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HARMONICA "CHROMA" IN THE MUSICAL CULTURE OF UKRAINE AND RUSSIA: HISTORICAL AND ORGANOLOGICAL ASPECTS

The purpose of this article. The research is focused on the analysis of historical facts of the origin, distribution and acoustic-technological modernization of two-row hand harmonics ("chrome") in Ukraine and Russia. **The methodology of the study** is to apply comparative, aesthetic-cultural, historical methods, which form a single methodological basis. This methodological approach allows us to disclose and analyze the organological properties of the named harmonic in the course of historical modernization. **The scientific novelty of the work** is to broaden the notion of a national variety of hand harmonics and its role in musical art. **The terminological, historical-factual and specific organological parameters** of this type of instrumentalism are specified. **Conclusions.** Understanding the historical path of modernization of one of the most popular tools in folklore and urban amateur and professional music making gives a new starting point in the perception of this type of creative expression as a specific nationally painted artistic and musical-instrumental phenomenon.

Keywords: harmonic, hand harmonica, harmonica-chrome, organology, musical instrument modernization, slipping tongue.

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Гармоніка «хромка» в музичній культурі України та Росії: історичний та органологічний аспекти.

Мета роботи. Дослідження пов'язане з аналізом історичних фактів виникнення, розповсюдження та акустично-технологічної модернізації дворянної ручної гармоніки («хромки») в Україні та Росії. **Методологія дослідження** полягає в застосуванні компаративного, естетико-культурологічного, історичного методів, які утворюють єдину методологічну основу. Зазначений методологічний підхід дозволяє розкрити та піддати аналізу органологічні властивості названої гармоніки в ході історичної модернізації. **Наукова новизна** роботи полягає в розширенні уявлень про національний різновид ручної гармоніки та її ролі у музичному мистецтві. Уточнюються термінологічні, історико-фактичні та специфічно органологічні параметри вказаного виду інструменталізму. **Висновки.** Осмислення історичного шляху модернізації одного з найрозповсюдженіших у фольклорному та міському любительському і професійному музикуванні інструменту дає нову точку відліку у сприйнятті цього виду творчого самовираження як специфічного національно окрашеного артистично-ігрового та музично-інструментального феномену.

Ключові слова: гармоніка, ручна гармоніка, гармоніка-хромка, органологія, модернізація музичного інструмента, проскакуючий язичок.

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Цель работы. Исследование обращено к анализу исторических фактов возникновения, распространения и акустически-технологической модернизации двухрядной ручной гармоника («хромки») в Украине и России. **Методология исследования** заключается в применении сравнительного, эстетико-культурологического, исторического методов, которые образуют единую методологическую основу. Указанный методологический подход позволяет раскрыть и подвергнуть анализу органологические свойства названной гармоника в ходе исторической модернизации. **Научная новизна** работы заключается в расширении представлений о национальной разновидности ручной гармоника и ее роли в музыкальном искусстве. Уточняются терминологические, историко-фактические и специфические органологические параметры указанного вида инструментализма. **Выводы.** Осмысление исторического пути модернизации одного из самых распространенных в фольклорном и городском любительском и профессиональном музицировании инструмента дает новую точку отсчета в восприятии этого вида творческого самовыражения как специфического национально окрашенного артистически игрового и музыкально-инструментального феномена.

Ключевые слова: гармоника, ручная гармоника, гармоника-хромка, органология, модернизация музыкального инструмента, проскакивающий язычок.

Relevance of research topic. The current process of globalization, a certain universalization of national traditions, urbanization, technological progress, capable of substituting national features with a single technogenic and urbanization culture, is causing actualization of interest (including in the young segment of the population) in national cultural

traditions, in particular, musical-instrumental ones. It is enough to remind, that in October 2003, UNESCO adopted a convention on the protection of the intangible cultural heritage [1, p. 4], which refers to the need to preserve both cultural objects and traditions, customs and folklore. Khromka two-rowed garmon, that once significantly influenced Ukrainian and Russian national cultural traditions, is now undergoing a certain renaissance of its existence. So the reference to the characteristics of its historical path and instrumental-modernizing principles is an actual layer of musicology and musical-organological research.

Purpose of the work is to determine the basic historical-factual and organological parameters of two-rowed garmon (Khromka) as the embodiment of a fundamentally new, perspective means of sound production.

Statement of main material. Most of musical instruments that have subsequently become academic have passed through a “thorny path” from primitive (artisanal) incarnation to the highest professional actualization – concert. Such an evolution, as in the aspect of organology (instrumental structure, features and details of its structure, subsequent modernization of the design of aggregates and elements), and in its repertoire component (“oral tradition”, “as heard” performance, “from the hand” performance, creation of translations of original repertoire of professional composers by musicians), and the Khromka garmon – a two-rowed hand garmon. Moreover, both of these directions in ontogenesis are interconnected and closely intertwined.

Garmon, as a tool being popular among the people and quite widespread, as a common participant in many household events (folk holidays and celebrations, social events, various family celebrations), has become a frequent guest at various academic concert venues not so long ago. Accordingly, the goals and methods of their achievements in various spheres of life – amateur, folk and concert, and professional – set different tasks, both in the selection (in the first case) and the creation (in the second one) of the repertoire, and necessary for solving these various tasks, tools. But before we proceed to the very analysis of the evolution of the subject of our study, perhaps the most widespread, both geographically and quantitatively (the work is about the Slavic space) types of harmonics – Khromka garmons, it is necessary to clarify the term “garmon”.

N. Rosenfeld and M. Ivanov give the following definition: “hand garmon – reed keyboard-pneumatic musical instruments, a class of harmonics” [4]. The sound in such instruments is received by way of reeds (voices) freely slipping through planks openings

impacted air jet which is manually pushed with the help of bellows. A. Mirek calls garmons “all musical instruments, the sound of which is made by a metal freely slipping reed (voice), which fluctuates under the action of an air jet” [3, 5], in manual garmon the air is fed with a hand bellows. Perhaps the most precise and the most comprehensive definition of the term “garmon” is made by academician M. Ya. Imhanytskyi, on whose works, among other scholars, on our study will be based: “Garmons are the instruments in which the sound source is the metal reed (voice) that slips in the opening of metal plank under the influence of air jet. It is advisable to classify such instruments as a special complex instrument type – idiophones” [2, 27]. Most hand-held garmons have right and left keyboards located on two half-hulls of the instrument with bellows between them.

It is known that the predecessor of the present garmons (including garmons with the chromatic scale) in the aspect of sound formation was the Chinese Sheng [4, 4], in which sound production was achieved by means of oscillations of a freely moving reed, interrupted by a stream of air directed at it. Accordingly, the flow of air to a particular sonorous element (the reed) and to adjust the time of the feed itself and its intensity, is possible as directly by the source of this air stream (lungs, bellows, etc.), so with the help of fingers (buttons, keyboard), as well combined. This fact is fundamental in the classification of types of garmons – labial without keyboard, labial with keyboard (harmonica-flute, chords, melodica, accordions, etc.) and bellow with keyboard (pump organ and its varieties, concertina, bandoneon, garmon, bayan, accordion etc.) [3].

In musical instrumental organology, the idea of the affinity of garmon and organs is widespread. Indeed, some part of the organ pipes (few ones and optional) is reed, that is, the sound is produced as a result of the fluctuation of metal reed placed in a special hull, on which mounted a mouthpiece amplifying and ennobling the sound; timbre of the reed voice is determined mostly by form of the mouthpiece. But the most, the main part of the organ’s pipes is the labial device, where the air column in the upper part of the tube is excited by a tape air jet, creating uniform periodic oscillations of the air pillar in the body, which extend from the core to the upper edge of the pipe (mouth), this is the so-called beating reed. Consequently, in our opinion, the affinity is partial and generally absent, if the organ does not have a group of reed pipes.

It is the appearance of slipping reeds in one of the varieties of a portable organ (positive organ) – bibel-harmonic (a close relative of the bibel-regal, in case of bible-regal, the reeds

beat, but the first harmonics inherited bellow and piano keyboard from them) is, on our view, the starting point in the birth of a completely independent type of instruments – garmon. In connection with the foregoing, it will be appropriate to mention the author of the invention (application of the slipping reed instead of beating in portable organs) – the Danish organist and organ master of Czech origin F. Kirshnik (1720-1799). It was he who, having arrived in Russia in the early 1870's, began to manufacture (in small volumes, under order) the aforementioned positive organs (bible-regalias) with slipping reeds and subsequently produced the first garmon, showing it in the House of Leon in the Engelhardt Palace on the Vasilyevsky Island in St. Petersburg.

Thus, we can surely state, following the researcher of the harmonics A. Mirek, that the first hand harmonics appeared in the Russian Empire, at least, 40 years earlier (1780) than the general date (1822, when the manual harmonic was patented by H. F. L. Bushman).

One of the prominent supporters of the new invention was the German organist, composer G. Y. Vogler (1749-1814), who was in St. Petersburg at the same time. While touring Europe a lot, he became the popularizer of F. Kirshnik's ideas (introduction of slipping tongues instead of those who beat and the manufacture of harmonics), and with its help the novelty began to spread in Europe.

Appearance of direct ancestors of Khromka garmon – the garmon of the German system, and then the Viennese harmony on the territory of then Russian Empire, was due to the merchant firms of Y. Zimmermann and A. Muller, whose manufactories and stores began to appear in the state since 1876, first in St. Petersburg and then in Moscow (1882). The German two-rowed garmons had a diatonic pitch (Khromka garmon, in fact, has a diatonic pitch too, only with the addition of several altered (chromatic) sounds) and were more widely distributed in the territory of current Ukraine, the Baltic states and partly in Siberia. They had, as a rule, 17-19 buttons in the right keyboard, allocated in two rows, and 4 buttons in the left, located on the side-mounted neck, as well in two rows. At the end of the XIX century, a two-rowed garmon created in Vienna appeared in Russia, with the difference that had in its left hand already 8 buttons in two rows (4 in row), at this time located not on the side-mounted neck, but on the body itself.

Approximately at the same time, garmons with the Russian system began to be manufactured in Russia, that became more widely spread in the regions of Central Russia. The difference between the two and the other system lies only in the opposite movement of the

bellow. “Sounds that are received on Russian type garmon upon depressing the bellow, are extracted on German type garmon upon pressing and, conversely, the sounds received on Russian type garmon upon compressing the bellow, are received on German type garmon upon depressing” [5, 3].

Khromka garmon (originally called “Severinanka” (“Northerner”)) appeared in 1870 in Tula by way of further modernization of Viennese garmon under the plan of M. Bieloborodov (1828-1912). At the neck of the right half-hull it initially had 7 buttons (seven-valved). The voice bars have been modified so that the garmon during the pressing and depressing of the bellow began to produce the same sound (unlike the German and Viennese garmons). Its further improvement has led to the fact that the number of buttons began to increase (the oldest of the samples of Khromka we found had already two rows of buttons with the scheme $(11 + 10) \times (6 + 6)$ for a wider use the entire range of sound) in the right and in the left keyboards.

Its sound, as before, was diatonic (in a certain tone, for example, in C major). But to extend the circle of tones in the bottom of its right keyboard two or three chromatic sounds were added, at the top the diatonic scale began to expand, the number of buttons in the right and left keypad began to grow, and as a result in the last decades in the Khromkas the standard 25×25 appeared: 25 buttons on the right and 25 in the left (Khromkas may be are “serial” or “irregular” – on the left side the irregular Khromkas has not three, but two rows of buttons – there is no auxiliary row).

One may surely state that the beginning of the mass production of harmonics (including Khromkas) began in Tula. Soon, after the former Tula province production of harmonics began to intensively occur in Orlov and Vyatka gubernias, and then in other parts of the middle zone of Russia – Yaroslavl, Smolensk, Tver, Nizhny Novgorod, Novgorod and Perm gubernias. Rapid growth of garmon production in the last quarter of the XIX century was directly related to the rapid industrial development.

Initially, manufacturers were, as a rule, small handicraft manufactures, located both in the cities themselves and in the provinces, mostly with the predominance of manual labor. Part of the manufactures made only certain parts and aggregates (bellows, voice planks, hulls, etc.), which came to workshops, focused mainly on the assembly. Voice planks with hardened reeds were sometimes purchased from abroad (mainly from Italy). Thus, by the end of the XIX - the beginning of the XX century, harmonica industry in the Russian Empire had already become of state scale.

Approximately in the same period, one of the first papers devoted to the analysis of harmonica production in Russia appeared: “Work of the Commission for the Study of Russian Handicraft Industry” (1881). This work provides a detailed description of the economic and technological basis of handicraft harmonica production in the Russian Empire during the specified period.

Simultaneously, during the second half of the XIX century repeated attempts were made to develop various harmonics performance techniques (more than 50) (including, on Khromka garmon), mainly with the digital system. After all, most fans of garmon of that period applied the methods “as hear” and “from the hand” to master their favourite instrument. However, despite such diversity, all these techniques were not self-taught, and, moreover, not professional schools. These were more attempts, designed for a wide range of fans. The digital method of recording the performance does not give a correct understanding of the rhythm, duration, and in no way could contribute to the achievement of high professional performing skills. Similarly, in most of the so-called “techniques” there was a violation of one of the basic postulates of any system of learning – from simple to complex – their selection of repertoire was of “chaotic” manner. However, nevertheless, certain benefits of occurrence of the above “techniques” were that they became a kind of impetus for the general population in the development of musical literacy. In parallel with the development of teaching techniques was the process of complication and expansion of repertoire, improvement of tools.

The first of the textbooks for Khromka that we found, but far not the very first one, dates back to 1925. It is “The Newest School Self-Teacher for Two-Rowed Diatonic Khromka Garmons and Half-Baya” by V. Razin. It shows the parameters of already four varieties of the tool, which differ from each other by the number of buttons on the right and especially in the left keyboard. Thus, since the late 20s of the XX century, performance (mostly amateur), as well as production of garmons (Khromkas) began to be massive. Creativity of harmonists of different generations made repeated attempts to “overcome” technical imperfection of musical instruments by performance means. Among amateur harmonists talents were distinguishable, the performing arts of which served as an stimulus to improve the instruments, teaching techniques and learning to play them.

By the beginning of the 1930s, Russian folklore traditions had the most widely presented two varieties of harmony – Russian two-rowed Videnka and Khromka. According to the musical-performance capabilities, both garmons were almost equivalent. However, it was much

more difficult to master Videnka, given the dependence of its sound on mastering the use of bellow. Therefore, in the industrial production of harmonics the advantage was given, of course, to the Khromka.

New factories for production of harmonics began to appear: 1928 – Ganinskaya, 1930 – Tula, 1933 – Veliky Ustyug, 1935 – Shuiskaya, 1938 – Vologda, etc.

Ukraine was represented by four factories (initially manufactyres and workshops) in production of keyboard instruments (harmonics, including khromkas, as well as bayans and accordions): Zhytomyr, Poltava, Kreminna and Horlivka.

Zhytomyr Music Factory was founded in 1936 on the basis of handicraft furniture workshops and exists nowadays. During the entire life of the factory, such garmon models (the most numerous model lines among the above-mentioned factories) were manufactured: “Marichka”, “Troienda”, “Veselka”, “Ukraina” and “Vesna”.

Kreminna Bayan Factory was founded in 1929 primarily as a workshop for the repair and manufacturing of bayans under incapable persons workshop. Later, in 1933, at a furniture factory a small area was facilitated where masters and their students began to make their own musical instruments on their own. Subsequently, the workshop began to expand and numbered up to 50 people. In 1934 a factory was founded on the basis of the workshop. Unfortunately, the factory does not exist today, as well as the two others – Horlivka and Poltava.

Horlivka Bayans and Garmons Factory, as well as Poltava Bayans Factory (Poltava Musical Instruments Factory, during the administrative reform of Khrushchev, “Poltava Bayans Factory under Kharkiv Regional Council”) were, respectively, in the cities of Horlivka, Donetsk region and Poltava. In particular, the “Vorskla” experimental model of the Poltava Factory is of interest (electronic - reed combined garmon)

Conclusions. Thus, the garmon, in particular Khromka garmon, revealed the actual cultural and musical positions in amateur and professional spheres. It was treated with great interest, it was widely promoted with the help of concert performances of accordion-soloists and the artisan-workshop and factory production industries worked actively. By the beginning of XX century, the constructive development of the national types of garmon was completed by the creation of the most perfect model of the diatonic species – a two-rowed garmon Khromka. The components of the holistic process of developing a garmon tradition in Russia and Ukraine have been the process of adapting the garmon to the unwritten musical system and the process of approximating the musical capabilities of the instrument to the European musical composing

culture. The specificity of the evolution and modernization of the instrument can be attributed to its “stretto” character. Understanding the historical path of modernization of one of the most widely used instruments in folk and urban amateur and professional musical instruments gives a new reference point in the perception of this kind of creative expression as a specific nationally featured artistic and musical instrumental phenomenon.

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Date of submission: 19.04.2017