

TREMOLO ON DOMRA AS A MEANS OF ARTISTIC EXPRESSION

SVITLANA BILOUSOVA¹

SUMMARY. The article is devoted to tremolo as one of the most important techniques of playing the domra using a plectrum. The article analyzes the use of tremolo in the practice of performing on various instruments – struck string, string, wind instruments, piano. Tremolo on domra in modern performance is considered in several aspects – as a way to lengthen the sound and a specific coloristic technique. At the same time, a new look at tremolo as a special unique means of artistic expression is offered. The research angle focuses on auditory problems in the process of technical implementation of tremolo and the use of tremolo intensity as a means of overcoming inertial mechanical movements and negative perception of uniform sound. Using the example of modern works for domra and mandolin by Oleg Bezborodko, Valery Ivko, Yasuo Kuwahara, Evgen Milka, Oleksandr Oliinyk, Boryslav Stronko, the main functions of tremolos and the problems of their performance specification are considered.

Keywords: sound formation on domra, tremolo on domra, intensity of tremolation, tremolo as a means of artistic expression.

1. Introduction

Modern struck string instrumental performance impresses with its diversity. Some of the instruments went beyond their national identity and gained worldwide fame and recognition (guitar and mandolin). Others have a long history, but they develop locally and are characteristic of the musical culture of certain countries. All of them were subjected to various historical

¹ *Ph.D, Associate Professor at the Department folks instruments the Tchaikovsky National Music Academy of Ukraine, E-mail: kolesniksv@ukr.net*



periods of neglect or popularity, prohibitions, destruction and flights. On their way from the tools of folk life, following the opportunities inherent in the tools and the general laws of development, they eventually outgrow the social functions imposed on them and reached the academic level of individual performance. Similar stages of development are inherent to domra, which has been common among the eastern Slavs since ancient times. In Ukraine, at the present stage, the domra exists in the form of a four-stringed instrument and belongs to struck string instruments that are played with a plectrum. Since the second half of the 20th century, thanks to the rapid growth and continuous improvement of the performing skills of domrist musicians, domra has been successfully developing as an academic instrument and occupies a worthy place in the musical culture of Ukraine.

We should mention one interesting pattern in the history of domra, which seems mysterious and incomprehensible. The growing popularity of the instrument and the professional skill of the domrists from time to time led to the discontent of the rulers – in Kievan Rus, with the adoption of Christianity, the domra migrated to the North, and later, in the 16th century, it was completely liquidated. Even in our time, despite the fact that the performance on domra, thanks to the efforts of outstanding figures of folk instrumental art, has reached an unprecedented flourishing, there is an opinion about the limited capabilities of domra in transmitting the nuances of the artistic content of a musical work. Accordingly, in addition to social ones, there should be some other reasons for inadequate perception of the aesthetic value and self-sufficiency of the instrument. These include, first of all, the use by domrists of a special technique of playing – tremolo, as a technological means of lengthening objectively rapidly fading sounds.

In the scientific research of domrists – the representatives of modern Ukrainian performing schools, the problems associated with mastering the tremolo technique are considered mainly from the perspective of perfection of technical implementation. However, recently this vector has significantly shifted to the plane of artistic tasks. The aesthetics of domra sound is considered in Natalia Kostenko's work "The modern theory and practice of domra performance in Ukraine"². The place of tremolo in the formation of the intonation culture of the domrist is determined in the work of Svitlana Bilousova "The intonation domra playing"³. A thorough work of recent years devoted to the expressive aspects of tremolo is the article by Oleksandr Oliinyk "Domra

² Kostenko, Natalia. *The modern theory and practice of domra performance in Ukraine*. Traditions and innovations in higher architectural and art education. 2, 2014, pp. 33-37.

³ Bilousova, Svitlana. *The intonation in domra playing*. Ukrainian culture: the past, modern, ways of development, vol. 28, 2018, pp. 171-177.

tremolo in terms of the performance techniques rhetorical context”⁴. Against the background of the search for new forms of utterance in modern music, an attempt to consider tremolo not as a way of sound formation, but, above all, as a unique means of artistic expression, the masterful possession of technical elements of which allows you to convey an infinite variety of mental states, is considered quite relevant for domra. The analysis of certain aspects, in particular the relationship between tremolo and articulation, was carried out by Svitlana Bilousova in the dissertation research “Donetsk school of domra’s performance: stages of development, methodological principles, regional component of repertoire”.⁵

2. Tremolo in general musical practice and tremolo on the domra

In most dictionaries, the term *tremolo* (from Italian) translates as trembling and represents a frequentative rapid repetition of one sound, interval, chord, as well as alternating two sounds located at a distance of at least a small third. Sometimes, the term *tremolando* is used as a synonym for tremolo. Often, tremolo is compared with vibrato (violin, vocal, wind) or referred to as a type of melisms. Technically, a tremolo can be formed with fingers (guitar), using an archet (violin), or using a plectrum (domra, mandolin).

Tremolo is performed on piano, strings, wind and percussion instruments, accordion, guitar, cymbals, bandura, and orchestra. A wide variety characterizes the tremolo on many solo instruments and serves to express *specific features* of states of the human spirit. In a high register, with a nuance of pianissimo, a violin sonority is fantastic, light, shimmering, and in a low one – mysterious, sometimes fateful. The Forte nuance reflects an unusually excited, flurried, and disturbing sound that creates a sense of expectation. The tremolo in the middle register is practically not used on the violin, except when it supports the solo in the piano part by filling in the harmony. On the piano, the tremolo is used in the bass – to lengthen the bass voice and emphasize its obstinateness in cases of significant dynamic growth. Tremolo (*frullato*) in flutes can be attributed to special effects that give the music a fantastic flavor. A kind of tremolo is used by trumpeters and

⁴ Oliinyk, Oleksandr. *Domra tremolo in terms of the performance techniques rhetoric context*. Bulletin of Kyiv National University of Culture and Arts. Series in Musical Art, (1), 2018, pp. 57-66.

⁵ Bilousova, Svitlana. *Donetsk school of domra’s performance: stages of development, methodological principles, regional component of repertoire* (PhD Dissertation). Kyiv. Tchaikovsky National Music Academy of Ukraine, 2021.

French horn players. The original, particularly colorful sonority is reproduced by windbag tremolo in accordion players. Always intriguing is the tremolo on guitar and bandura.

In a symphony orchestra, tremolando has the function of a specific means of artistic expression. The sound of the orchestral tremolo reflects a unique picturesque flavor and has an inexhaustible multiplicity of various shades that characterize the manifestation of extraordinary states of mind. All the above examples of using a tremolo allow us to interpret the nature of its sound as *unusual*. Thus, we can say that as a general musical means of artistic expression, the tremolo serves to reflect the extreme manifestations of states of the human soul, such as anxiety, expectation, tension.

On the other hand, on domra, the tremolo serves to convey all the elements inherent in music, including ones for the manifestations of the most subtle nuances of emotional experiences, which is sometimes perceived inadequately by the listener, moreover, it causes discomfort due to the subconscious sense of contradiction between the “sublime” in the figurative sphere and the “low” in the means of reproduction, as the essence of the conflict of the content and formative aspects of a single artistic process.

It becomes possible to understand the source of this discomfort in the process of considering the acoustic patterns of the tremolo phenomenon. Tremolo on the domra is formed in the process of alternating multidirectional hits⁶. Different rates of tremolation are perceived differently. Thus, when playing in the middle and high register at the number of 8-10 pulses per second and below, the tremolo looks like an alternation of single hits, not combining into a continuous movement. The rate above 18 sounds per second are irritating to the ear and physically unbearable to perceive. However, such movement intensity is not available to the domrist or is available to only a few for a fairly short period of time.

The most favorable impression has the rate of tremolation between 10 to 16 pulses per second. By the nature of the action, such a tremolo resembles a violin or vocal vibrato and is perceived as a natural phenomenon that does not interfere with the perception of the main musical idea. The time factor plays a significant role in the listener's perception of tremolo – at a certain moment, uniform tremolo suddenly becomes intrusive and annoying. Negative perception occurs as a subconscious reaction to the same pulsation frequency, to its monotony.

Unfortunately, in performing practice, domrists use a uniform tremolo, mostly not realizing that in their arsenal there is a special means of artistic expression – the intensity of tremolation or the ability to change the frequency

⁶ Recall that the main means of sound formation on the domra are plucking and hitting the plectrum on the string.

of tremolo in the process of presenting musical thought. The level of tremolation frequency should be different for each specific work, phrase, or combination of sounds, depending on the artistic content of the work. The intensity of tremolation resembles human breathing. The higher the rate of tremolation, the more excited, intense the sound, and vice versa – slowing down the hits causes calm. Changing the intensity of tremolation allows you to achieve the most subtle nuances in transmitting the most expressive colors of the emotional state. Mastering this technique, as one of the most complex elements of the domrist right hand technique, requires, in addition to long-term energy and physical strength, maximum strain on auditory abilities. At the same time, focusing on auditory representations allows avoiding excessive overexertion of the muscles of the hands, which leads to unpleasant sensations and even pain.

The technology of implementing tremolo is based on alternating phases of rhythmized and arbitrary tremolo. The specificity of the development of domrists' musical hearing is associated with the need to cultivate the ability to hear the organization of fast and rhythmically very complex sequences that make up the tremolo. However, we are not talking about the deliberate rhythmization of tremolation according to the binary principle, as well as the need to keep rhythmized structures in mind throughout the entire tremolation. The concept of hearing should be understood as conditioning the movements of the right hand with an auditory representation formed in the process of studying a musical work (the producing function of hearing).

The fundamental ability to evaluate rhythmized sequences in a specific time space is also important. Thus, the exit to a rhythmically conscious tremolo when performing a cantilena is necessary in all cases associated with changing the tremolo with single hits or plucks. The essence of the problem is the need to change the nature of tremolation from rhythmically unconscious to conscious at a certain moment, overcoming the inertial movement of the right hand.

It is advisable to use a rhythmic tremolo when replacing the cantilena episode with a motor one for a more confident, natural transition. Tremolo with a clear rhythmic pattern is also used in Mobile works of cantilena plan, the nature of which does not allow to completely exclude tremolation. The level of tremolo frequency, the ability to control the process of regulating the speed of movements of the plectrum demonstrates a qualitative characteristic of the professional training of the performer on the domra.

Domrist's work on sound is mainly reduced to working on the frequency of tremolation and working out the ability to change it in the least long periods of time and is one of the most complex processes on which the technical development of the performer is based. It should be noted that this process should be based on auditory representations, where the ear acts as

a controller of the musician's physical sensations. The performer compares the nature of the sound actually obtained on the instrument with the sound representation and the ear makes adjustments (correcting function of hearing).

Among other elements that determine the characteristic of domra sound, the following should be distinguished:

1. Quality of the instrument (first of all, its sonority and perfect tuning);
2. The quality of the plectrum;
3. The angle of inclination of the plectrum plane to the string and the ability to change it;
4. The angle of inclination of the plane of the plectrum to the plane of the soundboard (ideal is perpendicular one, which timbral balances the sounds that are extracted by hitting down and up);
5. Overcoming the inertial movement of the right hand;
6. Stationary position of the right hand on the fingerboard and its operation;
7. Depth of lowering of the plectrum in the strings;
8. The degree of pressing of the string with the fingers of the left hand and the coordination of micro-movements of both hands;
9. Ability to navigate in an acoustic environment.

When working on the sound, the domrist needs to develop the hearing ability to equalize the timbral coloring of fleeting sounds produced by moving down and up. At the same time, it should be borne in mind that the downstroke is stronger than the upstroke. After all, at downstroke, the weight of the hand helps to overcome the resistance of the string, and at upstroke, it prevents this.

During the alternation of hits in tremolation, the string must have time to make an oscillating movement in order to make it possible to sound overtones. Its colors and timbre depend on what overtones accompany the main sound. A sound lacking overtones is perceived as unpainted, dull, or empty. If the tremolation speed is too high, after hitting down, the string does not have time to use the oscillating energy set for it. The resulting vibrations are stopped by a reverse hit, which prevents partial tones from occurring. This leads to a loss of sound color and the tremolo is perceived as a whisper. At the same time, at a low speed of tremolation, each hit is perceived separately, because the string performs an oscillating movement and it has time to go out. Therefore, it is impossible to get a continuous pouring sound.

It is important to constantly maintain the state of vibration of the string, reproducing a single sound line, and this is achieved by the equivalence of downstrokes and upstrokes. To a sufficient extent, mastering special movements (supination-pronation) helps to achieve this. When the plectrum

hits downwards, the forearm does not move parallel to the soundboard, but at a certain angle with the hand tilted to the little finger (supination). To form an equivalent upstroke, it is necessary to perform a similar tilt of the forearm in the opposite direction (pronation). However, such movements in a thick tremor are almost impossible. In this case, the plectrum performs the function of leveling the tilt angles.

3. Functions tremolo on the domra

The technique (method) of playing tremolo on domra is used in all cases when the sound needs to be lengthened. After all, hitting and plucking with a plectrum are not able to provide a long-lasting sound. In a musical text, authors usually refer to episodes using tremolo. The need to use tremolo is determined by the tempo of the piece. Slow music requires melodiousness, so tremolo is the basis for performing the cantilena on domra.

It is traditionally believed that the embodiment of cantilena music on domra consists in performing legato extremely large melodic constructions using tremolo. However, it is worth remembering that the formation of correct articulatory thinking is facilitated by relying on the vocal nature of the melody with the indispensable presence of breathing as a natural limiter in the pronunciation of a musical phrase.

In this regard, it should be noted that the basis of the articulation technique is the mastery of all types of strokes using tremolo, primarily non-legato strokes. A tremolating sound has a beginning, lengthening, and ending. The variety of characteristics of various sounds involves the use of a certain type of attack. Tremolo can start with a soft, hard, and accentuated attack, as well as with continuous tremolo (*portato*). In the works of modern authors, there is a noticeable tendency to strive for clearer pronunciation. Legato is used sporadically, as a kind of means of artistic expression.

An interesting effect can be the simultaneous use of non-legato strokes with different types of attacks in the ensemble texture.

E. g. 1

Andante Maestoso

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The image shows a musical score for two mandolins, bars 212-215. The tempo is marked 'Andante Maestoso' and the dynamic is 'ff'. The score is in 3/4 time. The left instrument (mandolin 1) plays a tremolo accompaniment on the lower strings. The right instrument (mandolin 2) plays a melodic line in the upper strings, starting with a quarter note G4, followed by eighth notes A4 and B4, and then a series of chords and single notes in the lower register.

Yasuo Kuwahara. In the Fence for two mandolins. Bars 212-215.

The rich texture contains a raised melody in the part of the first mandolin with an obvious non-legate soft pronunciation. The movement of harmony accompanied by the upper voice in the part of the second mandolin is achieved by a continuous tremolo, with barely noticeable pressure, fixing the beginning of sounds. The physical properties of the sound, its lengthening and ending are formed with the help of the intensity of tremolation, which also depends on the ability of the performer to “lead” the sound. It is important to remember that the smallest modifications of the tremolo frequency in the middle of the sound (thinning), which create a unique musical effect, must obey the acoustic laws and properties of the sound and can only be based on a clear internal representation. The author in this episode does not indicate legato in the notes, but this polyphonic articulation pronunciation, together with a change in the speed of the tremolo, creates the illusion of singing a polyphonic orchestra.

It should be noted that the use of tremor intensity as a means of technical reproduction of the sound thinning mechanism and the measure in its application significantly affect the qualitative side of the performance. This is due to the aesthetics of perception of artistic images embodied with the help of tremolo. A sharp acceleration of the tremolo rate in the pile with an increase in dynamic stress and the subsequent uncontrolled attenuation and deceleration of the pulse frequency leads to a negative perception of the tremolo, which in nature resembles howling.

The tremolation technique is directly related to articulation through the reproduction of strokes. A complex element of articulatory technique can certainly be called the mechanism of pronunciation and implementation of various types of intonation combinations. Thus, the common rhythmic formula for performing two sounds that are in a choreographic ratio (♩) is applied in the form of a triplet (or other, quintuplet modification) on the first sound. The difficulty of mastering this formula by domrist is the need to adequately imagine an odd rhythmic grouping and perform it without focusing on the third note of the triplet. At the same time, the performer should be clearly aware of the polyrhythmic combination in their time sequence, since often the triplet of the above formula in the text of a musical work is decorated with a duplet pattern.

Considerable technical skill is required to reproduce episodes associated with the transition from dual thinking to triplet thinking.

E. g. 2

Oleksandr Oliinyk. «Sketch» for domra solo. Bars 39-44.

Uniformly pulsating constructions (39, 40) performed by hitting the plectrum on the string create an inertial motor sensation in domrist's right hand. The need to overcome it (41) is associated with solving complex psychophysiological problems. Often, the performer's thinking does not have time to adjust, thus resulting in a violation of the rhythm. Thus, the triplet group that forms the basis of the first sound of descending intonation (41) is performed at the speed of the previous duplet one. To correct this inaccuracy, it is important to remember that the error, first of all, should be sought not in the movements of the hands, but in the thinking of the musician.

The considered rhythmic formula, which implies relaxed polyrhythmic thinking, should be considered the basis for performing various odd groupings on the domra.

The use of tremolation intensity is mainly related to dynamics, and in some cases performs its functions. So, the dynamic domra scale in the upper register is somewhat limited, but when the dynamics reach the limit sonority, it becomes possible to achieve a more intense sound by increasing the speed of tremolation.

Given this, the attention must be paid to the technique of performing double notes, octaves, chords. The play of octaves and chords on the Fort provokes performers on the domra to increase the speed of tremolation, which is explained by the desire to better reflect the emotional side of the work.

E. g. 3

Oleg Besborodko «Shooting stars» for mandolin solo.

In the above fragment, the composer indicates the number of voices that require tremolation. At first glance, emotional arousal against the background of compaction of the texture, along with increased dynamics, requires a thicker tremolation. However, a tremolo on two or more strings leads to excessive muscle tension, painful sensations, and a heavy, strained sound. Therefore, it is more expedient in such cases to change the intensity of tremolation in the direction of slowing down.

As noted above, taking into account acoustic patterns in the use of dynamic resources in terms of changing the frequency of tremolation within a single sound allows you to level the irritating effect of tremolo. This is especially true when motor episodes in the musical substance are interspersed with tremolating and usually dynamically brighter sounds.

In the next work of the contemporary Ukrainian composer, the already mentioned trend of episodic use of tremolo is very clearly traced. The author deliberately uses the technique of playing as a means of artistic expression, and not a way of legate singing of a cantilena piece. Continuity is achieved in the process of intonation of the space between sounds, creating an energy wave in the time space between the actual (acoustic) sound. This saturation of the distance between sounds with meaningful energy eliminates the need for mandatory tremolation of all sounds.

E. g. 4

Boryslav Stronko. "Wicker" for two domras. II part "Chant", bars 61-66.

In the first bars of the "Descant" (61, 62) in the part of the first domra, the second beat is performed on a tremolo. It is worth choosing a soft sound attack and, at the same time, you should not use too thick tremolo so as not to weigh down the light song melody. In addition, ignoring the fact that

tremolated sounds stand out against the background of single hits can distort the metric structure of the melody. After all, the sounds playing the tremolo begin to be perceived as a heavy beat of tact.

It should also be noted that the ability to change the intensity of tremolation in the shortest period of time is based on the freedom to reproduce agogic vibrations within a musical work. Difficulties that arise when reproducing tempo or agogic deviations are caused by the need to be aware of the need to overcome the inertial movements of the right-hand during deceleration with subsequent acceleration and, conversely, subject to mandatory hearing control.

In the original works for domra of recent decades, the tremolo is mainly used as a powerful means of expression. Even in works of a cantilena nature, composers deliberately refuse to lengthen the sound at the expense of tremolo (E. g. 4) or use it as a manifestation of a certain character of intonation (E. g. 3).

It is possible to use tremolo rhythmization, which was mentioned earlier, to create certain effects, for example, to perform two voices. In the polyphonic texture on domra, this technique sounds organic and impressive.

E. g. 5

Allegro moderato

The musical score consists of two staves. The top staff begins at bar 58 and shows a melodic line with a tremolo effect, marked with *pp* and *sim.* The bottom staff starts at bar 60 and features a rhythmic accompaniment with sixteenth-note patterns and chords. The piece concludes with a final chord in bar 61.

Valery Ivko. Fugue for domra solo. Bars 58-61.

In this episode, a rhythmic tremolo is used to individualize each voice. Performing a melodic line and accompaniment on different strings gives the impression of a melody playing against a background of continuous sound. In this example, the tremolo acts as a kind of domra coloristic tool that can convey fragility and vulnerability in the mood. At the same time, in the motor movement of fugue, a tremolo of this kind acts as a general musical means of expression.

A similar effect is mentioned in the work of Tymur Ivannikov and Tetiana Filatova "Guitar creativity of Agustin Barrios in the context of the development of Paraguayan music"⁷. The technique used by A. Barrios in the

⁷ Ivannikov, Tymur and Filatova, Tetyana. *Guitar creativity of Agustin Barrios in the context of the Paraguayan music*. Scientific herald of Tchaikovsky National Music Academy of Ukraine, vol. 124, 2019, pp. 86-102.

work “The Last tremolo” is interpreted by the authors as a means of conveying the deepest feelings. The next piece for two domras also contains a clearly defined rhythm in the tremolo.

E. g. 6

Moderato con moto

Evgen Milka. Three Ukrainien song-ballades for two domras. I part.

Descending chromatic sequences in high register on *p* form an attractive, mysterious mood. This example demonstrates tremolo as a coloristic technique against the background of texture, performed exclusively by the plectrum hitting.

4. Conclusions

Thus, tremolo on domra should be considered one of the most powerful means of artistic expression. Unlike its use to enhance certain specific expressive effects in general musical practice, the domra tremolo is able to perform many purposes and artistic tasks.

It is necessary to distinguish several main functions of using tremolo in domra performance practice: the technique of playing to lengthen the sound; the basis for performing cantilena; a specific coloristic tool. For all the above functions, the use of the intensity of tremolation with awareness of the time factor of its use and a clear auditory representation of an arbitrary or rhythmized tremolo, depending on the artistic task, is outstanding. In all cases of tremolo rhythmization, the alternation of duplet and triplet tremolo organization should be used to produce the continuity of musical thought. Clear coordination of right and left hands movements and mandatory auditory control will help to avoid an arbitrary transition from one sound to another.

It should be noted the differences in the use of tremolo by composers of the 20th and 21st centuries. Domra music of the last century was characterized by the use of tremolo as the basis of the cantilena, where the function of lengthening the sound prevailed. In this aspect, tremolo should be considered as a means of implementing internal intonation combinations through the intonation mechanism, which accumulates interrelated means of artistic expression, such as: dynamics, articulation, agogics against the background of an autonomously existing musical time. But in the music of modern composers, there is an occasional use of tremolo, mainly as a specific coloristic tool. However, the use of tremolo is used by them to identify and influence dynamics, articulation, agogics, and through them, the intonation process is maintained.

This multi-layered use of domra tremolo, which can solve all technical and artistic problems and reveal the full range of musical content, makes it a special means of artistic expression and ensures the uniqueness of domra's sound aesthetics.

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