

REVIEW

by **Assoc. Prof Rada Borislavova Slavinska, PhD**

on dissertation work for awarding educational and scientific degree “Doctor”

in professional field 8.3. Music and Dance Art,

doctoral program Music Studies and Music Art.

Author: Peyo Trendafilov Peev

Title: *Gadulka – acoustic features and modern trends in its sound amplification*

Academic supervisor: Prof Todor Aleksandrov Kirov, PhD

General presentation of the procedure and the materials presented for review

By order № RD27 – 032 of 28.03.2023 of the Rector of AMDFA “Prof Asen Diamandiev” I have been appointed a member of the scientific jury to supervise a procedure for the defense of a dissertation work of Peyo Trendafilov Peev titled D *Gadulka – acoustic features and modern trends in its sound amplification*. The procedure is for obtaining educational and scientific degree “doctor” in Higher education field 8. Arts, Professional field 8.3 Music and dance art. The author of the dissertation is Nadezhda Petrova – free-studies doctoral student at the Department of Music Folklore, AMDFA “Prof Asen Diamandiev”. The candidate Peyo Peev has presented set of documents (on paper and on magnetic media) related to the procedure, as well as 2 publications (*The leading role of microphones in the sound recording of gadulka* and *The Gadulka on our Lands*) related to the topic of the dissertation under consideration. I have no objections to the presented documents and materials.

Brief biographical information about the candidate

We cannot but notice the extreme modesty and restraint of the doctoral candidate in listing his own achievements in his short thesis autobiography, which he presented in the documentation. I know Peev since way back in 1994, when he entered the Academy, as one of the most gifted and promising young gadulka players who have crossed the threshold of the Academy. Time has confirmed that the expectations for him have been met. For many years, Peyo Peev has proven himself as a member of the most elite group of folklore virtuoso-instrumentalists in Bulgaria. A graduate of the Kotel music school, immediately after completing Conducting of Folk Ensembles at the Academy of Music, Dance and Fine Art, he is noticed and recruited as gadulka player in the orchestra of Filip Kutev National Folklore Ensemble. Three years later, he is invited to the Folk Music Orchestra of the Bulgarian National Radio, where for more than two decades is band leader, soloist-orchestrator and arranger of a number of works performed by the orchestra. He is the winner of many awards for performance and arrangements from various competitions and is often sought after as a lecturer in international seminars and master classes in the country and abroad on performance and harmonization of Balkan music.

The virtuosity, the extraordinary sensuality and sense of the sound extraction of his performances, the perfect intonation purity, the dialectal response to the performed music, reaching the depths of authenticity and showing a deep knowledge of the roots of our instrumental music, the metrorhythmic freedom, the innovativeness of thinking, the ultimate flexibility to different styles and the reflection of modern trends in folk instrumental music, the freedom in ethno-transformations and the skillful stylistic interweaving of jazz elements define him as one of the most attractive, liked, respected in the guild instrumentalists.

It is no coincidence that his rich career as a performer includes recordings of more than 40 CDs with musicians from all over the world, more than 150 concerts with the world-famous Riverdance show, endless performances on the stages of almost all European countries, Israel, America, Japan, Hong Kong with different formations. His creativity is also evident in his numerous author's compositions, permanently embedded in the repertoire of several ensembles. Peyo Peev is the composer of the music for the performances *Click*, *Dance of the Wind*, *5x5+1*, dozens of arrangements for the Bulgarian National Radio. For seven years now, assistant professor Peev has been teaching the discipline Special instrument - gudulka at AMDFA Prof. Asen Diamandiev. With his wonderful results as a teacher and his impressive career as a performer and composer, he is an attractive factor for the young players to apply to the Academy and the Department of Musical Folklore.

Relevance of the topic

The dissertation work *Gadulka – acoustic features and modern trends in its sound amplification* covers an extremely relevant topic, which has not been considered until now in Bulgarian musicology, but which is problematic in the daily life of concert musicians. The contribution of the author is both in the relevance of the topic and in the fact that his deep knowledge of the problem comes not only from theory, or from the specific scientific challenge, but from the many years of experiments in this field, from a deep interest in the latest technologies and from synthesizing own and others' attempts to improve the sound of this relatively quiet, capricious and specific instrument.

Evaluation of the dissertation work

According to Peyo Peev himself, his dissertation does not claim to be completely comprehensive study of the subject, and in my opinion this is impossible, because modern sound amplifying and sound recording technology is in a continuous process of improvement and change. His scientific development is based on hundreds of experiments during rehearsal and concerts and in different acoustic conditions.

The theoretical part of the doctoral thesis consists of 107 pages, divided into an introduction, a theoretical overview, four chapters, a bibliographic reference covering 73 specialized publications and two appendices with visual and sound illustrations of different aspects of the study. In the literary

review, Peyo Peev proves the necessity of creating such a study - while in numerous works discuss "*mainly historical information about the appearance, distribution, traditional practices related to gadulka. The current state of the gadulka art is not their main topic...*" [p. 9] And as evidenced in the overall study, there are works that concern generally valid acoustic principles and situations, but do not discuss in detailed the gadulka, or works that give basic information and concepts necessary for the technical aspects of modern sound engineering, but without specific examples with this instrument. Peev's hypotheses rest on the interpretation and systematization of a large number of English-language publications on the types of microphones, their device and functionality, and on the practical use of this knowledge in his active concert and recording activity - experimentation that lasted almost three decades and was accompanied by the application of various approaches.

The first chapter gives a synthesized introduction to gadulka, its roots, distribution, use. A kind of conceptual emphasis in the chapter is the short third section, which further conditions the choice of the topic. Summarizing the modern development of the gadulka art, Peev finds that among the current conditions of stage realization is the desire for each performer to "*strives to build his own handwriting, his own sound and to be recognizable, to be relevant to the conditions and environment where he is placed, as this happens not only with his individual performing qualities, but also with the ways of voicing, with the use of microphones and effects*" [p. 25], thereby equating instrumental skills and skilful use of technical knowledge. This thesis is further discussed in the following chapters.

The second chapter Acoustic Features of the Gadulka deepens the theoretical section - from the generally valid acoustic features of the stringed instruments, through the specifics of the tone and frequency range of the frequency spectrum, resonator systems and the different vibration phases of the components, to the specifics of the acoustics of the gadulka. Knowing the acoustic norms in depth, Peev synthesizes some specific parameters, such as, for example, that "*the acoustic apparatus of the gadulka is a combination of two systems: a system for exciting mechanical vibrations in a string and a system for shaping the spectral composition of the vibrations*" [p. 34] and examines in detail the acoustic parameters of the different types of sound extraction in the gadulka and the role of the aliquot strings - something that is being done for the first time in Bulgarian musicology. The graphs visually illustrating the formant regions forming the specific timbre of the instrument clearly prove their position in the area of greatest sensitivity of human hearing and the research approach of the author - rigorously scientific and maximally rational. At the same time, for a quality performance "*it is of great importance to know the basic acoustic properties affecting the quality of the instrument in terms of concert activity, sound amplification and recording*" [p. 41]. Examining the acoustic features of the gadulka purposefully builds the structure of the dissertation to a kind of a climax.

The most unexplored "territory" in the theoretical part is concentrated in Chapter Three – Sound Recording and Amplification of Gadulka. Here, the vast experience, knowledge and thirty years of experimentation in all possible acoustic conditions receive their verbal systematization. This is combined with long-term follow-up of the improvement of the sound equipment, repeated attempts

and mastering of quality handling of it and its application in gadulka performance. As the author himself says: "*The purpose of this part of theoretical study is to systematize the modern sound recording technology on the basis of detailed consultations with sound engineers, my many years of practical experience and common sense, the continuous drawing of information from various modern sources. The recording process is delicate, professional and deeply aesthetic.*" [p. 42]. It is the pursuit of aesthetic sound perfection that underlies the overall concept of the dissertation.

Among the most significant achievements of this dissertation are the "concert experiments", illustrating in detail the theoretical concepts and hypotheses. Each deeply examined way of amplifying the gadulka in different acoustic situations is presented publicly in a series of concert performances - part of the artistic-creative doctoral studies - and follows the theme of the scientific-theoretical study.

The work is constructed logically and consistently, from the general to the specific, with the construction of a well-founded basis on which the innovative concept of the researcher is built. Peyo Peev combines the accumulated empirical knowledge with serious theoretical preparation, from which valuable and useful conclusions and generalizations follow for future researchers.

Contributions and significance of the thesis and the publications on the topic of the dissertation

Among the main contributions of the dissertation, several stand out:

- ❖ First, the work is the fruit of a magnificent performer and gadulka player, who knows practically and in the greatest detail the potential of the instrument, and this dissertation is really the quintessence of his knowledge, which increases its importance. It is also among the still few scientific studies of this folk instrument and the first written by a working performer.
- ❖ Second - every theoretical hypothesis, presented by synthesizing and systematizing the ways of sounding the Gadulka in various acoustic concert and recording situations, is proven in practice by means of concert performances – the so-called "artistic and creative experiments", which actually turns the dissertation into a "*the first theoretical-practical attempt to give guidelines for the sound recording of Gadulka - use of different types of microphones, different positioning in relation to them and different methods and techniques for the performer*" [p. 102].
- ❖ Third – for the first time in the music research literature, in addition to the sound capabilities and acoustic characteristics of Gadulka, there is an analysis of the electronic musical effects "filters", "reverberation", "echo", "sound delay", "modulation transformations", "switches of pitch", 'distortion', as well as their practical application in Gadulka performance.
- ❖ Fourth, but not least – this is the first attempt to scientifically investigate various aspects of Gadulka sound production such as sound shaping, acoustic properties, sound

propagation, positioning of the instrument in relation to recording and/ or sound equipment.

I believe that the dissertation work *Gadulka – acoustic features and modern trends in its sound amplification* will serve as a basis for future studies, as it has a significant contribution to the Bulgarian musicology and examines extremely relevant trends in the contemporary Gadula performing art.

Recommendations

I would recommend that this work be published so that many performers in Bulgaria - not only Gadulka players - can benefit from Peyo Peev's synthesized performance experience and his vast knowledge of the specifics and possibilities of modern training techniques, their application in different conditions, the selection of certain parameters according to the requirements of the concert performance or sound recording.

Abstract

The abstract of the dissertation work fully meets the requirements for layout and synthesis of the thesis within 52 pages, A5 format. All the contributing and important parts of the work are preserved in almost full volume or offered in a "compressed" form, which allows a full presentation of the various aspects of the research, as well as the active use of the abstract by those interested in the subject. His ability to synthesize the materials is another indicator of Peyo Peev's research qualities and his knowledge of the specifics of the subject.

Conclusion

The overall execution of the doctoral thesis shows that during his studies, the candidate has done a serious amount of research and artistic-creative work. The concerts used as direct examples are of a high level, and the theoretical study synthesizes a large amount of theoretical material. Original results and contributions to the Bulgarian musicology were obtained. The dissertation work shows that the author Peyo Peev possesses in-depth theoretical knowledge and professional skills in the scientific field of Musical Art by demonstrating qualities and skills of an independent scientific researcher. The reviewed work contains results that are contributions to science. The presented materials and results fully correspond to the specific requirements of the Faculty of Musical Folklore and Choreography, adopted in connection with the Regulations of the AMDFA for the application of the the Law on the development of the academic staff of Republic of Bulgaria. Due to the above, I confidently give my positive assessment of the scientific development presented in the dissertation work, the abstract, the achieved results and contributions, and I propose to the honourable scientific jury to award the educational and scientific degree "doctor" to assistant professor Peyo Peev in the field of higher education: 8. Arts; professional field 8.3 Music and Dance Art.

I congratulate Peyo Peev for the serious and thorough artistic, creative and scientific work. I also congratulate his academic supervisor Prof Todor Kirov for the successful mentoring and the achievement of the impressive final result.

22.05.202

Prepared by:

(Assoc. Prof Rada Slavinska)