horn (bell size) stands somewhere in-between the two Kerner horns.



CONCLUSIONS OF THE EXPERIMENTATION

When I first started to write this thesis, I already had some preconceived ideas about what an XVIIIth century horn could bring me. I somewhat expected it to show me things that could not be done on an other instrument, or the other way around ; I expected it to show me a different way of playing Mozart. But in the end, the 1760 Kerner only showed me why we should play such an instrument for Mozart ! The instrument himself made the music better and gave it the character that we are always looking for on other instruments. I was expecting it to show me how one should play Mozart, but instead it made me understand why one should play Mozart with this particular horn.

But even when playing on a different horn, we can still be inspired by the esthetic suggested by this Kerner. Brightness, definition and articulation, lightness and elegance, fluid legato, are the key words ; to dare to be looking for interesting phrasing, a more « spoken » horn, and cherish this clarity of sound, rather than to be looking for a dark, modern-ish sound, as I sometimes did before.

Thus, even if the results are somehow different from what I expected them to be, this experimentation not only enlightened me on some aspects of playing Mozart, it also completed the preliminary historical investigation on the XVIIIth century horn and what kind of instrument Leutgeb may have played.



GENERAL CONCLUSIONS

Thanks to this research, I have now a better idea of what kind of instrument Mozart and Leutgeb may have known, and how different the playing esthetic may have been like at the time.

The horn had an incredibly rich evolution throughout the XVIIIth century (not to mention the important changes of the XIXth century). In spite of our ever-growing knowledge of early horn, there is still a cloak of uncertainty on important details and entire periods of its history and developement. But we know for sure that Mozart's horn was a very different instrument than what is commonly seen in concert halls today (romantic French hand horns) ; with this research, I believe I made a step further towards interesting leads.

Even if there are still several possibilities for which horn Leutgeb played for Mozart (transitional terminally-crooked horn or Kirchenhorn, Kerner or Starzer...), it is obvious that his instrument was smaller, lighter, with a brighter sound and a « need » for definition and articulation : esthetical aspects from which all horn players (historical or modern) may benefit from. My experimentation also ended in a sort of « justification » of why we should play Mozart on a historically accurate horn : *the music suddenly makes sense and finds its inherent esthetic when played on the corresponding instrument*. This is of course true for any repertoire and not only for horn. The instrument is the best *urtext* one can benefit from.

This research is of course an unfinished business, as there are many other paths to explore. I truly believe that investigating the horn manufacturer Carl Starzer would lead to interesting discoveries. Also, the question of which mouthpiece to use is an interesting one. During my experimentation on the 1760 Kerner, I played on a modern mouthpiece (L'Olifant's C10 cup and CR1 rim), but also on a more historically shaped one (L'Olifant's RC historical cup and CR1 rim). When using a historical cup, the accuracy, definition and all the particularities of the Kerner described in this work were highly increased. The horn reacted to the mouthpiece the way music reacted to the horn. It is astonishing to see how music and material are bounded.

I can only encourage horn players to investigate the past of their instrument, with or without any research question, with or without focusing on a particular period of time. We can only learn from its richness and become better players and musicians because of it. This work is only a small brick in the wall ; there still is a lot to discover.

BIBLIOGRAPHY

Books

- Baines, A. (1978) *Brass Instruments - Their history and development*. Faber&faber, London.
- Geringer, K. (1945) *Musical Instruments - Their history from the stone age to the present Day*. (B. Miall, trad.) Londres : W. F. H. Blandford.
- Humphries, J. (2000) *The Early Horn : A Practical Guide*, Cambridge University Press, London.
- Laborde, J.-B. (1780) *Essai sur la musique ancienne et moderne*, Ph. - D. Pierre, Paris.
- Morley-Pegge, R. (1973) *The French Horn*. Ernest Benn Ltd, London (2nd ed.).
- Mozart, W. A. (1987), *Correspondance*, Harmoniques Flammarion, Mayenne.
- Pizka, H. (1980) *Das Horn bei Mozart* [facsimile] Hans Pizka Edition, Munich.
- Pizka, H. (1986) *Dictionary for Hornists*. Hans Pizka Edition, Munich, Germany.
- Pohl, C. F. (1871) « Denkschrift aus Anlass des hundertjährigen Bestehens der Tonkünstler-Societät », in *Selbstverlag des "Haydn"*, Wien.
- Pontécoulant (De) (1972) *Organographie*, Frits Knuf, Amsterdam (reprint).
- Tuckwell, B (2002) *Horn* (2nd ed.). Kahn & Averill, London.

Articles and dictionaries

- Choron, A. E. & Fayolle, F. J. (1971) *Dictionnaire historique des musiciens*, vol.1, Georg Olms, New York.
- Clive, P. (1993) *Mozart and his circle : a biographical dictionary*. Yale University Press, New Haven.
- Deutsch, O. E. (1934) « Austrian currency values and their purchasing power (1725 - 1934) », in *Music & Letters*, vol.15, Nr.3, pp.236-238.

- Edge, D. (1992) « Mozart's Viennese orchestras ». In *Early Music*, vol. 20, pp. 64-88.
- Fasman, M. J. (1990) *Brass bibliography*. Indiana University Press, Indianapolis/Bloomington.
- Fétis, F. - J. (1884) *Biographie universelle des musiciens*, vol. 5, Firmin-Didot, Paris.
- Fitzpatrick, Horace (1964) « An eighteenth century school of horn makers in Bohemia ». In *Galpin Society Journal*, Vol.17, febr 1964.
- Fitzpatrick, H. (1963) « Some historical notes on the horn in Germany and Austria », In *Galpin Society Journal*, Vol.16, pp.33-48.
- Grove, G. (ed. Eric Blom) (1954) *Grove's dictionary of music and musicians*, vol. 5, McMillan & Co, New York.
- Grove, G. (ed. Stanley Sadie) (2001) *Grove's dictionary of music and musicians*, vol. 14, McMillan Publishers Ltd, London
- Hellyer, R (1975) « Some documents relating to Viennese Wind-instrument purchases, 1779 - 1837 », in *Galpin Society Journal*, vol.28, pp.50-59.
- Maunder, R. (1998) "Viennese Wind-instruments Makers, 1700-1800". in *The Galpin Society Journal*, n.51, pp. 170-191.
- McDonald, J. (1975) « Leutgeb's legacy : the Mozart horn masterpieces ». in *The Horn Call* 5, n.2, 29-35.
- Morley-Pegge, R. (1943) "The Evolution of the Modern French Horn from 1750 to the Present Day", in *Proceedings of the Musical Association*, 69th Sess., pp.34-55.
- Starzer, H. (1998) « Herkunft und jugendzeit des Komponisten Joseph Starzer ». In *Studien zu Musikwissenschaft*, pp.77-94, Hans Schneider : Tutzing.
- W. Waterhouse (1993) *The New Langwill Index*, Tony Bingham, London (first edition by Lyndesay G. Langwill, *An Index of Musical Wind Instruments Makers*, 1960).

Webpages and internet resources

- Berdychová, T. (2014) *Lesní rohy Michaela Leichamschneidera v českých sbírkách* [Horns by Michael Leichamschneider in Czech collections].

https://cdk.lib.cas.cz/search/img?pid=uuid:77e5d7bb-fefd-4fbb-b23a-8fe6643d8e97&stream=IMG_FULL&action=GETRAW

- Dagmar Glüxam & Christian Fastl (2015) « Starzer Familie ». in *Oesterreichisches Musiklexikon Online*.

https://www.musiklexikon.ac.at/ml/musik_S/Starzer_Familie.xml

- Lichtenstern (von), J. F. (1791) : *Staatsverfassung der Oesterreichischen Monarchie im Grundrisse*. Vienna : Kleinmaier. Accessed via Edge, D. & Black, D. (2014) *Mozart : New Documents*.

<https://sites.google.com/site/mozartdocuments/documents/1791-staatsverfassung>

- Lorenz, M. (2013) « A little Leitgeb research ». In *Michael Lorenz, Musicological Triffles and Biographical Paralipomena*.

<http://michaelorenz.blogspot.com/2013/04/a-little-leitgeb-research.html>

- Manganaro, J. (2019) *Horn Iconography - An online resource for historical horn*.

<http://horniconography.com/>

- *Musical Instruments Museums Online* (MIMO).

<http://www.mimo-international.com/MIMO/>

- Pisarowitz, K. M. (1970) « Mozarts Schnorrer Leutgeb : Dessen Primärbiographie », in *Mitteilungen der Internationalen Stiftung Mozarteum*, VIII, vol. 3/4, pp. 21-26.

<http://digibib.mozarteum.at/search/quick?query=Pisarowitz%2C+Karl+Maria+&offset=11>

- *Portraits of Unknown Baroque & Classical Era Musicians* [Facebook group].

<https://www.facebook.com/portraitsofunknownbaroqueandclassicaleramusicians/>

- Robert Ostermeyer Musikedition (2018) *French-Horn.Net*. Keyword : Leichamschneider.

<https://french-horn.net/index.php/biographien/117-leichamschneider.html>

- Seraphinoff, R. (2011) *Natural Horns By Richard Seraphinoff*.

<http://www.seraphinoff.com>

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