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Máté Posta

The Transformation of European Fretted Zithers in the 19th and 20th Centuries

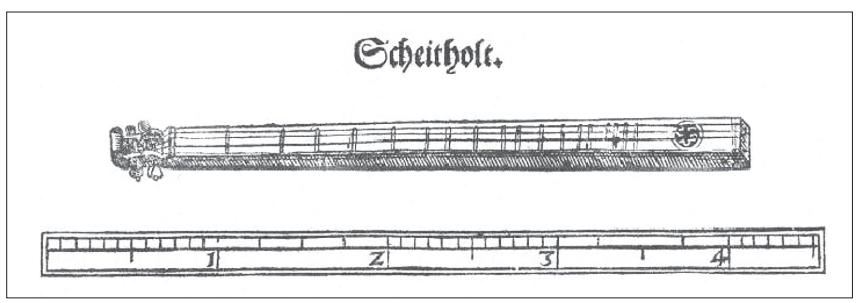
Abstract
Different types of fretted zithers appeared in the western and northern parts of Europe and in the Alpine regions 500-600 years ago to meet the needs of rural folk music. In the 19th and 20th centuries, in northern Germany, the Czech Republic, Denmark, Sweden and the Netherlands, zithers were constantly pushed out of village folk music. The final blow was the spread of the accordion to the zither. However, in some regions of southern Germany, Bavaria and Austria, zithers did not disappear, but underwent a number of significant modifications. In the first step, the volume of the instrument was increased (Salzburg form). This variety, called the *Kratzzither* was further developed in two different ways. To ensure that the zither could play with other instruments, the *Scherrzither* and *Raffele* were developed. Another development direction of the *Kratzzither* was the *Schlagzither,* which already provided a harmonic accompaniment to the melody. The systematic development of the *Schlagzither* made possible the birth of the Austrian and German *Konzertzithers,* whose harmonization already meets the requirements of classical music.

Keywords: Fretted zithers, Hummel, Kratzzither, Schlagzither, Konzertzither

The terminology used to identify European fretted zithers

The shared goal of our earlier and present investigations is to compile the most diverse body of knowledge about our most popular folk-music instrument, the Hungarian zither, its origins, history, domestic and international

background and its relatives.[1] To achieve that goal, it makes perfect sense to set out by studying the historical development and community-related role of the closest relatives of that instrument, European fretted or holder-board *(Griffbrett)* zithers. Fretted or holder-board varieties appeared much earlier than the Hungarian zither on the European scene, specifically in a wider sphere of German-speaking regions. Also, the existence of more plentiful Western European archival records makes them an easier subject of examination. The structure and tuning patterns of European fretted zithers had not changed for centuries and neither had the playing techniques they required. In the 19th and 20th centuries, however, these instruments underwent various paths of transformation with regard to use, structure and tuning. Regardless of which European region they originate from, the relevant international literature has related to traditional fretted zithers as *Scheitholt*. The name was coined by Michael Praetorius, who included a precise drawing and detailed description of a "beggars' instrument" – the fretted zither[2] – popular in the uneducated lower echelons of society, in his work titled Syntagma Musicum II, published in 1619. Among other things, Praetorius writes, "The instrument… is not quite unlike a *Scheit* (log) or a block of *Holt* (Low German for wood)." In other words, the instrument was simply likened to a piece of wood by Praetorius (Pic. Nr. 1). Pic. Nr. 1 is a fragment of the plate XXI of the book of Praetorius. It was made by subtracting the instrument number 8 *(scheitholt)* from its plate. This picture can be found in Ulrich's book[3]. The graduation of the scale shown below the *scheitholt* is in Brunswick foot. One Brunswick foot is 285 mm. Based on this, the length of Praetorius's *scheitholt* is c.a. 3.7 feet, i.e. 107 cm.



Pic. Nr. 1: *A "Scheitholt" depicted by Michael Praetorius.* This is a fragment of plate XXI. Source: Praetorius 1619: Plate XXI.

[1] Posta–Posta 2014: 17–22, Posta–Posta 2019: 73–90.
[2] Praetorius 1619: Plate XXI.
[3] Ulrich 2011: 10.

Since Praetorius also used the phrase in the title of one of his chapters, he seems to have become the coiner – irrespective of the colloquial name of the instrument. In whatever source the name *Scheitholt* turns up – for instance in encyclopaedias – it invariably refers to Praetorius' text.

There were hardly two instruments of this kind exactly the same, due to the fact that they were nearly all created by hobbyists in villages of different regions. Most of the newer ones were not similar to logs at all. However, independent of the individual or regional building technique, all these instruments have something in common – the buzzing and humming of the drone strings. Therefore, the onomatopoeic word *HUMMEL* (wasp or bumble-bee) offers a much more characteristic option to name these types of zither.[4] It is this peculiar name *(Hummel, hommel, hommle)* which is typically used in Swedish, Danish, Dutch and Northern German-speaking regions. The same meaning is expressed by the French *bourdon* (wasp or bumble-bee) a variant of which is used when this category of zithers is collectively called bordun-instruments. The same meaning is represented by the analogous term *bordunske citra* in Slovenian. In English-speaking countries, the verb *drone* (make a continuous low noise) is employed to create the collective term drone instruments.

Certain names of zither varieties such as the Belgian *pinet* (pine) or *épinette des Vosges* (*épinette* = spruce) from the Vosges mountains are based on words denoting main structural materials. (Note that members of Hungarian communities about to start dance parties often urge zitherists by exclaiming, "Bring out the dry wood, buddy.") It is remarkable that the relatively small Flemish region of Belgium has preserved numerous terms that identify local zither varieties.[5] In addition to the onomatopoeic *hommel* (wasp), which is a generic term in the north of Europe, *noordsche balk* (northern beam) also appears highlighting, similarly to *Scheitholt,* the shape of the instrument.[6] The names *blokviool* and *kloonviool* prove that the instrument is considered a special type of fiddle in this region. *Hoolviool* (hollow fiddle) refers to the fact that the bottom of a zither is open while the body is often carved out of a single block of wood. The attributes *krabber* (scraping) and *krapkas* (scratching) focus on playing techniques as the musician "scrapes" the tune and guest strings at the same time with a plectrum. *Spinet* comes from the word for an old harpsichord-like key instrument – much more complicated than the zither – of the same name. The Norwegian and Icelandic terms emphasize the shape of the instrument (*langeleik*, *langspil*

[4] Ulrich 2011: 20–21.

[5] Boone 1976: 104–105.

[6] Boers 1882: 1–9.

= long play). The so-called Alpine zithers in Southern Germany, the Bavarian and Tyrolese regions were named after the way they were plucked: *Kratzzither* (*kratzen* = scratch), *Scherrzither* (*scharre* = scrape), *Raffele* (*Raffel* = rattler, rasp), *Schlagzither* (*schlag* = hit, slap). The first three are clever speaking names because the player actually "scrapes," "scratches," or "rasps" the tune and guest strings while making music to generate the humming bordun effect. The *Schlagzither* or "percussion zither," however, is not particularly aptly named with regard to technique, a fact which will be further reflected on in this study. The name *kobza,* widespread in Czechia is, at first sight, a very distant relative of the terms used in other European regions.[7] *Koboz* or *kobza* typically mean a lute-like string instrument with a short neck but the words expanded to represent fretted zithers. The word *"kob"* has a meaning referring to a hollow body which is not very far from an instrument carved out of a block of wood, manufacturing technology actually used with certain types of zither.[8] The Swiss type of fretted zither, *Hexenscheit* (witch's block), carries a very peculiar name which obviously cannot be associated with building materials or playing techniques.

Citera, the modern Hungarian term used for fretted or holder-board instrurments has not been present in our lexicon very long. In earlier centuries, *cytra, cithara* lute, or the very category of proper string instruments did not have much to do with zither-type holder-board-equipped pieces.[9] The first written Hungarian record of a fretted zither can be found in a manuscript from 1774 by Antal Balla, who calls it *tombora.*[10] Its variant, *tambura* was in vogue in the Great Plain Region even in the mid-20th century. Today's *citera* may have only started to become widespread in the second half of the 19th century with the advent to the Transdanube Region of the belly-shaped Salzburg-type variety, the *Kratzzither.*[11]

The story of zithers from Northern Germany

The fretted or holder-board *(Griffbrett)* types of zither *(Scheitholt, Hummel)* became a common instrument in the folk music of Northern and Western Europe about 500 years ago. These instruments played a major role for centuries

[7] Kunz 1974: 53–54.
[8] Brauer-Benke 2016: 288–314.
[9] Brauer-Benke 2019: 45–71.
[10] Balla 1774.
[11] Bakó 1949: EA 4.077/28; Bereczki 1958: EA 12260/1.

in satisfying the musical needs of simple country folk, including that of dance music, without undergoing any structural changes.

The relevant literature discussing the history of the European fretted or holder-board zithers unanimously refers to Praetorius' drawing and description of the *Scheitholt* as a milestone.[12] It is quite obvious, however, that the instrument had long been a presence in European folk music before that milestone. We have archaeological evidence, pictorial representations as well as written records dating from more than a hundred years prior to Praetorius' work. In the expenditure book of the Cologne municipality, *Mittwochs-rentkammer,* on the pages dated 14 May 1508, it lists the participating musicians of a local procession. The text includes, among others, the instruments and groups of instruments participating in the parade:[13] "Lutes …in a group … drums and pipes… flutes …reed-pipes …fiddles and a lute … a *hommel* … bagpipes …violas." "Bei einer Prozession erlangen: *Luyten […] in position […] bringen ind pijffen […] fleutten […] schalmeyen […] fedelen ein luitten […] ein hommel […] sackpyffen […] gygen.*"[14]

In a footnote to his study, Merlo writes about the hummell: *"Eine Sackpfeife, welche nur zwei Töne, F und C hat",* meaning that the hummell is a bagpipe with only two notes, F and C. The statement in the footnote is debatable. In his book, Ulrich explains that several authors of the Mittwochsrentkammer text from 1508 have indicated that this mention is not yet sufficient evidence that the hummel described there really means a fretted zither. According to Ulrich, the misunderstanding could also be caused by the existence of the *Hümmelchen* at the time – which was actually the name of a small and relatively low-pitched bagpipe. Praetorius also considers the *Hümmelchen* among the bagpipes, to which the *Gross-bock, Bock, Schaperpfeiff* and *Dudey* also belong. The name Hummel has traditionally never been used to designate a bagpipe. Ulrich also draws attention to the fact that, an European fretted zither *(langeleik)* made

[12] Praetorius 1619: plate XXI.

[13] Ulrich 2011: 19–20; Boone 1976: 35; Merlo 1866: 98–101; Moser 1918: 135–144.

[14] At the time cited in the Mittwochsrentkammer, on page 100 of Merlo's study, it is written that *"Item hartlieff van Oelp peter Jonis mit luyten ind eyn hummell"*. As you can see, according to Merlo, the name of the instrument is "hummell" and not "ein hommel", as Ulrich writes in the original German edition of his book. In such cases, the question arises as to whether Merlo took the name of the instrument correctly. The instrument is known as *Hummel Hommel, Hommle* in various Northern European languages, but it never occurs with two "l" letters at the end of the word. The two "l"s are not justified either, because the original meaning of hummel is wasp, bumble bee, which word is never written with two "l"s at the end. Merlo 1866: 100.

in 1524 was found in Norway, which is the oldest such material evidence of the existence of the instrument known so far.[15] Based on these details, the instrument in the 1508 text of the Revenue Office can currently be considered the first written mention of the European fretted zither.

A text from Czech-speaking regions dating from 1551 is about a similar procession which was banned by the local church.

> "On the Sunday preceding the holiday of St. Margaret and the following Monday, twenty-two persons in fancy dresses and equipped with instruments, including *kobzas,* were walking along the streets of Kuttenberg [Kutna Hora today] disregarding the fact that it was against God's rule… and they were to repent."[16]

In the 19th century, owing to the economic and social changes sweeping Europe, music-loving country folk became more and more interested in higher-prestige instruments and bands. The survival of the *Scheitholt* and *Hummel,* still wide-spread and popular in village communities, was put in jeopardy by various factors. One of these factors was that people were familiarizing themselves with the instruments and quality of play of professional musicians. Also, there was a need to launch musical ensembles. The major limitation on the use of the *Hummel* in such groupings was that it was a bordun instrument. The constant drone, at even pitch, of the guest strings made it tough for the *Hummel* to harmonize with other instruments. Instrument-builders and players were, in many instances, responsible for not providing perfect results. The placement of the frets, especially at the higher ranges, oftentimes was not accurate enough. Therefore, required songs could not be rendered in the precise way. The stringing pattern of the *Hummel* was too simple. One or two melody strings with the meagre accompaniment of a few guest strings could not provide sufficient volume in large venues. It is no rocket science to pick a melody on the *Hummel*. To a certain extent, it is easy to learn how to play. But rendering the soul, the throbbing heart of the song, creatively getting the guest strings into play and learning how to deliver a tight performance takes a lot of practice. If the player does not possess the skills required for the above, their play becomes flat and monotonous, which will inevitably become a nuisance.

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[15] In 1980 a langeleik dated as early as 1524 was uncovered on a farm in Vibergsroa, Gjøvik, Norway. This instrument predates any documented occurrences of the scheitholt, the hummel or any other similar instrument. Jochim 2018. https://stampaday.wordpress.com/2018/02/24/the-langeleik-or-norwegian-zither/

[16] Kunz 1974: 53–59.

The tradition of fretted zithers going back to several centuries in Western-European folk music began to fade around the beginning of the 19th century in Western German regions. Actual specimens of the zither started to disappear, in spite of having been a major feature in entertainment, dancing and singing as well as church music previously. These changes were being reported from the mid-century by several local historians who had hard times procuring such instruments. To quote, for instance, local historian and travelogue writer J. G. Kohl making a record of a trip traversing Schleswig-Holstein in 1846[17] which led him to visit and elderly lady on the small island of *Föhr*.

> *"She also owned an old musical instrument, a type of old-fashioned zither, which she placed in front of her on the table in order to play for me an old tune. She called this zither 'Hommel' and said that there were only a few 'Hommeln' left on the island, but they all most likely, including her own, had come from Holland or England.*
>
> *This Hommel had only brass strings. Several of them were strung in a parallel fashion, but the others were spread like divergent rays (they were arranged fan-shaped). She fretted the parallel ones with fingers, and strummed them with a quill. But at the end of each phrase she brushed the quill over the divergent strings, which, so to speak, just rang and resonated like an echo.*
>
> *My old friend said that once upon a time such Hummeln were more frequent, and most likely one danced to their music, whereas nowadays trumpets and violins were always wanted for dancing. But most people had a Hommel at home, to accompany with it the psalm of Sunday afternoon, which was sung in those days in each family."*

The old lady's comment that the instruments might have come from England must have been a mistake given that no trace of *Hummel* has been found in the UK. Her probable meaning was that the *"Hommeln"* arrived at the island via transactions with Dutch and English sailors.

In 1873, attorney Andreas Michelsen was visiting the small North Sea resort on *Föhr* Island for several weeks. That is where he came across a well-respected piece of writing by Kohl on various events in *Schleswig-Holstein* in 1846. He was happy to read the report about the old lady who still played the *Hummel*. The comfort and peace of the serene sea resort gave him the ideal setting for his quest of such an elusive instrument.[18]

> *"I hardly finished reading such a pleasing report about a musical instrument of our past which in our changeable days has gotten lost, indeed has been virtually forgotten, when curiosity or*

[17] Kohl 1846: 177–178.

[18] Michelsen 1876: 53–56.

rather the thirst for knowledge of the antiquary stirred in me. I immediately made up my mind, to make inquiries and undertake research about this early instrument."

He visited every single village on the island, made inquiries on the Isle of *Sylt* but none of his efforts bore fruit. He found no *Hummel* although he had been fully prepared to purchase one. Back in Schleswig, he continued the search on the mainland, which only yielded old descriptions of the *Hummel* but no actual instrument. People told him that the *Hummel* had been immensely popular with village folk in the early 19th century but later fell out of use. Around 1873, only old-timers had any recollections of the instrument. Old Captain Ketelsen from the village of *Borchsum (Borgsum)* on *Föhr* reported that his "…Mam would put the *Hummel* on the table to play some dance music for the kids."

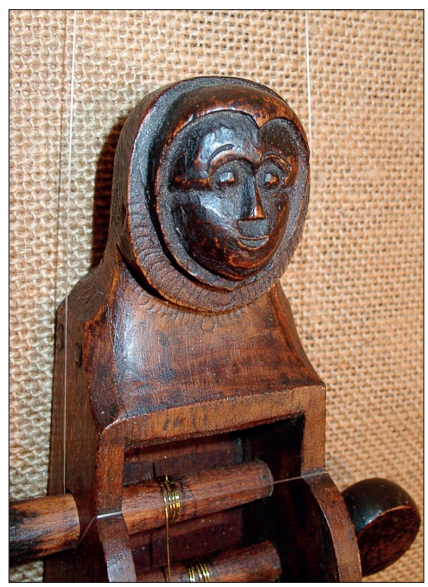
Michelsen amassed a large quantity of data on the old instrument – interviewing people on the isles, various areas of mainland Schleswig-Holstein, even from Danish settlements – but never found an actual *Hummel*. Shortly after he returned to Schleswig, though, as a complete stroke of luck, a friend managed to find him an excellent instrument from the day of his grandparents in *Kellinghausen* (16 km east of *Itzehoe*). (Pic. Nr. 2) Michelsen recorded the measurement and specifications: 13 metal strings including ten steel and three brass low strings. He made a note of the instrument making a very pleasant sound. When the strings were plucked, the resulting twang was exceptionally strong and long-lasting. Michelsen assumed that it would not take much effort of an instrument builder to put it back into perfect shape.

Pic. Nr. 2: *Frisian Hummel from Kellinghausen, Volkskunde Museum Schleswig*
Source: Ulrich 2011: 52.

He published an article in the *Jahreskalender* (a regional cultural almanac) of 1876 asking for "…further information about the historical piece and other similar instruments that might still be in existence."

His call went unanswered until as late as 1937. That is when a Dr. Nissen from Hamburg responded and made an announcement for the museum saying, "The instrument used to belong to one of my uncles who collected curios and antiquities in Kellinghausen." This collector must have procured numerous items during his expeditions from all over the country. Therefore, it is impossible to say with absolute certainty that the instrument indeed originated from *Kellinghausen* or its neighborhood. Its restoration took place in the workshop of Wilfried Ulrich in the early 2000s.[19]

In comparison with other instruments, it is obvious that this *Hummel* was built by a professional. It is made of oak with the exception of the straight sideboard of pine-wood. Schleswig-Holstein had ample resources of oak in those days. The upper edge of the main head is carved into an elegant wave topped with the exquisite figure of a human head covered in a hood. (Pic. Nr. 3)



Pic. Nr. 3: *Carved human face on the main head of a Hummel from Kellinghausen*
Source: Ulrich 2011: 53.

The circular lower sound hole has a ring-like rim pierced with eight S-shaped openings (see Pic. Nr. 2). The upper sound hole is cut into the shape of an F. The carvings on the holder board, main head and neck are all masterpieces,

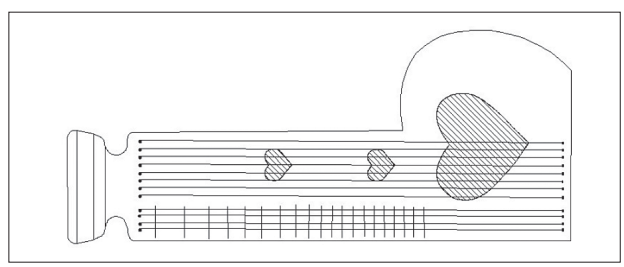
[19] Ulrich 2011: 51–54.

too. The back and cover boards are not braced diagonally inside the body, although there are wooden support ribs located over the sound holes. In the narrow upper section, the back board is surprisingly thin, only 1.5 mm. Most *Hummel*s had back boards of 4 to 5 mm thickness. The restoration included freshly gluing the rib structure to the back and cover boards. The first trials with the overhauled instrument proved true Michelsen's anticipation about its exceptionally strong sound.

Michelsen's report about his tireless efforts to find a real *Hummel* around the year 1873 makes an interesting read. In fact, by that time, the fretted zither had gone extinct in Schleswig-Holstein.

The *Hummel* was a very wide-spread folk-music instrument in the first half of the 19th century, in the Silesian region of Upper Lusatia (Sorbia). This fact is reported by historian and teacher Dr. Georg Pilk from *Neukirch*. His study (surviving only in manuscript form) is dated from around 1900 but focuses on the 1840s.[20] The paper is based on eyewitness interviews to describe the folk-dance and folk-music scene of village people living in Upper Lusatia. The author cites expert accounts by physician Dr. Heller (70) of *Neukirch* and old factory owner August Richter of *Oberneukirch* to present the Hummel as a folk instrument.

The study goes to great lengths to emphasize that *Hummel*s were usually not (or were not only) built by joiners but uneducated village handymen for their own entertainment. In those days, a lot of such instruments existed all around the region.



Pic. Nr. 4: *A Hummel as described by August Richter in Pilk's article*
Source: Ulrich 2011: 24.

The specifications of one of the instruments described by Richter are as follows. The cover and back boards are made of spruce, while the side and main head of hardwood. As Pic. Nr. 4 shows, one side of the sound box is

[20] Ulrich 2011: 23–25.

rounded and sports three heart-shaped sound holes. The largest width is about 20 cm, the smallest (at the neck) 8 to 9 cm. The full length of the instrument is 55 cm. The height of the sound box is 5 cm and the strings stretch to a length of 45 cm. The strings are attached by hooks to pins affixed to the rear block. At the other end of the instrument, they are coiled on tuner pins. The tuning process requires the use of a key. The instrument has tune as well as bass strings. The four steel tune strings are arranged in pairs. All of these strings are tuned to the same pitch. The manual does not include the distance between the pairs of strings neither the pitch of the empty strings. The bass or guest strings are tuned as chords but their exact number is not known. The holder board is furnished with brass frets. The instrument has three short legs. The player presses the tune strings to the frets using their left thumb and index finger, while plucking with a round horn plectrum held in the right hand.

Relevant studies show that the *Hummel* is completely unknown in *Neukirch* today – no such instrument can be found in the local museum. Wilfried Ulrich, the internationally acclaimed restorer breathed new life into the *Neukirch-Hummel* in 2008 using the drawing and specifications detailed above. He only had to make a few modifications. For instance, he could not place 11 tuning pins in a single line on the 9-cm wide main head. Therefore, he arranged them in a symmetrical V-shaped pattern. He proportionally shrank the originally oversized lower sound hole. In every other respect, Ulrich retained all the measurements proposed by Richter.

Pic. Nr. 5: *Traditional playing technique on a fretted Hummel from Neukirch reconstructed on the basis of contemporary descriptions*
Source: Ulrich 2011: 25.

The final blow to traditional Northern German zithers was dealt by the appearance of the accordion from the second half of the 19th century. German manufacturers started to bring more and more versatile accordions to market from the late 1800s. Their sound was much stronger than that of the zither and, by the use chord pipes, melodies could be accompanied by a lot more diverse harmonies. The advent of the accordion in regions of Northern Germany brought about the gradual disappearance of the *Scheitholt/Hummel*. It felt out of use and got relegated to junk storage in attics or, in luckier instances, museum exhibits.

Experts on local history mention an Adolf Hilke of Lower Saxony, who had a joiner's shop in *Moringen* and manufactured his own zithers in the 1870s. These instruments were called *Hümmelke* the sides of which displayed a number of peculiar sound holes (Pic. Nr. 6). Not only did Hilke build instruments, he also made music on his products himself.[21] Sohnrey writes that Hilke was immortalized by "a competent" artist A. Nolte in the form of a woodcut in the 1922 issue 3 (page 641) of the newspaper *Die Gartenlaube* [The Arbor]. The picture shows Hilke with the instrument, which has many sound holes on the side facing the listener. The skilful artist depicted in correct perspective an instrument the width of a hand.

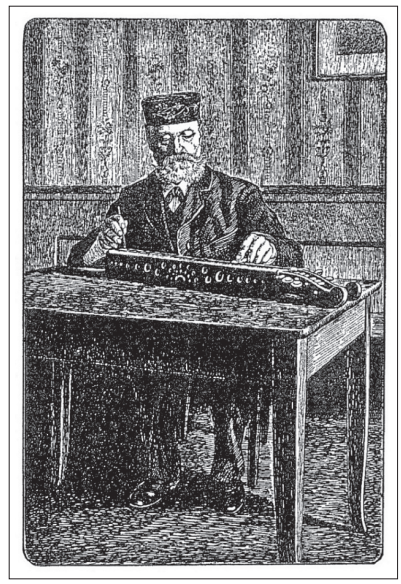
Pic. Nr. 6: *Adolf Hilke's Hümmelke*. Source: Ulrich 2011: 38.

Evidence suggests that he was a skillful and popular zitherist because the local youth hired him for decades to provide music at their parties and dances. Contemporary records show that when – zither under his arm – he set out on Friday evenings towards the local spinnery, which employed a lot of maids, he was usually joined by a whole army of village lads. At the end of the girls' shift, boisterous parties got under way with music provided by Adolf Hilke's zither.[22] One of Hilke's instruments ended up at the museum of *Northeim*.

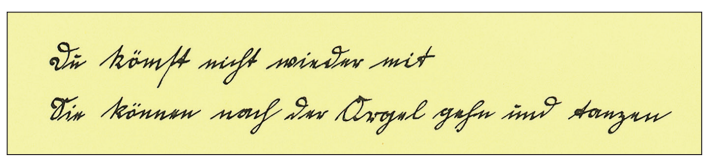
[21] Sohnrey 1924: 308–311.

[22] Ulrich 2011: 33–41.

While restoring the artifact, a museum employee discovered on the side facing the player traces of handwritten script. Because of poor legibility, it could only be deciphered with the help of a special viewing device.[23]



Pic. Nr. 7: *Adolf Hilke is playing the zither (Woodcut by A. Nolte)*
Source: Sohnrey 1922: 641.



Pic. Nr. 8: *The script on the side of Adolf Hilke's Hümmelke*
Source: Ulrich 2011: 40.

The text translates as, *"You will not come along any more, They can go to the organ and dance"*.

Probably written on his trusted instrument by Hilke himself, the inscription sounds sad and disappointed. Hohner Inc. had been mass-producing and selling at low cost the ever more popular accordion since 1903. Thereby began the industrialization of music. At some point, Hilke, a village musician from

[23] Ulrich 2011: 40.

Moringen, must have realized that the "squeeze-box" (referred to as "organ" those days) delighted the dancers with the changing basses and its loud sound. The new instrument proved more suitable to the rhythmic movements of the dancers than the constant, steady buzzing and humming of the drones. One of the dancers must have made it very clear to Hilke that the *Huemmelke* was not good enough any longer.

Another variety of fretted zithers, used in Czech-speaking regions and called *kobza,* suffered the same fate. By the turn of the 20th century, it had practically disappeared with the only exception of a few museum specimens.[24]

Alpine zithers, transformation of the *kratzzither*

Unlike Northern European regions, 19th and 20th-century zithers were typically dealt luckier hands in Bavaria and Austria (*Mittenwald, Kempten, Allgäu* Region, *Salzburg* and South Tyrol). Whereas fretted zithers had disappeared from the palette of folk-musical instruments in Northern German, Dutch, Belgian and Czech regions, in certain areas of Bavaria and Austria they underwent changes that still make them major players in folk music.

As a successor to Alpine zithers of earlier years, the traditionally log-shaped *Scheitholt* can still be found here. (Pic. Nr. 9)

Pic. Nr. 9: *An Alpine Scheitholt built in the mid-18th century from the collection of the German National Museum (GNM).* Inventory No.: MI 70. Source: Ulrich 2011: 83.

The German National Museum (GNM) of *Nuremberg* displays several types of Alpine zither including one built in the mid-18th century and inventoried as MI 70 (Pic. Nr. 9) which is identified as *Scheitholt*. Although a lot of these items were dubbed "instruments of paupers or vagrants" displaying no orna-

[24] Režny 1975: 35–36; Kurfürst 2002: 439–442.

mentation, the builder of MI 70 was a skillful craftsman who furnished this piece with uniquely exquisite decoration (Pic. Nr. 9). The full length of the instrument is 68.7cm and that of the strings is 53.5 cm. In addition to seven guest strings, three tune strings run above the diatonic, Mixolydian-scale holder board. The body widens towards the sound hole and sports gilded and carved decorative motifs on the top and sides. The builder applied a layer of gypsum on the whole surface which was wrapped in red clay. Then he covered the protruding carvings with gold leaf leaving the even parts red. The two head spirals are black. These may have also been gilded but the foil has worn off.

Found in *Brixen,* South Tyrol, the oldest known Alpine zither *(Scheitholt/Kratzzither),* was built in 1675 (Pic. Nr. 10). It was originally displayed in the Heyer Collection of Cologne but disappeared during World War II. It was a full 50 cm long with strings of 42 cm in length.

Pic. Nr. 10: *A Tyrolese Scheitholt or Kratzzither built in 1675*. Heyer Collection, Cologne. Source: Ulrich 2011: 84.

Keeping the traditional stringing pattern and tuning intact, 18th-century builders modified the shape of the "scraping-style" *Kratzzither* so that its right side took a curved or round form which is also a familiar feature of Hungarian belly-shaped zithers (Pic. Nr. 11). This form has become known as the Salzburg shape. This Saltzburg version of the *Kratzziter* in Pic. Nr. 11 can be found in the *Südtiroler Landesmuseum für Volkskunde in Dietenheim,* Southern Germany. The *Südtirolen Bürgernetz* internet newspaper reported on the instrument's structure, dimensions, other parameters and its photo.

The increased volume of the body, on the one hand, raised the potential volume, on the other hand, generated a richer and more full-bodied sound.

Pic. Nr. 11: *Kratzzither showing a shape typical of Salzburg (1775–1799)*
South Tyrolean Folklore Museum, Dietenheim (Bruneck). Inv.Nr. SVM L/2853,
on loan from the Stiftung Südtiroler Sparkasse. Photo: Folklore Museum
(Courtesy of the South Tyrolean Folklore Museum)

Scherrzither

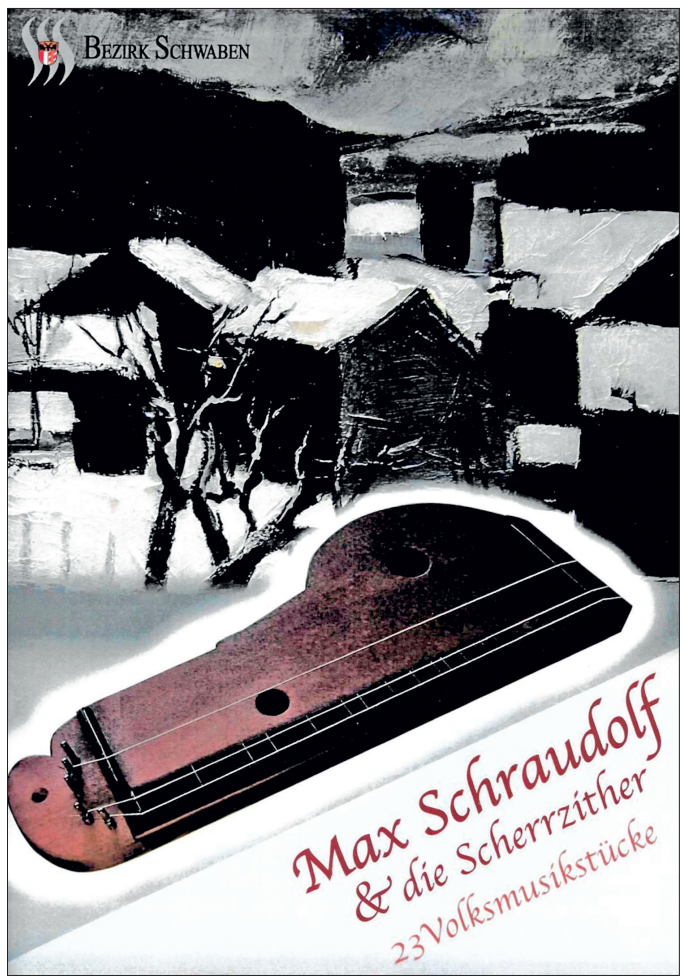
The traditional Alpine *Kratzzither* took two paths of transformation in the 19th century. The first was spurred by efforts to make the zither part of musical ensembles. The second path of development aimed at modifications so that the zitherist, forgoing the bordun accompaniment, could play melodies with harmonious and diverse chords.

Efforts to make the *Kratzzither* compatible with other instruments in ensembles were hampered by the constant, monotonous humming of the drone strings which badly disturbed the desired instrumental harmony. This urged designers to take steps to gradually get rid of the accompaniment-providing bordun strings. These efforts eventually resulted in the *Scherrzither,* which lacks guest strings lower than the tune string.[25]

By the early 20th century, the *Scherrzither* had almost completely disappeared from the tool kit of folk musicians in the Southern Bavarian *Allgäu* Region. In those years, though, there lived a shepherd in the hamlet of *Oberstdorf,* by the name of August Bader, who still played that instrument. Had Bader and Max Schraudolf (then at the age of 18) not had a chance meeting, *Scherrzither*

[25] Schraudolf 1988: 13.

specimens would probably be only found in museums today. Schraudolf immediately threw himself into learning how to play the nearly extinct instrument and devoted himself to studying it. Thanks to his efforts, the *Scherrzither* has become widespread again in the entire *Allgäu* Region. In addition to making audio records of *Scherrzither* play, Schraudolf also adapted folk songs for the instrument. Pic. Nr. 12 shows the front cover of a publication of his adaptations complete with a photo of a contemporary *Scherrzither* highlighting its stringing pattern.



Pic. Nr. 12: *Max Schraudolf's adaptations of German folk song for Scherrzither*
Source: Heigl–Kern–Lambertz–Schraudolf 2008: book cover.

The *Scherrzither* originally had 4-5 strings of the same pitch. Some of them ran above the diatonic holder board and the rest next to it. The newest versions display two tune strings above the diatonic holder board plus one guest string (Pic. Nr. 12). The two tune strings facilitate antiphonal (*tercelő* in Hungarian) play while a vigorous right-hand plucking technique provides the characteristic dynamics to German folk songs. A *Scherrzither* strung according the pattern described above is suitable for an ensemble including guitar, hammered dulcimer and/or violin (Pic. Nr. 13). In the middle of Pic. Nr. 13 can be seen Max Schraudorf playing the *Scherrzither,* accompanied by his partner Garschhammer with a double-necked guitar. Both are in Tyrolean folk costume and in a local folk room furnishings. Thanks to the enthusiasm of traditional folk musicians, the *Scherrzither* has survived and ensembles still use it in stage performances. The Local History Museum of *Oberstdorf* displays a *Scherrzither* built around 1840.[26]

Pic. Nr. 13: *The Scherrzither and guitar duo Schraudolf & Garschhammer*
Source: Schraudolf 1988: 13.

Folk music scholar Michael Bredl describes in detail the *Scherrzither*'s building materials, structure, stringing pattern and tuning as well as the role it played in *Allgäu* and the neighboring regions. Due to players' hand moves similar to scraping *(scherr),* this instrument was called *Scherrzither* or *Schaar* and *Zwecklzither* in *Vorarlberg*.[27]

[26] Schraudolf 1988: 13.
[27] Bredl 1979: 5–25.

An important contribution of *Scherrzither* to German folk music is that, thanks to its plucking technique, it has helped to preserve the tight dynamics of folk songs. Samples from an LP by *Scherrzither*/guitar duo Schraudolf & Kern are accessible on the Internet.[28] The video record of *Scherrzither*/guitar duo Lipp & Zettler[29] offers a visible and audible representation of the dynamic plucking technique. In addition to that, the second part of the clip displays an excellent instrumental imitation of yodelling.

Raffele

The final destination of the journey taken by the *Kratzzither* via the intermediary "scraping" *Scherrzither* is the *Raffelzither* or simply *Raffele*[30], which is a very popular instrument of the present day especially in Bavaria, Austria, South Tyrol and Northern Italy. The sound box of the *Raffele* typically retains the wide, belly-shaped Salzburg form, already assumed by the *Kratzzither*, but above the originally diatonic and in the newest pieces chromatic holder board set on the edge of the body, are stretched only three melody strings tuned as a^1, a^1, d^1. This tuning pattern provides for *terc* accompaniment and common-chord-based play in addition to monophonic melody. The bordun accompaniment is gone but the powerful, dynamic plucking of the right hand remains. An appropriate plucking technique provided, the sound of the *Raffele* is quiet strong. Accompanied by guitar and hammer dulcimer, *Raffele* music is an intensive and genuine representation of the characteristic sound of German folk songs.

The *Raffele* shown in Pic. Nr. 14 is the handiwork of Robert Grasser. The upper board is made of radially cut, tight-fibered spruce. The main head supporting the tuning mechanism is made of wood of wild cherry, sycamore, maple, ash, apple, pear and plum trees. The use of a special primer lends the body unique intensity of color. A last waxy finish provides its silky sheen. A well-known video clip shows Alois Müller playing on Robert Glasser's *Raffele*.[31] The record aptly represents the dynamic plucking technique and the strong, characteristic sound of the *Raffele* which is ideally suited to guitar accompaniment.

[28] Schraudolf–Kern 2009.
[29] Lipp–Zettler 2012.
[30] Niederfriniger 2015: 107–118.
[31] Müller 2012.

Pic. Nr. 14: *A Raffele with a diatonic fretboard*
This instrument was built in 2018 and photographed by Robert Grasser.
(With the permission of Robert Grasser)

Schlagzither. The zither undergoes a "revolutionary" transformation

It should be noted that the relevant literature on the history of the zither has not put enough emphasis on the monumental change in the development of Alpine zithers that stemmed from the *Kratzzither*-to-*Schlagzither* shift. It was the advent of the *Schlagzither* that launched the major transformation that later resulted in the modern concert zither. The *Schlagzither* is similar to the traditional *Scheitholt* or *Hummel* structure in shape only. By comparison with the latter, it is immediately obvious that the *Schlagzither* has a significantly larger number of strings. Pic. Nr. 15 depicts a *Schlagzither* from the 1800s which, in addition to three melody strings, sports sixteen tuning pins for guest strings.

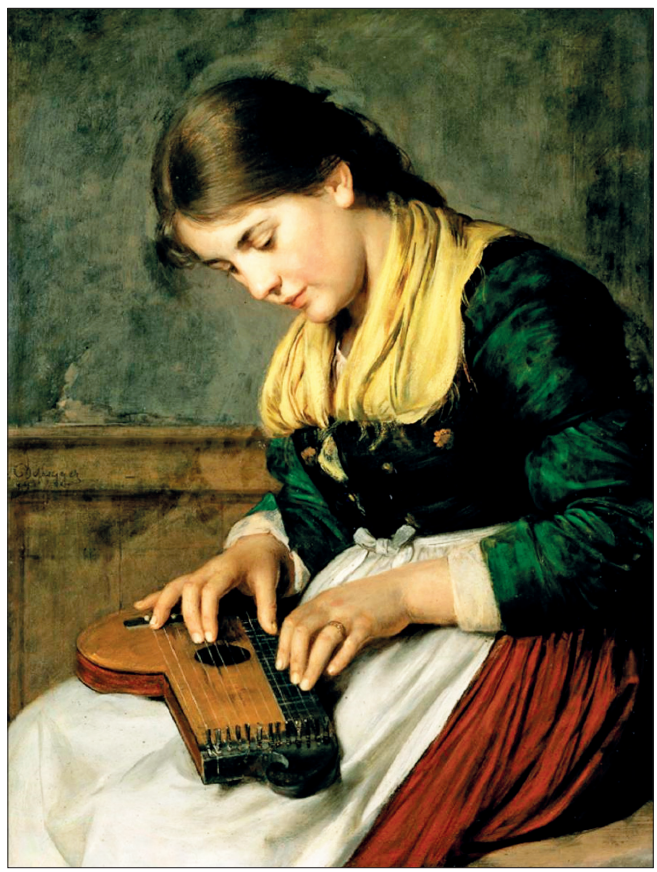
Schlagzither is also a resonating chamber, to be set on a table or the player's knees, which is equipped with a left-positioned holder board with frets whose function is to shorten the melody strings. The instrument's holder board retained the traditional Mixolydian-scale, diatonic arrangement. However, the stringing pattern, number of strings, plucking and playing technique are totally different from those of the traditional *Scheitholt*, *Kratz-* and *Scherrzither*.

Pic. Nr. 15: *Schlagzither showing a shape typical of Salzburg*
The length of the strings is 55.5cm.
The cover board is furnished with carved music-related motifs.
This instrument belongs to the Ulrich Collection. Built in Austria in the 1800s, it has 3 tune strings and 16 guest strings.
Source: Ulrich 2011: 88.

Pic. Nr. 16: *A Bavarian Schlagzither from the early 19th century showing the typical Mittenwald shape*
It has been part of in the collection of Bach House, Eisenach since 1910.
The length of the tune strings is 47cm.
In addition to 3 tune strings, it has 12 guest strings.
Source: Ulrich 2011: 87.

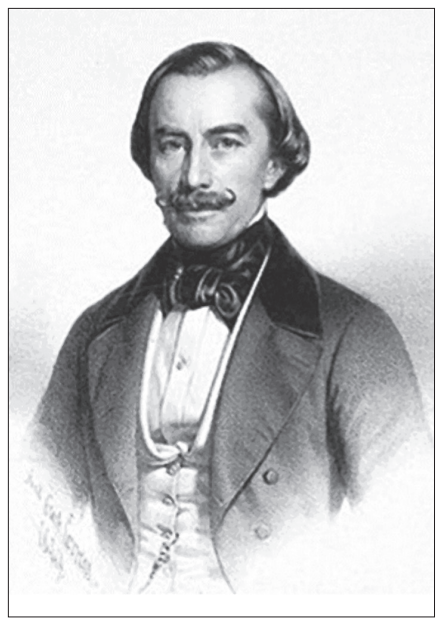
The evolution of the traditional Alpine *Kratzzither* into *Schlagzither* was spurred by efforts to replace monotonous bordun accompaniment with a harmonious arrangement that would be amenable to the melody and its changing patterns. For the player to be able to produce melody and changing chords at the same time, the fingers of the plucking (right) hand had to share the "workload" – something which had not been an issue in traditional play. The tune strings had

to be operated with the bare thumb of the right hand or a plectrum attached to a metal ring on the said appendage. The harmonious common chords and bass accompaniment were to be selected and generated by the four fingers plucking at the guest strings. Another modification was that, as opposed to the traditional *Kratzzither*, the tune strings running above the fretted holder board were tuned to various pitch. *Schlagzither*s usually had three tune strings (Pic. Nr. 15 and 16). The existence of tune strings of various pitch had the advantage of making melodies in a more comfortable way, without the fingers of the left hand having to span big lengths.



Pic. Nr. 17: *Zitherspielendes Mädchen (Girl playing the zither) by Franz von Defregger*
Source: Lempertz Auction House
https://www.lempertz.com/en/catalogues/lot/840-1/1379-franz-von-defregger.html
(Courtesy of Kunsthaus Lempertz, Cologne)

Franz von Defregger (1825–1921), the well-known Austrian painter born in Tyrol, chose the Alpine zither *(Schlagzither)* and zitherists (popular in his childhood home region) as subjects of several of his works. Pic. Nr. 17 (*Zitherspielendes Mädchen* – Girl playing the zither) shows the player's hand position in very accurate detail. She is pressing the tune strings with the fingers of her right hand, using the left thumb to make the melody, leaving the left fingers to select and pluck the chords suitable for the melody. Pic. Nr. 17 is currently owned by Lempertz Auction House with inventory number 1379.



Pic. Nr. 18: *Johann Petzmayer (1803–1884), lithograph by Erich Correns, 1849*
Source: The New York Public Library Digital Collections 1555932. https://digitalcollections.nypl.org/items/510d47e2-91bd-a3d9-e040-e00a18064a99
(Courtesy of the Music Division, The New York Public Library)

In the early 19th century, Alpine *Schlagzither* also found its way into Vienna, Austria and the surrounding regions. The instrument's holder board was arranged to match the traditional Mixolydian diatonic scale. For this reason, it was good for only a limited number of keys. The number and tuning pattern of guest strings depended on the taste and deftness of individual players. Austrian

musician, Johann Peztmayer had an indisputable role in popularizing and making known widespread this new instrument structure and playing technique.[32]

Petzmayer was born in Zistersdorf, Lower Austria in 1803. Son of an innkeeper, he grew up in Vienna. First, he learned to play the violin and at 16 he switched to the *(Schlag)zither*. His zither had three tune strings and fifteen guest strings. He found the tuning order of guest strings ideally suited for his playing technique. After a while, he was able to accompany his melodies as a virtuoso using harmonious and diverse chords.

Pic. Nr. 19: *Portrait of Prince Maximilian Joseph playing the zither*
Source: Duke Max in Bavaria playing the zither,
lithograph by Johann Wölfle, after a drawing
by Samuel Friedrich Diez Museum of History, Bamberg.
https://www.bamberger-onlinezeitung.de/2018/11/28/
der-gute-stern-oder-wie-herzog-
max-in-bamberg-die-zither-entdeckte/

His father's inn, *Zum Heiligen Johann* (For St. John) was near the *Linienwall,* an outer line of fortifications around Vienna frequented by lots of merchants and travellers. The first audience of Petzmayer's bravura performances was the clientele of his father's inn. People were so amazed that more and more of them became curious. His fame was growing and noble families invited him

[32] Hamberger 2006: 5–35.

to perform at their events. In 1827, he got the chance to show his skills in the court of Emperor Franz I. Urged by the imperial family, Petzmayer launched a concert tour in Austria and Germany. Lacking a partner zitherist of his own stature, he performed with guitarists, violinists and singers. His concert venues included major halls housing grand orchestras. In 1830, he played in the King's Theater in Berlin as well as the Prussian court.

A show delivered in the *Theater zu Bamberg* in 1837 was determinant in pushing forward Petzmayer's career as well as the evolution of the zither. Among the VIPs was Bavarian Prince Maximilian Joseph (29 at the time), father of Elisabeth, the later Queen of Hungary. Entirely captivated by Petzmayer's virtuoso performance, the prince decided to learn how to play the zither himself.

Prince Max hired Petzmayer as his personal tutor and bestowed the title "virtuoso chamber musician" upon him in 1838. The prince proved to be an outstanding student excelling in both playing the zither and later composing pieces for the instrument. In 1838, Petzmayer accompanied the prince on his foreign trips (to Italy, Greece, the Middle East and Egypt), which included zither concerts starring them both. Thanks to Petzmayer and Prince Max's gigs, the zither gained in popularity in all social strata. In Pic. Nr. 19 Prince Max's characteristic zither playing corresponding to the *Schlagzither* is clearly visible from the hand position. The prince's elegant attire and surroundings clearly show that the formerly "beggar's instrument" entered the culture of elite circles.

In Prince Max's hometown of *Bamberg,* the memory of the prince's virtuoso zither playing is preserved to this day. The local newspaper *Bamberger Onlinezeitung "Der gute Stern oder Wie Herzog Max in Bamberg die Zither entdeckte"* [The Good Star or How Duke Max discovered the zither in Bamberg] reported that on November 28. 2018 and February 03, 2019, a large-scale exhibition and musical performances were organized in the Bamberg History Museum, where there is also a portrait of Duke Max playing the zither (Pic. Nr. 19).

The *Schlagzither,* evolved from the *Scheitholt* of "paupers or vagrants" of Praetorius' day, had become an instrument of choice even in the highest echelons of society. Thus, Prince Max's daughter, Queen Elizabeth of Hungary (aka Sissy), Queen Maria of Naples, Crown Princess Alexandra of the UK and Beatrice, Princess of Wales all became dedicated zither players.

The general love of folklore typical of the *Biedermeier* period saw the zither flourish in Bavarian and Austrian provinces. Dubbed as the "piano of Average Joe", the *Schlagzither* became a staple of salon music in circles of the landed gentry. Having reached the pinnacle of the structural evolution of the *Schlagzither* by the end of the 19th century, the new variety, the "concert zither"

represented the fullest manifestation of this musical phenomenon and playing technique.

The concert zither *(Konzertzither)*

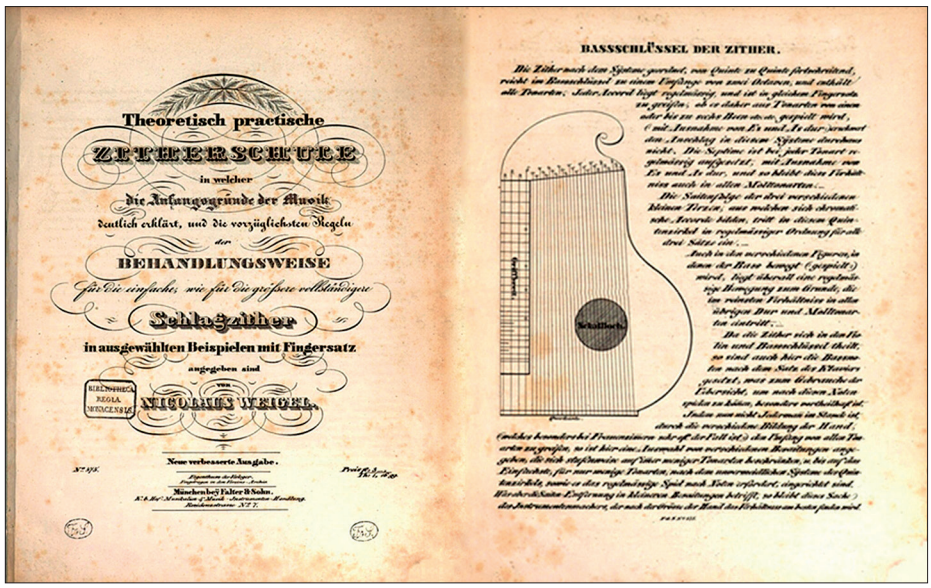
The sound of the *Schlagzither* played on by a virtuoso like Johann Petzmayer won the highest accolades from audiences in Bavaria and Austria. But this novel sound and technique notwithstanding, classical musicians still considered it a folk instrument *(Volkszither)* of limited musical value.

Pic. Nr. 20: *Nikolaus Weigel (1811–1878), father of the concert zither*
Source: Hamberger n. d.

The final modifications on the *Schlagzither* were brought about by musician Nikolaus Weigel (1811–1878), hailed from *Pfalz* and later based in Munich.[33] He was born in *Hainau-bei-Landau, Rheinpfalz* in 1811. In 1822, he moved with his parents to *Giesing-bei-Munich,* where his father became a farm manager and

[33] Albert 1878: 17.

mayor. Weigel had a horse-riding accident in 1830 and was confined to his room for a while. He killed the time by meticulously studying the *Schlagzither,* which had become quite well-known by that time. He pinpointed the limitations of the instrument and decided to devote himself to its development.[34]



Pic. Nr. 21: *The title page and page 9*
from Nikolaus Weigel's 41-page "zither school" published in 1844 by Falter & Sons, Munich
Source: Weigel 1844: 41.

In order to be able to play in any key or the broadest possible range, he modified the fretted holder board to become chromatic. He increased the number of the tune strings to four then five. He also introduced the use of a metal plectrum (thumb pick) which was affixed to the thumb with a ring. This highlighted the melody and increased volume. He also raised the number of the guest strings so that the melody could be accompanied by diverse chords and finely harmonious timbre. A clever trick made it possible to unify the tuning of the guest strings and reach an arrangement most suitable for the new playing technique. The guest strings were arranged in an order compatible with the circle of fifths. This ensured that when the player needed major or minor common chords, the two strings representing the base and fifth grades were next to each other to be picked with the same finger simultaneously. The gen-

[34] Mayer 2010.

eration of the third grade of the common chord was the job of another finger. Common chords were usually produced by employing the middle and index fingers while bass strings were plucked with the ring finger.[35]

The first zither tuned according to Weigel's instructions was built in *Haidhausen-bei-Munich* by Ignaz Simon, founder of a still famous instrument-manufacturing company. Weigel self-published the first handbook about the reconfigured instrument in 1838. This is the first and oldest surviving zither manual which does not only describe various playing techniques but practically anything a proficient musical student might need to achieve peak performance. Falter & Son of Munich brought out a revised and updated second edition in 1844 (Pic. Nr. 21). This version already details the exact same tuning arrangement in use today.[36]

Weigel's reforms, however, were only accepted by the world of music much later. Instrument manufacturer Max Amberger of Munich built the first concert zither based on Weigel's revolutionary blueprint in 1862. From then on, it did not take long for the new development to replace the old *Volkszither (Schlagzither)* in German-speaking countries, especially in the Alpine regions.

The potential of the concert zither was not lost on established composers a few of whom became accomplished players. The sound of the instrument did not fail to capture the attention of a young Johann Strauss either. He assigned a major solo role to the concert zither in his waltz "Tales from the Vienna Woods" (Op. 325), which debuted in 1868.[37] The popular piece by Strauss gained the concert zither international popularity as early as the second half of the 19th century.

By making the modifications detailed above, Nikolaus Weigel brought about the concept of the concert zither (still in constant development), which is wildly popular in both German and Austrian regions. The concert zither has been undergoing transformation since the mid-19th century without any major changes to the basic concept. However, designers have obtained some 150 patents on smaller modifications gradually resulting in a variety of shapes and stringing patterns characterizing modern specimens.

The holder board of the concert zither with the widest range known today has 29 frets *(bund),* 5 melody strings and 37 guest strings adding up to a total

[35] Based on a personal e-mail message with Tibor Németh, zither artist on the 23rd of March, 2021 about the tuning of the accompaniment strings and the chord playing of the right-hand fingers on the Viennese-tuned concert zither.

[36] Weigel 1844.

[37] Berger 2020.

of 42. This instrument can produce an amazing 187 different pitches, which represents a much wider range than those of the guitar's 136 or the piano's 88.

In 1862, Max Alberger started producing concert zither with a structure developed by Weigel. Max Alberger founded a company that is still popular today. In addition to other musical instruments, the company also currently produces concert zithers. The zither of standard size and structure with 5 melody strings and 27 accompaniment strings shown in Pic. Nr. 22 was made by Ludwig Gruber in 2006. He took a photo of the instrument and made the photo public domain on the world wide web.

Pic. Nr. 22: *A concert zither built by Max Amberger's firm*
Photo: Ludwig Gruber (Courtesy of Ludwig Gruber)

In today's market, there are concert zithers with two different tuning patterns. In Bavarian regions, mainly the Munich variant (based on Weigel's blueprint) is wide-spread, while in Austria the Vienna-type is more popular. The ones using the Munich arrangement has melody strings getting lower by following the order a^1, a^1, d^1, g and c (A4 A4 D4 G3 C3). The Vienna pattern was introduced by virtuoso Carl J. F. Umlauf (1824–1902).[38] An interesting feature of this arrangement is that the melody strings do not get lower in a gradual way. Following the general order a^1, d^1, g^1, g and c (A4 D4 G4 G3 C3), the third string is tuned higher than the second, specifically to g^1. The reason for that is that this pattern makes it easier to play songs typical of *Steyr*-Land District. This is where another name of the Vienna-type concert zither (*Steyr* zither)

[38] Klier 1956: 90.

comes from. Lengths of score representing the tuning of Viennese concert zithers are shown in Pic. Nr. 23.

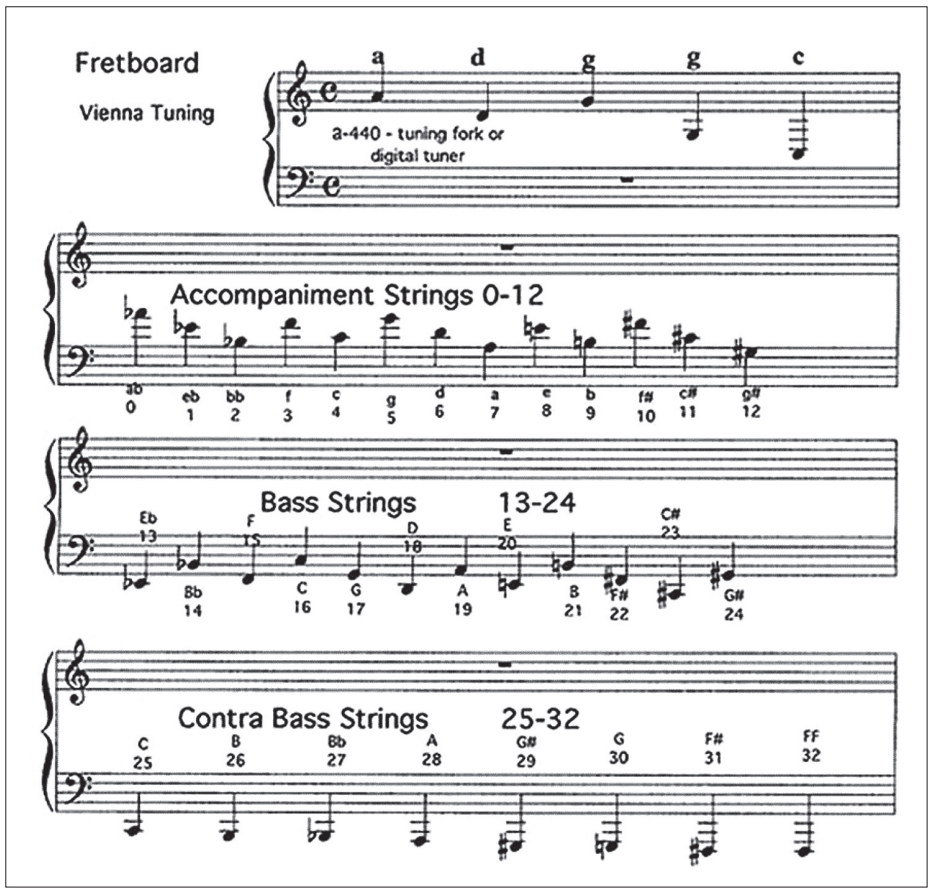
Guest strings are arranged into three groups. The first group (12 +1 in number) is actually called "guest strings." The second group has twelve bass strings, while the third is that of the contrabass strings. Retaining the circle-of-the-fifths-determined order of the guest strings according to Weigel, some of those strings are tuned higher on the Viennese variant than the Munich one. Therefore, the former typically emits a more silvery, tinkling sound that the latter.

Ronald Cook operates an instrument repair studio in Santa Cruz, California. In particular, he specializes in repairing damaged concert zithers and chord zithers made in the late 19th and early 20th centuries. He publishes the steps of repairing such a well-known zither (dismantling, strengthening the frame, gluing, painting, stringing) in the form of a booklet illustrated with photographs and also posted on the Internet. In 2006, a Connecticut resident named Dick Husta refurbished his concert zither. On the last pages of his booklet published about this repair, he presents the sheet music for both the Munich and Vienna tunings.

The concert zither became wildly popular in the U.S.A. too. Emigrating to the New World in several waves, Germans packed in their luggage *Scheitholt*s in the 18th century and concert zithers in the late 19th century. Similarly to the European scene, more and more zither clubs were established in the States. The concert zither came into vogue at the turn of the 20th century in many American homes as the salon instrument of choice. Those years witnessed a lot of European (mainly German or Austrian) zither players launch instrument-building shops or get involved in the business of U.S. manufacturers. Numerous zither clubs were founded to satisfy people's need for community music making. A photo (Pic. Nr. 24) of the Buffalo Zither Club shows eleven concert zithers of various shapes in addition to other instruments (violin, cello, guitar and accordion). The founder, as in the case of many other clubs, was a German immigrant.

The two-century historical development of the Alpine zither detailed above became part of the German and Austrian folklore movements of this period. For this reason, the Alpine and concert or *Styrian* zither, rooted in Bavarian, Tyrolean and Austrian folk music, and developing together with it, was strongly linked to German culture and became an important musical expression of national identity.[39]

[39] Huber 2015: 28–35; Haid n.d.: 14–17; Eichner 2012.



Pic. Nr. 23: *The tuning of Viennese concert zithers*
Source: Cook 2006: 21.

The concert zither rose in international fame and popularity again when the 1949 English movie *The Third Man* hit the theaters. Based on a Graham Greene novel, starring Orson Welles and set in Vienna, the picture is best known for its original score which is exclusively provided by Viennese zither player Anton Karas.[40]

With the appearance of the *Schlagzither* and concert zither, the instrument left behind the domain characteristic of the sound effects of its other bordun-based counterparts (bagpipes, hurdy-gurdy and *Hummel*). With regard to the novel musical experience stemming from its structure and playing style, the

[40] Karas 1949.

concert zither is a far cry from the traditional *Scheitholt* or *Hummel.* All in all, the concert zither's sound is closest to that of the harp. No wonder it is often called table harp.

Pic. Nr. 24: *The Buffalo Zither Club in the U.S.A in 1917*
The club was founded by Josef Mayerhofer (sitting in the first row, right), born in Dingolfingenm, Lower Bavaria.
Source: Anna Mayerhofer.
Zither US. https://www.zither.us/node/123

Besides numerous advantages, the transformation of the *Scheitholt* and *Hummel* into concert zither has had its drawbacks. The volume of the latter is much lower and it facilitates a narrower dynamics of playing style. The original function of the *Hummel,* among other things, used to be accompaniment to dances. By employing bordun strings, the high-pitched *Hummel* can provide a broad range of volume as well as decisive and dynamic rhythms to dance. The playing techniques of musicians using traditional instruments *(epinette des Vosges, Appalachian dulcimer, Hungarian zither)* are still in development. The advances provide them with opportunities to deftly compensate for the traditionally monotonous bordun accompaniment. This is especially true to the *Hungarian zither,* which enables musicians to generate novel and surprising musical effects.

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