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The Organ and its Relation to the Local Music Life in Czech historical lands

The terrain of the Czech historical lands (Bohemia, Moravia and Silesia) as a part of the central European space reflects one typical feature in its music historical research – the importance of sacred music life. Generally speaking, such formulation says nothing new. But the closer view of research reveals more interesting findings.

Till the end of the 19th century, the churches represented the ruling stage for almost all forms of sacred music. In this connection must to be posed a legitimate question: What was the most important, i.e. the most listened musical instrument in its performances? That was nothing but the organ, which represented the most used musical instrument in sacred music since the Middle Ages. In the earlier periods, not every church or chapel in the central Europe was equipped with an organ. In the 2nd half of the 17th century, it was only one of each four Bohemian and Moravian churches\(^1\). Nevertheless, the number of organs grew rapidly after the wars against the Turks during the Baroque and later periods; the Theresian, Josephinian and Caecilian sacred music reforms did not halt or decelerate this progressive trend at all.

Thanks to the latest results of the Czech music historiography and organology, we are informed quite well as to the question how the historical organs looked like. Nevertheless, those writings do not answer fully the question how the historical organs did sound like. Here we are at the roots of the matter.

In each time and place, the organ represented a powerful, influential and almost unsubstitutable part of the music reception and communication in the church. It has not been a passive component of such a process; the organ always forms a system com-

ponent with its feedback to the surrounding systems of music, especially to the music reception of listeners, i.e. of churchgoers and of the organist. Thus the organ itself becomes a part of a sophisticated system of relations (musical, psychological, social, aesthetical, liturgical, pedagogical and other ones). The quest for the music perception and reception of the organ and its role in the sacred music of the past periods can be answered on the two aspects only: a) detailed information of the organ’s construction, b) corresponding knowledge of its sound parameters. The second task – the recognizing of sound structure of the historical organs – is a hard nut to crack. Not only their remarkable scaling and voicing, but also predominantly their pitch level and type of temperament must be distinguished.

In this context, we must underline one special circumstance connected with no other music instrument but the organ – every organ stands for an individual, original masterpiece with its individual, unique sound, differing from all others. It was Christoph Wolff\(^2\), who confuted a previous idea of what was called the sound ideal of the organ as the expression of a given historical epoch. Wolff has proved that such an idea of the historical sound ideal is incorrect from the present-day point of view. The sound of the organ depends on many factors: the organ’s specification, the type of windchest and action, the pipe scaling and voicing, the acoustic character of the interior the instrument is standing in, etc. All these elements are rather significant; nevertheless, when stressing music reception of a keyboard instrument, the most essential is its tuning, especially the type of its tempering. In fact, this seemingly omissible, purely theoretical problem comprises important impacts to the fields of music psychology, education, sociology, aesthetics, organology, historiography, etc.

To this day many musicians and even musicologists have unknowingly (and wrongly) understood the compositions created before 1900 as music pieces always performed and tuned in equal temperament and, moreover, related to the present-day pitch of 440 Hz. But such views do correspond to historical objective facts not at all, especially in the case of organ and church music perfor-

mannances. Kerala Snyder\textsuperscript{3} claims rightfully, that it is just the tuning (temperament), what can serve as a music aesthetic mirror.

To understand relevant circumstances let us remind briefly the situation in 18\textsuperscript{th} and 19\textsuperscript{th} centuries. The earlier keyboard instrument makers had tried to come closer to the ideal of just, natural tuning. These tryings were not easy because of the existence of harmonic tones ( aliquots) and the well known problem of Pythagorean and syntonic commas. The way out led in two directions. The first was the raising of number of keys in the range of one keyboard octave, for example at the Vincetino’s archicembalo or at organs with subsemitones (split keys). Such solution is complicated from the point of view both of instrument makers and organists. In the Czech historic terrain, the only late, deformed heritage of such a development is the so called “broken octave”. The second solution is a tempering of a certain number of semitones in the range of one pure octave. The historical development has brought a number of various temperaments. They are usually classified as just, meantone, irregular and equal. Their chronological ranging to “Pythagorean tuning – meantone temperaments – irregular temperaments (the so called Wohltemperierung) – equal temperament” agrees in part only. From the beginning of the 18\textsuperscript{th} to the end of the 19\textsuperscript{th} century, the parallel existence of two or more types of them was quite common in many European countries and towns. The results of the newest research (by Lindley\textsuperscript{4}, Ratte\textsuperscript{5}, Meister\textsuperscript{6}, Ferroni\textsuperscript{7}, Asselin\textsuperscript{8} and others) confirm the fact, that the meantone temperament in some modified forms was employed deeply to the end of the 18\textsuperscript{th} century in Ger-

\textsuperscript{3}Kerala Snyder, The Organ as a Mirror of its Time, Oxford 2002.


\textsuperscript{7} <http://www.nicolaferroni.com/accorda/altri.php>

\textsuperscript{8}Pierre-Yves Asselin, Musique et temperament, Paris 1985.
many and France and even in the 19th century in Italy and the Habsburg Austria. The irregular temperaments (wohltemperierte Stimmung) used to be quite common during all the 18th century and survived even up to the end of the 19th century in spite of introducing of equal temperament. In the field of church music of central Europe, the main role was played by the Caecilian reform. In its consequences, this movement finally swept out all previous methods of tuning and contributed strongly to the general use of equal temperament for a long time.

The fact that the organ used to be the most listened-in instrument of church music in Czech historical lands, leads us to another question. How is the sound of the organ perceived and which factors can influence its reception? The organ is capable of uncommon range of sound options, especially as to its dynamics and tone colours. Its construction (especially by an instrument built in the Baroque period with its specification, scaling, voicing and tuning) has enabled to change intentionally various acoustic parameters during the performance (especially the structure of harmonic tones as a part of the resulting sound) with the help of registration, articulation, etc. Although the final goal of such an effort lies in the field of music aesthetics, the ground of this process is a part of the perception itself. At this point must be reminded once again the above said fact of individuality of every organ. That leads to a conclusion that also perception and reception of an individual organ differs from other ones according to their specific construction and sound. The real share of harmonics becomes always the pivotal criterion of the resulting organ sound; in this way, it predetermines the listener’s perception and reception.

These considerations are supported by the newest research in neuropsychology. It seems that the real, concrete organ sound (with its specific structure and share of harmonics given by the specification and the type of temperament) determines the course and the result of the neuropsychological process of music perception with its direct influence on the function and even shaping of
brain. Scientists (as Elbert\textsuperscript{9}, Pantev\textsuperscript{10}, Woody\textsuperscript{11} and others) have found out that the groups of neurons, called tonotopic maps, and their activity in the brain of a musician, are formed and changed according to what type of musical instrument the experimental person had practised. The research has confirmed the structure of harmonic (aliquot) tones as the decisive component. This information seems to be important in the case of the organ with its greatest richness of harmonics. At our disposal is already the result of one experiment, where the auditory perceptions of various musicians including organists were tested. David Brennan and Cate Stevens\textsuperscript{12} too did the experiment, using the tool of octave illusion. As they write, the results contrasted pipe organists with other instrumentalists. As hypothesized, participants experienced in playing pipe organ – an instrument with harmonic and spatial features similar to those of the octave illusion – were more likely to listen analytically and to perceive the stimulus veridically.

Such abilities must be supposed for the organists of the past periods too. But not only organists – to a certain amount, it had to hold true for other musicians and their listeners too. Besides the organ construction, the most important circumstance in such a process was the type of the organ tuning (temperament). If an organist played only one organ for a long time, his brain and


\textsuperscript{12}David Brennan/Cate Stevens, Specialist musical training and the octave illusion: analytical listening and veridical perception by pipe organists, in: Acta Psychologica 109, 2002 Mar.
the way of perception were literally formed and shaped by that instrument and its sound. All his aesthetical evaluation of music came largely on that score. In practical life, such an assumption could bring interesting consequences. For example, if an organist in the 18th century played and listened to only the organ tuned in meantone, his perception, reception and evaluation of organ and church music must have been different from another organist living in another town or village and playing only the organ tuned e.g. in Werckmeister Temperament. To a certain extent, the same conclusion can also be related to all the listeners, i.e. parishioners forming a small social group with the same way of music reception and its evaluation. And this is the aspirated deduction we want to come to. To understand properly the development and state of sacred music of any locality and parish, we must entertain all the knowledge of the local organ, its construction, tuning etc.

Being equipped with all that information, let us throw a glance at the situation in the Czech lands before 1900. Similar to neighbouring countries, the last three decades of the 19th century were the time of stormy struggles and changes in the sacred music. The first steps of the Caecilian Reform in the seventies brought confusion among both old-fashioned clergy and laymen. One of the Moravian leading reformers, Pavel Křížkovský, noted down the following words addressed to members of the Olomouc chapter: “The Reverends do not like numerous things; many of them wish the comeback of the times of thunderous fanfares, strident fugues and plaintive sugary melodies of bunglers.”13 The forthcoming changes affected the sacred music life very deeply, disrupting its long-standing system of aesthetical, sociological, performing, provisional, compositional etc. spheres and functions. Helmut Loos14 speaks legitimately about the sudden discontinuance of previous close relation between the church musician (regens chori or organist) and people of his parish.

The ideas and instructions of the Caecilian Reform influenced also the organ very substantially. On one hand side, the role of

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13 Karel Eichler, Pavel Křížkovský, Brno 1904, p. 59.
the organ in the sacred music was preferred and promoted. But, on the other hand, the organ’s function (and consequently its construction and sound) was predetermined and limited with a severe rigidness. Such strictness brought an immediate reaction of organ building: from now on, the organ has been classified by the Bohemian organists and organ builders into two types – as church ones and concert ones\textsuperscript{15}. In fact, it was nothing but a way, how to outwit the strict Caecilian instructions – in the churches were built both types.

By the Caecilian Reform (called also “cyrilism” in Bohemia) the organ became the most important and, actually, the only music instrument in the organ loft. In fact, the prescribed functions required quite a new type of organ and its sound. The domestic organ builders were not able to meet such a demand before 1870; only then the old workshops with handicap were replaced by modern organ building factories. This fact supports the following hypothesis. The first attempts to reform the sacred music are dating back to the beginning of the 19\textsuperscript{th} century, but the real outburst of the Caecilian Reform was enabled only in the connection with that important change of character of organ building production in the eighties and nineties. That, once again, underlines the importance of the organ in the sacred music history.

How did the Czech organs look and sound like in the seventies, when the first Caecilian Reform efforts came to that area? Briefly said, they were very conservative. There were many old Baroque instruments still in use. The newly built organs came out of the same tradition. Their specifications copied the Baroque style in the full pyramid of principal voices from 8-feet voices to relatively high Mixtures. The variety of flute and string stops was strongly restricted; the reed stops represented a unique exception. Till 1870 the manual and pedal range of most organs was limited by the so called short octave; the pedal range comprised mostly twelve tones only. In short, the domestic organ building did not adopt the principal features of the European romantic organ building at all. Only after 1880 some romantic trends appeared being nevertheless strongly predetermined, formed and restricted by the puristic

\textsuperscript{15}Karel Knittl, O francouzských skladbách pro varhany [On the French Organ Compositions], in: Dalibor X/10, 1889, p. 77.
demands of caecilianism. That is the ground casting doubt upon the use of the term “romantic” with the 19th century Bohemian, Moravian and Silesian organ building.

The use of the short octave (missing semitones C sharp, D sharp, F sharp and G sharp in great octave) is likely for the saving of expensive pipe material. But at the same time, it must be seen as a significant evidence for application of some type of unequal tuning. Though the new research appears at its beginning, it already confirms the occurrence of irregular temperaments of Kirnberger type in Bohemia and Moravia up to the beginning of the Caecilian Reform. The demand of the Caecilianists (formulated e.g. by František Z. Skuhrs ký in 1876) to substitute the short octave with the full chromatic compass entailed then the general introduction of equal temperament to the home organ building and sacred music itself.

Such efforts met a resistance among both clergy and organists mostly in provincial parishes. For example, Johann Kubiček, the prelate in České Budějovice, advocates the existence of the short octave even in 1881. On the other hand, the Reform was strongly supported by organ building firms. It was a good business for them – the Caecilianism was bringing numerous commissions for new instruments and retuning and possibly rebuilding of the rest of organs in the country for decades. At this point the important circumstance should be stressed once again: there were the organ builders who helped substantially to introduce the Caecilian Reform in the Czech historical lands. And once again, this fact underlines the influence of the organ in the development of the sacred music.

Adopting new Caecilian hymn books in the provincial parishes lasted for a long time. For example, in the region of south-eastern Moravia, the new songs from the Caecilian hymnal by Holain (published 1887) were sung not before 1900. In such places also the rebuilding of the organ took place after that year.

It would be possible to list various examples of the influence of the organ on the local church music life. Being well informed on the causes, we can introduce some information on the organ in the

\[16\] Johann Kubiček, Wie viele Manual- und wie viele Pedaltasten müssen an alle Kirchenorgeln angebracht worden [...], author’s publication 1881.
church of St. Jacob in Telč. The instrument comprising 23 stops in two manuals and pedal was built in 1725 by Václav Pantoček from the nearby town of Dačice. There is no evidence about its original tuning; however, the year of its origin and a provincial character of the organ building workshop assure us about some modification of meantone as the most probable option. We know positively (from the sources) that the first retuning of this organ was made by Johann Herden not before 1790. The workshop of this organ builder was in Jihlava, but he himself had come from Silesia. The Silesian organbuilding of that time used various types of irregular temperaments; so Herden is supposed to change the meantone tuning to some “Wohltemperierung”. His work cost only 80 florins; so he was likely to choose the easiest and the quickest way of retuning – it was the choice of the temperament called Werckmeister III in these days. The next organ builder, who repaired the organ for 200 florins, was František Svůt in 1834. The paid-out sum of money is high enough to cover the retuning too. It is probable, that the supposed Werckmeister tuning was almost unapplicable in that time. František Svůt is known to use his own modification of Kirnberger temperament; for that reason, we can expect him to retune the Telč organ in this way too. After that adaptation, the organ could meet well all the needs of local sacred music including the favourite orchestral masses. That is why Jan Kypta, the school master, organist and music composer, admired the organ when he came to Telč in 1848. The Moravian topographer Gregor Wolny described the instrument in 1861 as follows: “Orgel von 23 Registern, die weit und breit als die beste gilt.” Those words of appraisal refer to an instrument with the short octave and twelve-


\[18\] Kirchenrechnungen St. Jakob Telč, Kreisarchiv Jihlava.

\[19\] Ibid.


\[21\] Jana Deník, Kypty [The Diary of Jan Kypta], Praha 1940, p. 103.

tone pedal (!). Before 1880 the organ was thoroughly repaired; the details are not described. The music repertoire of that time suggests the continuing tradition of orchestral masses with no need to retune the organ. The situation changed in 1905, when Bohumír Pokorný, the pupil of Leoš Janáček and the follower of the Caecilian Reform, was appointed to regens chori and organist in Telč\textsuperscript{23}. Only two years later, 1907, the organbuilder Tuček retuned the organ again\textsuperscript{24}, positively to the equal temperament. The instrument, anyway, left unchanged with its limited tone compass and Baroque specification.

All that information makes an evidence of the effect which the organ in Telč had on the local musicians and parishioners. On the contrary to other cases, this instrument was good enough to satisfy the musical and liturgical needs for centuries. The sound of organ influenced and formed its listeners (in musical, aesthetical, sociological and psychological sense) so much, that they were persuaded about its qualities and did not want anything different or new. Even the Janáček’s pupil Bohumír Pokorný respected the local tradition and did not ask instrument’s rebuilding after the Caecilian instructions and needs.

All that information confirms the deep-seated relation among the organ and its listeners in the church. That connection is closer than it has been thought. But such an impact with all its relations works even on the microstructural level: one, individual organ and its sound in a certain church or chapel codetermines the resulting features of local music life, music aesthetical values of organist and listeners, etc. When dealing with the themes of sacred music and its history, we should take in account such a conclusion too. It can help us to understand it better.

\textsuperscript{23}Československý hudební slovník [The Czechoslovak Dictionary of Music], t. 2, Praha 1965, p. 331.
\textsuperscript{24}Pfarrchronik 1823–1962, Pfarrarchiv Telč.