**The Main Directions of Development of Artistic Technologies in Theater and Concert Activity of Modern Society**

The purpose of the work. The research is related to the search for new trends in the development of artistic technologies in theater and concert activities, which reflect the dynamics of the formation and transformation of sound design for the creation of an artistic image on the stage. The scientific novelty of this research consists in a unique material for studying and developing the cultural potential of Ukraine in favor of national interests in the conditions of internal social transformations, with defying its effectiveness, problems and further perspectives of cooperation in the theater sphere. The methodological basis of the study forms a comprehensive analysis of scientific and theoretical works, based on which a dialectical approach is combined with a synergetic paradigm. General scientific methods of theoretical and empirical levels are used such as analysis and generalization of the theory and practice of formation of new trends of the development of artistic technologies in theater and concert activities. The socio-cultural functions of musical sound and acoustic properties of the hardware and software complex during the sounding of national festivals, concerts and performances are characterized. Conclusions. Theatrical art is an integral part of the development of the nation's culture and indicator of the spirituality and maturity of its society. The ability of effective management of the cultural sphere and its structural divisions provides the most complete satisfaction of the needs of society. Different kinds of arts manifest themselves in the most interesting angles just on the theatrical stage. However, the sound capabilities of theater sites, areas and premises play an extraordinary role in the creation and perception of the artistic image and are made by masters of acoustics.

**Keywords:** culture, artistic technology, theater, concert, music, musical sound, acoustic properties.

**References**


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інтересам в умовах внутрішніх суспільних трансформацій із визначенням його ефективності, проблем та подальших перспектив співробітництва в театральній сфері. Охарактеризовано соціокультурні функції музичного звуку і акустичні властивості апаратно-програмного комплексу в озвучуванні національних фестивалів, концертів і вистав. Висновки. Театральне мистецтво, навіть невід’ємна частина розвитку національної культури, індикатор духовності та зрілості свого суспільства. Різні види мистецтва розкриваються в самих інтересних ракурсах саме на театральній сцені. Звукові можливості театральних майбутніх, ніби прив’язані відіграють надзвичайну роль у створенні та сприйнятті художнього образу і зроблені майстрами акустики.

Ключові слова: культура, мистецтві технології, театр, музичний звук, акустичні властивості.

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Основними напрямами розвитку технологій в театральній та концертній діяльності сучасного суспільства

Цель работы. Исследование связано с поисками новых направлений развития технологий в театральной и концертной деятельности, отражающих динамику формирования и трансформации звукового оформления для создания художественного образа на сцене. Методологическую основу исследования формирует комплексный анализ научно-теоретических работ, в основе которых объединены диалектический подход с синергетической парадигмой. Применены общенациональные методы теоретического и эмпирического уровней: анализ и обобщение теории и практики становления новых направлений развития технологий в театральной и концертной деятельности.

Научной новизной исследования является уникальный материал анализа и развития культурного потенциала Украины на пользу национальным интересам в условиях внутренних общественных трансформаций с определением его эффективности, проблем и дальнейших перспектив сотрудничества в театральной сфере. Охарактеризованы социокультурные функции музыкального звука и акустическое свойство апаратно-програмного комплекса при озвучивании национальных фестивалей, концертов и спектаклей.

Выводы. Театральное искусство это неотъемлемая часть развития национальной культуры, индикатор духовности и зрелости своего общества. Различные виды искусства розкрываются в самых интересных рамках именно на театральной сцене. Но звуковые возможности театральных площадок, площадей и помещений играют чрезвычайную роль в создании и восприятии художественного образа и сделаны мастерами акустики.

Ключевые слова: культура, технологии, театр, музыкальный звук, акустические свойства.

The urgency of the topic lies in the fact that modern society is changing rapidly and the role of culture becomes determinant for the development of Ukraine and the creation of its positive image among surrounding states. In recent international relations, the issue of intercultural cooperation is playing an increasingly important role. It is recognized at various levels: international, regional and national. Cultural ties today are seen as an independent and important tool of foreign policy activity, which, in turn, undergoes a significant transformation, acquiring rather vivid, unusual and interesting forms and covering the widest audience. The study of art technologies in modern art processes is perhaps the most difficult and at the same time the most interesting problem, but the difficulties in systematization of all processes that occur in contemporary theater and concert activity do not remove the need to identify the factors of this process. Transformations of artistic technologies that have arisen in theatrical and concert activities certainly require further scientific reflection.

The concert is one of the types of public performances in which music, literature, choreography, theather and pop music is involved in one form or another. Concert sound making in its present state in many cases is closely connected with the theatrical techniques of stage concert directing, on which the best examples of theatrical culture are based. Just as theatrical directing entered the concert stage, the concert sound work became closely linked to the techniques of theatrical sound-making. Information technology covers practically all spheres of modern society. In today’s rapidly changing society the role of culture becomes crucial for the development of Ukraine and the creation of its positive image among the other states.

Concert performances are associated with theatrical and circus performances. The concert is a contest of different genres, genera and types of performing arts. This is an indispensable discovery of the expressiveness and high artistry skills. A contemporary concert, composed of different genres, has arisen relatively recently. This is due to the growth of the population’s culture. Chamber and instrumental music genres came on the stage. Moreover, the piano, violina and cello became regular participants of mixed concerts and even entertainment concerts, where they face with pop genres.

Analysis of philosophical, socio-psychological and pedagogical research (A. A Anokhin, I. B., L. Zakov, T. Zavadskaya, L. Koval, V. Krivurochenko, I. Melnikova, A. Mudrik, G. Padalka, G. Rindin M. Scatkin O. Rostotsky, O. Rudnitsky, A. Shevro, B. Yavorsky) makes it possible to conclude that the process of formation of artistic orientations contributes to the development of theatrical and concert art [6,150]

The features of the perception of art were studied by such scholars as B. Asafiev, Y. Afanasyev, L. Vygotsky, M. Blinova, L. Bokarev, T. Doroshenko, O.Kostiuk, M.Markov, O.Rudnitskaya, E.Nazaykinsky, O. Rostovsky and others.

Many scientists considered problems of the development of musical technologies in theatrical and concert events, reflecting the dynamics of the formation and transformation of sound design for the creation of sound image on stage.

Problems of the development of artistic technologies in theatrical and concert events, reflecting the dynamics of the formation and transformation of sound design for the creation of sound image on stage were considered by many scholars. The features of the perception of art were studied by such scholars as B. Asafiev, Y. Afanasyev, L. Vygotsky, M. Blinov, L. Bokarev, T. Doroshenko, O. Kostiuk, M. Markov, A. Rudnitskaya, E. Nazaykinsky, O. Rostovsky and others.
The theater is one of the most ancient and global for the world art culture. Over the millennia of its existence, it has accumulated an arsenal of sustainable means, stored under any scenic reforms and conditions of various forms of ideological artistic consciousness.

Subject of research: the dynamics of formation and transformation of artistic technologies used in theater and concert activity in Ukraine.

In the opinion of the scientist V. Movchan, the artistic image created by means of artistic technologies, endowed with logic and developed in accordance with its internal laws, is the basis of any kind, variety, genre of art and method. Creation of an artistic image is the main criterion for belonging to that other species. Art [4].

Bogutsky Yuri, Korabelova Nadezhda, Chmil Hanna in the monograph “New cultural reality as a sociodynamic process of mankind through a role” emphasizes that new technologies are based on the use of language: cybernetics, computer science and programming. They have become an environment that interprets the social status of man [2, 26].

Musical culture in Ukraine is under the influence of the development of global information technologies. The development of musical art in Ukraine has evolved in its own system of global symbols, where brands and logos are recognized all over the world and associated with musical professionalism of the highest quality [1, 209].

Problems of the development of various forms of cultural leisure were studied by such scholars as I. Avdeev, S. Bratchenko, V. Viichech, L. Vygodsky, T. Darnkov, V. Druzhinin, A. Kostyuk, L. Lyubov, N. Myropolks, V. Mazepa, S. Naumenko, H. Negauz, V. Rushin, S. Rubinstein, A. Shelokova, S. Sholomovich and I. Ponomarev.

Scientific novelty is the study of old traditions and the study of the experiences of such famous scientists as E. Vershkovsky, O. Rubb, A. Silin, D. Tumanov, A. Chechetun, I. Sharoyev, V. Abramovich, V. Vovkun, D. Mukharsky, B. Savruko and others.

Scientists and theatrical teachers in different historical periods studied the creative heritage of the coryphaeus of the Ukrainian stage: K. Rudnitsky, G. Dovbyschchenko, Y. Kosach, V. Maksimov, N. Kuzyakina, I. Chabanenko, P. Kravchuk and A. Klekovin. As a result of working with historical literature and archival material, we can say that theater and artistic activity of such masters of stage art, who created during the same period, as K. Stanislavsky, I. Marianenko, S. Tobilevich, V. Vasylko, A. Buchna, B. Gorin-Goryanov and L. Kurbas was studied. Their contemporaries were such theatrical scholars, writers and theatrical figures as I. Karpenko-Karyi, A. Suvorin, Y. Mamontov, M. Voronyi, S. Yefremov, O. Zaharov, M. Synelnikov and A. Nezvinsky.

In Kiev, the first theaters appeared in 1917-1918. They wanted to find new ways for Ukrainian art: the Young Theater, National Theater and People’s Theater. The arrival of Soviet power in 1919 dramatically changed the life of theaters – not only their name, but also the composition and artistic program. Some theater companies disappeared and the other were formed. Widespread ideas of the Soviets, including the left, theater, find supporters in the Ukrainian environment.

The unity of the director, actor and playwright, which was considered to be the theater corps of natural coryphaeus, did not exist at the Ukrainian theater of the early twentieth century. The opposite was the opposite of the genre – literary drama, which at that time was not directly connected with the theater. These are works by L. Ukrainka, V. Vinnichenko, G. Khotkevich, V. Samylenko and others. They demanded from the director-director a creative project, and not just the organization of the play. Features of the genre of literary drama were neo-romanticism, symbolism, journalism, chronicle, etc. Saksagansky tried to solve the problem of preserving the achievements of the old theater, but at the completely different level. He made an attempt to revive the spectacular performances of the Coryphaeus theater. The conducted scientific work allows us to determine that in 1918 in Kiev the People’s Theater, headed by Saksagansky as a leader began its creative activity in Kiev. The theater consists of talented actors of the Coryphaeus theater, as well as their followers: V. Levitsky, I. Zamychkovsky, L. Linitskaya, G. Zatyrkyevich-Karpinskaya, B. Romanytsky and others. The basis of the repertoire of the theater was the Ukrainian play of the XIX century.

Ukrainian drama groups, formed in 1917-1922, in one way or another, repel from the stamped forms of the traditional theater. Even the concept of theater and actor of “European forms”, that is, able to work in European classics, arises. The repertoire of the new theaters was a Ukrainian and foreign play of the twentieth century.

Formation of the Ukrainian professional direction of the 20-s of the twentieth century takes place in the unity with the confrontation of aesthetic tendencies. They were represented on the one hand by such directors as G. Yura, O. Krolchuk and B. Romanytsky, and on the other – L. Kurbas, M. Tershchenko and Y. Bortnik. At that time in Ukrainian stage art, in the process of artistic naturalistic direction, two systems were determined: one of them gravitated to the forms of the theater of direct correspondence to life and was most clearly embodied in the directorial work of G. Yura, the second performed under the flag of the left art, asserted on the stage conditional forms and headed by L. Kurbas. Both were natural, although the first had visible resistance in the tradition of the Coryphaeus theater, and the second one had to consolidate the aesthetic foundation for further development.

However, the deep movement of the national art itself continues as well as the search for the aesthetic forms of mastering the new reality. All this gives birth to a complex picture of the life of the Ukrainian theater of those years. In the practice of new Ukrainian theatrical collectives in the generalization of it in the pages of newspapers and magazines the process of formation of a new direction was drawn up.

Today in the theater it is important to find new expressive means and techniques that can convey the idea of a performance or concert. In solving these problems, music plays an important role in the formation of an artistic image.
In the typological system of artistic images the theory of Ukrainian scholars occupies a separate place (I. Kovalik and M. Kotsyubinskaya about the mega-image, macroforms and microforms). Modern researchers are T. Serikova, Y. Lukashevskaya, G. Demin and V. Portland.

For theaters, acoustic systems are used. Acoustic systems for theaters must meet professional requirements. This is connected, first of all, with the general features of theatrical technique. The siege of one or another degree, dictates the location itself and the way of using microphone systems. It is used in telephony, broadcasting, television, sound amplification and sound recording systems. According to the principle of operation, the microphones are divided into coal, electrodynamic, condenser, electret, piezoelectric and electromagnetic, in the direction of action – to the non-directional, one-way directed (cardioid) and bi-directional. In the presence of several microphone positions, for which there is a satisfactory sound clarity, we have to analyze these positions in terms of "microphone balance". The audio equipment for the theater should be sufficiently versatile. Its opportunities should not end with simply voice-over: many plays use complex phonograms. The acoustic systems of the theater should have a large frequency range and provide high-quality sound. And this means a thorough selection of acoustic systems. The technique of the theater is a complex system. It has a lot of components and everything should work without disturbing each other. Mechanics of scene, lighting devices, scene clothes and places for changing scenery is a great complex. Acoustic systems should be invisible, but at the same time – functional and powerful. Some theaters have concerts and musicals, and they require additional sound equipment, such as monitors. It is also necessary to anticipate and anticipate how to integrate the new equipment into the acoustic system. These are the main tasks that have to be solved with the acoustic calculation and selection of acoustic systems for the theater. And, finally, the most important thing is acoustic calculation. Often, actors perform at the performances without sound amplifiers, which is facilitated by the mastery and acoustics of the hall. Acoustic calculation is the basis of good sounding. Calculation of acoustics and placement of acoustic systems requires serious knowledge and extensive experience. It is necessary to take into account, in particular, the combination of architectural acoustics and the work of sound equipment.

Today, for the creation of modern large-scale multimedia installations, 3D-mapping, methods of obtaining an image using projection technologies are used. The technology of video-messaging (video-mapping, video-editing, 3D-mapping, projection mapping, projection show, projection display (3D mapping) creates a 3D projection. Video technology is used to create the illusion of a three-dimensional virtual space in which you can easily create and modify the environment without using complicated and expensive landscapes [5].

Stecking is used to increase the brightness of the final image by applying two projected images to each other, thus doubling the brightness of the image. The two ProTego EH7700 ProScene projectors, each of which have a brightness of 7500 ANSI, can provide a brightness of up to 15,000 ANSI lumens [8].

The projector with the interface function allows you to perfectly create images from several projectors. The Arc (Projector Correction) function allows you to customize the image. These features come with the Epson EB-G7900U Full HD Projector (Technology: LCD: 3 x 0.76 "P-Si TFT, Resolution: WUXGA (1920x1200), Brightness: 7000 ANSI lm, Contrast: 50000: 1, 4K Support, Projection Capability Angle from 0° to 360°, HDBaseT interface).

The main advantage of the proprietary Wings VIOSO software is the ability to automatically stitch the projected image, combine projections, and also calibrate the geometry and brightness of the image on the projected surface. Within a few minutes, you can adjust the projection to any surface (building, car, scene, natural landscapes, etc.), using the automatic setting via USB or Ethernet camcorder.

The Wings Vioso software has an advanced functionality for design and deformation of the image, which allows you to easily adapt the show to the projection surface. Projection surface can be any, ranging from ordinary or concave screens to spheres, 3D models and even to completely unusual surfaces, for example, rocks. The Wings AV system is a comprehensive hardware and software solution for creating, editing, playing content and managing any show. The system allows you to control all audio-visual systems at a concert, theater, create multimedia installations in museums, 3D display shows, etc [6].

The emergence of digital arts has led to the emergence of new artistic genres and forms. Acoustic modeling of the premises is carried out taking into account all the necessary characteristics on the basis of the power and uniformity of the propagation of the sound spectrum. It is important to take into account and use the necessary acoustic properties of the finishing materials, and, of course, the type of acoustics required, to obtain a clear, clear and even sound. Today, three-level rooms with modern sound and lighting equipment are created, which allows you to enjoy the show with comfort in any part of the hall. The halls have large screens and 4K technology, which allows you to broadcast images that have high-quality imagery in cinemas, theaters, concert halls, and create effects of added reality, to be part of decorative solutions, plunging viewers into the atmosphere on the stage.

There are L-Acoustics and other sound-amplifying systems in theater and concert halls. In the first configuration, for concert events, the SB28 low-frequency systems are centrally located between the left and right portals and consist of K2 systems that provide high-quality coverage of the low-frequency signal of all viewers' seats. The second system configuration is used for circus performances, the specifics of which are numbers with air gymnasts. In this configuration, the SB28 subwoofers are portrayed. Such a configuration frees up the space above the arena to perform air gymnasts.

So, today, the practice of using powerful projectors (16-20 thousandlumen) in the design of the scene is becoming more widespread. And this is not surprising: at the cost of little effort and in the presence of
artistic vision, any scene, any performance can be enriched with an additional impression, thanks to a dynamic projection to the stage backstage.

BenQ projection equipment is traditionally used in laser shows on the example of the models LU9715, LU9235 [12]. Successful theaters in the world use projection techniques. Obviously, they only benefited from this, because the theater is a living organism that is developing and sensitive to the needs of today's demanding and delicate spectators. The most common multimedia projectors in Ukraine are Barco (Belgium), Casio – (Japan) Panasonic – (Japan), Projectiondesign – (Norway) [3].

Thanks to new technologies, in our time a new kind of theater appeared "Forum-theater" or "Theater of the oppressed". The main idea of the forum-theater is to show the society the necessity of each person's participation in building a better future and explain to people that improving their lives and changing the social situation in the country depends on them. Technology can effectively change the situation in local social groups, with their spectrum can be very wide: at present, this method is successfully applied in working with children and youth, representatives of various social strata and professional communities.

The technology of imagination assumes active participation of spectators in performance with actors, search of alternative solutions of problems, acquisition of experience of active reflection of personal initiative. The play is constructed in such a way that the scene ends with the peak of the conflict, and the spectators, replacing one of the roles, change the situation of oppression so that it ceases to be a dangerous and humiliating victim. Today, this technique operates in more than 100 countries around the world, because there is not only a need for a more just and more democratic world, but also a desire for people to participate in the creation of such a society [7].

Studying the theatrical hardware complex, used in the Kiev Operetta Theater on the example of the sound of the play "Sorochinsky fair", we analyzed the acoustic system. The equipment for the sounding of the show was: Midas Siena 480, four SHURE SM58 SE microphones, three Shure SM58-SE microphones, four Shure BLX288EB58 radios, one Shure SM86 microphone, two Shure SM81-LC microphones, five Shure PG14EP185 radio systems Internal sound card "M-Aciiio Aisliorllie 2496", MacBook Pro computer, KRK ROKIT RP5 G3 monitors and Cool Audio Crown reputation amplifier which is equally suitable for FOH application or monitor monitors. Also, a modern microphone SHURE C608 was used: frequency range: 50 Hz – 15 kHz Input impedance: 600 Ohm sensitivity (at 1 kHz) -52 cIV / Ra 1 Ra – 94 IB 5R, connector: XLR. Sound card Didgeis 003 Input / Output Interface – RSI. Frequency range – 22 ... 22 000 Hz, -0.4 ... 0.4 dB. Dynamic range -CAP – 104 dB, ATIII – 100.4 dB Synchronization – 5 / RBIR. Drivers – 95/98 / IMT / 2000 and MasOb 9.2.2 / X, with the support of A5102, 05IR, MME, OMZ, OigesiH.

Recommended configurations -RIL-500MHz, from 128MB RAM. Powerful columns with technical parameters: Gemich BF11: Power (KM8) 2x18 lzt size of speaker. Sc / nx 1x4 "Speaker size HF 1x1" dimensions 262x150x210 mm. Entry 2.0 (KSA) Hull material tree (MDF). An important role in a number of used equipment is played by the Amplifier: RAC AUDIO V4-1200. Its Specifications: Nominal Load Resistance 4 Ohms (Channel), Output power 600 / ZSV (channel, 4/8 Ohm, 220 V) 1200 W (bridge, 8 Ohm, 220 V) Peak output 900/450 W (channel, 4/8 Ohm, 10 ms, 220 V) 1800 W (Bridge, 8 ohm, 10 ms, 220 V), The frequency range is 20 Hz – 20 kHz (± 0.2 up, 600 W, 4 ohms), 10 Hz and 60 kg (± 1 dB, 1 W, 4 ohms). Total harmonic distortion 0.003% (1 kg, 4 Q) 0.02% (20 Hz – 20 kHz, 4 ohms) Output voltage increase 40 V / μs (channel) 80 V / μs (bridge) Damping factor 400 (1 kg, 48 °) Transient decay between channels 60 dB (1 kHz) Signal / noise ratio 100 dB (not weighted) Input impedance 10 com (symmetrical) Sensitivity 0.775 V Mains supply 220 V, 50/60 Hz. Weight 15 kg Dimensions 482 mm (width), 96 mm (height), 414 mm (depth).


Conclusions:

- Musical performance or concert requires a professional sound recording and transfers of a profound understanding of the character and the plot.
- Music is a kind of art that, reproducing reality, affects a person thanks to sound complexes built in a special way. In the presence of several microphone positions, for which there is a satisfactory sound clarity, we have to analyze these positions in terms of "microphone balance".
- There is probably as much music, fine arts, literature and choreography – all the synthesis of arts in theatrical practice, than theater itself. The modern period of the development of domestic theater is associated with the search for expressive means of the festive, ritual, cult theater, masterfully owned by the artists of the stage art of Ukraine of the late XIX – early XX century.
- The ability to effectively manage the cultural sphere and its structural divisions provides the most complete satisfaction of the needs of society. Different kinds of arts manifest themselves in the most interesting angles just on the theatrical stage. But the sound capabilities of theater sites, areas and premises play an extraordinary role in the creation and perception of the artistic image and are made by masters of acoustics.
CHILDREN'S CHOIR IN RESPECT OF THE ASPECT OF IDEAS ABOUT THE PHENOMENON OF CHILDHOOD

The purpose of the work is to study children's choral singing as a reflection of the phenomenological principles of childishness in musical creativity. Methodology of the study consists in the application of comparative, aesthetic-cultural, historical methods, as well as musicological and analytical approach, which form a unified methodological basis. This methodological approach allows revealing and analyzing the model of the children's choir as a separate significant artistic and cultural phenomenon aiming at finding a dynamic view of the further development of this type of creativity, its new dimensions, its means of self-realization of young people. The scientific novelty of work involves widening of understanding of the phenomenon of childhood in the art and musicological aspects. The children's choir is presented as an artistic and cultural phenomenon, not only embodying high artistic tasks, but also influencing the fluid processes of "adult" art and culture. Conclusions. Comprehension of the historical development of paradigmatic ideas about childhood and childishness and their projection to the musical, in particular children's choral creativity, give a new starting point in the perception of this type of creative expression as a specific holistic "cathedral"-personal, musical-aesthetic, artistically playing and spiritually educational phenomenon. This phenomenological approach allows us to assert that the symbolic interchange of children's and adult worlds (children's and adult subcultures) leads to the formation of a common communicative, "living" culture field, in particular musical creativity, where phenomenon of childhood manifests itself inclined to the same intentions as the general field indicated.

Keywords: childhood, childhood phenomenon, childishness, musical art, children's choir, children's singing, children's culture.

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