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## **THE INFLUENCE OF CULTURAL TRADITIONS ON MODERN THEATRICAL EDUCATION IN UKRAINE ON THE EXAMPLE OF LES KURBAS'S THEATRICAL SYSTEM**

*У статті зроблено спробу проаналізувати вплив культурних традицій на театральну освіту, порівняно методи навчання акторів та використання театральних принципів у виставах від початку XX до початку XXI століття задля посилення культурологічної складової сучасної театральної освіти та суспільства взагалі. Стрімко розвиваюча українська нація, стиснута в умовах політичних подій, сьогодні стає знов актуальним почути українські класичні твори – пісні, музику, танці, те що підкреслює національні надбання, національні культурні традиції та автентичність. З появою нових способів спілкування, сучасний світ безкінечно комуні кує. Сьогодні важко уявити людину без телефону або смартфону. А що це значить? В кожну секунду може бути відкрита інформація про події у світі, погляди на ці події, а значить і події на театральних сценах. Саме зараз, і саме така сучасність підіймає на поверхню*

всі недоліки і не доопрацювання в жанрах мистецтва. Театральна практика стає народною, і вже ніщо не може зупинити слово, яке вилітає з вуст акторів, якщо воно з'явилося в інформаційному просторі. В таких умовах надзвичайно важливо підвищувати рівень викладачів, що готують майбутніх фахівців сценічного мистецтва, удосконалення тонкощів професій, освоєння сучасних методик, розширення фізичних та психологічних практик за допомогою надбань йоги та інших ведичних технік і обмін цими знаннями, сучасність виховує «ідеального» актора, «актора - Геракла», який має абсолютний вплив на публіку.

**Ключові слова:** освіта, театральна освіта, культурні традиції, сучасний театр, національна ідентичність, український театр.

В статтю предпринята попытка проанализировать влияние культурных традиций на театральное образование, сравнить методы обучения актеров и использование театральных принципов в спектаклях от начала XX до начала XXI века для усиления культурологической складовой современного театрального образования и общества в целом. Стремительно развивающаяся украинская нация, стиснутая в условиях политических событий, сегодня становится вновь актуальным услышать украинские классические произведения – песни, музыку, танцы, то что подчеркивает национальные достоинства, национальные культурные традиции и аутентичность. С появлением новых способов общения, современный мир безконечно коммуницирует. Сегодня сложно представить человека без телефона или смартфона. А что это значит? В каждую секунду может быть открыта информация о событии в мире, взгляды на эти события, а значит и события на театральных сценах. Именно сейчас, и именно такая современность поднимает на поверхность все недостатки и не доработки в жанрах искусства. Театральная практика становится народной, и уже ничто не может остановить слово, которое вылетает из уст актеров, если оно появилось в информационном пространстве. В таких условиях крайне важно повышать уровень педагогов, которые готовят будущих специалистов сценического искусства, усовершенствование тонкостей профессий, освоение современных методик, расширение физических и психологических практик с помощью достояний йоги и других ведических техник, и обмен этими знаниями, современность воспитывает «идеального» актера,

«актера - Геракла», который имеет абсолютное влияние на публику.

**Ключевые слова:** образование, театральное образование, культурные традиции, современный театр, национальная идентичность, украинский театр.

*The article analyzes the influence of cultural traditions on theatrical education; the authors compare methods of teaching actors and the use of theatrical principles in plays from the beginning of the 20th to the beginning of the 21st century in order to strengthen the cultural component of contemporary theatrical education and society in general. The rapidly developing Ukrainian nation, pressed by political events, today becomes topical again to hear Ukrainian classical works - songs, music, dances, which emphasize national heritage, national cultural traditions and authenticity. With the appearance of new ways of communication, the modern world is endlessly communicating. It's hard to imagine a person today without a phone or a smartphone. And what does it mean? Every second you can open information about events in the world and read views on them, so you can find information about events on theatre stages. Right now, and it is this modernity that brings to the surface all the shortcomings and incompleteness in art genres. Theatrical practice becomes popular, and nothing can stop the word flying out of actors' mouths if it appears in information space. In such circumstances, it is extremely important to raise the level of teachers who prepare future specialists in stage arts, to improve the peculiarities of the professions, to master modern techniques, to expand physical and psychological practices through the benefits of yoga and other Vedic techniques, and to exchange this knowledge; modernity educates the 'ideal' actor, 'the actor-Hercules', which has an absolute impact on the public.*

**Key words:** education, theatrical education, cultural traditions, contemporary theater, national identity, Ukrainian theater.

For generations, the Ukrainian nation has brought up the youth through cultural traditions, thus forming a personality strong in spirit and body who had a close bond with the national community and passed on the succession of generations. Today, this connection is lost because of wars, the occupation of the country and the totalitarian Soviet regime. Theatre art has an impact on society, and one of its many functions is educational and unifying. Ideological plays for

development of Ukrainian modern independence of the 21<sup>st</sup> century and for the modern viewer are needed, especially during the war. The performances should be clear and convey the idea, feeling and understanding of national identity and cultural traditions to different segments of society. Insufficient scientific development of this problem is connected with the generation gap due to mass destruction of the Ukrainian people and cultural national heritage. Analyzing the creative heritage of Les Kurbas in the field of theatrical education in Ukraine, we strive to highlight the basic principles of forming the creative personality of an actor, which becomes topical in this publication.

The purpose of the research is to examine the impact of cultural traditions on stage art and theatrical education in Ukraine. Achieving this goal involves the following tasks:

- to investigate the presence of cultural traditions in Les Kurbas's theatrical system;
- to trace the impact of tradition on acting, viewers and society;
- to identify the traits of national identity in plays.

The analysis of recent researches and publications of Ukrainian theatre experts testifies to numerous studies in the field of theatrical education in pedagogical system of training actors by Les Kurbas (Nelya Kornienko, Les Tanyuk, Oksana Tanyuk, etc.) but the problem of cultural traditions influence on the theatrical traditions in Ukraine is studied insufficiently.

On the example of the prominent stage director, the reformer of the Ukrainian theater Les Kurbas, whose stage principles are imitated by the following generations and contemporary artists, we have the opportunity to watch his method of training actors, somewhat hyperalized movements or voices, the prevalence of basic movements, the influence of cultural traditions on the creativity of the stage director. "You can not make a jug from fragments," says the folk saying, you can not make the whole image, but the viewer would not notice the statement of the essence behind small movements of these manipulations. He did not consider it necessary to separate the actor from the entourage, but he considered it necessary to cultivate the independence of the skill from the additionality, the performances should not be mass.

Les Kurbas believed that the most important and most principal in theatre art was a man, an actor who through his experience and skill presented the hero's philosophy and ideas by means of absolute possession of the body. That is the ability to convey mentality – by movement, the idea – by glance, the planned connection – by the plastic arts, despite the presence or absence of other theatrical accessories, such as scenery, music, as well as stage lighting or authenticity in the outfit. We can assume that the actor can play his character - a person without makeup or in simple everyday clothes.

The stage director himself had various artistic hobbies, but he adhered the principle of artistic transformation of life in the theater invariably. He was interested in philosophical thinking of Nietzsche, Aristotle and Spengler. He was on friendly terms with Austrian philosopher Rudolf Steiner and attended his lectures, where he shared his thoughts on cosmology, human history, the macrocosm and the microcosm. Kurbas also shared the views of the philosopher on theatre arts and was convinced that theater had to return to its original forms, to forms of a religious act.

Later, he created the association of artists 'Young Theater' or Experimental Laboratory, where all were united for one purpose – to update the Ukrainian theater. It was possible by combining and systematizing knowledge of Ukrainian theatre principles and national cultural traditions with European theatrical principles, where the theatre space was already more developed. So the task was to raise the Ukrainian theater to the world level.

During preparation for stage work, namely for the performance, Kurbas considered it necessary to conduct physical training to understand a specific image. For example, if the actor has a long monologue, an actor should be able to control his breath and hold the air. If the role of an actor is related to a specific professional activity, for example the image of a blacksmith, he or she should have the appropriate physical training and figure. Development of psychotechnics, perception of what the actor had heard or felt, analysis of actions and their logical completion were important.

“You cry on the stage and the audience looks calm, and you need to keep calm and the audience should cry! .. To create something that is not real, to throw people a fantasy, perfect, non-existent, but beautiful - only there can be a difference between an actor and a well-trained monkey. And to do this, it is necessary to awaken the fantasy, to grow its wings and to learn to fly” , the stage director said.

Self-development of the actor requires professional knowledge - to introduce lectures on the history of theatre, art, cultural studies, to watch and discuss various performances - classical and contemporary, national and theatrical works of other cultures. Training his actors, Kurbas organized creative meetings of artists of different directions, such as musicians, choreographers, critics, actors, directors, artists, playwrights and other specialists in the knowledge of “human souls”, where creative personalities exchanged opinions, read their literary or musical works. The actors had the opportunity of free expression, they could play roles not only in the director’s performances, but they could show their abilities and create their own performances.

Kurbas carried out the system of figurative transformation by means of artistic language, as well as by exploring the connection between the events in the country and their extrapolation to the existence of modern theater, he strived for

influence on the audience and success. The artists sought to deepen and expand the knowledge of life, the vital sophistication, to get to the essence – this is a reproduction of cultural traditions. In his practice, in order to convey his philosophical reflections, the Ukrainian producer used different styles and thus filled the Ukrainian theater with artistic aesthetics of expressionism and symbolism, the properties of which he thoroughly studied and systematized for Ukrainian stage arts, taking into account the peculiarities of these trends and traditions of the Ukrainians. According to the artist, realism was the greatest threat and was too dangerous for Ukrainian theatre art. In order to reproduce the author's word in the play "Haydamaky" by T.G. Shevchenko, the stage director turned to the times of ancient traditions, where the choir played the role of an interlocutor or a commentator during the performance.

Working on plasticity and physical fitness of an actor was always vulnerable, painstaking and complicated and it needed special attention. For this purpose choreographers of high experience were engaged, so the best specialists worked in this field. One of the specialists was Bronislava Nizhynska, a professional classical ballet dancer, who in her creative career had experience as a ballet dancer at the Mariinsky Theater, where she performed solo variations in performances. She helped her brother Vatslav Nizhynsky to direct ballet performances and created her own in Ukraine ('Etude', music by F.List, "Demons" by M. Cherepnin and others) and abroad with troupes of different nationalities ("Wedding" by Stravinsky, "The Blue Train" by D. Miyo and others). In Kyiv, she set up a theatre and ballet studio "School of Movement", where she trained actors - dancers aged 16 – 20. She trained dancers in the direction of modern choreography and preferred students without dance experience. Her teaching methods combined classical dance lessons, dance theory and other disciplines. The second specialist was a young talented ballerina Valentina Chistyakova, who could perfectly control her body and had a desire to explore. Later she became a leading actress in Kurbas's Theatre and due to work and kinship of souls she became his legal wife. This is indicated by their joint work. Musicians, choreographers, critics, actors and the director's creativity brought together professionals from different fields and all of them had one goal – to step aside from classical forms and to search for new ways of development in art.

In order to produce national performances Kurbas recommended to study ideas, customs and nature of the society to which the play would influence. In Kurbas's times the question of difference of plays for the bourgeoisie or mass working viewer was considered, so the hero, on the one hand, had to be universal, on the other - be able to convey the national idea to the heart of the viewer, to attract modern young generation; the plays had to be modern in nature, such as other manners, posture, innovative technologies. The innovative breath of the

performance, understandable by modern society, would attract more age layers and with such adaptation it would be easier to promote the national Ukrainian idea.

From the beginning of the 2000s, when the society's trust was zero, the society and will of people began to change. These consequences of the totalitarian Soviet regime free people from stereotypes and fears and, as a result, make it possible to gather people according to ideas and tastes. This is one of the reasons to develop small scenes, the disclosure of national problems and not only Ukrainians. Thus it becomes possible to develop other national theaters, their cultural cooperation and professional competition for the audience. Theaters, free from language violence, open up new borders of contemporary Ukrainian theater in general. For example, plays by Tatar and Jewish authors, and by authors of other nationalities in the Ukrainian language, the artists of Soviet and democratic Ukraine. However, over time, trust has grown again, the viewer has changed, today we have very rapid changes around the world, not only in the country. Speed of thinking, perception of information and methods of transmitting this information are changing, due to the general impression of a particular performance or staging.

Kurbas believed that theater could not do without experiment if this theater was aimed to develop and to be an example for other theatre groups. Watching 'Buna' by David Petrosyan, we see the actors' extraordinary fitness with their physical capabilities and a talented reincarnation of the characters of the play. For example, the role of Buna's grandmother, played by young talented actress Christina Fedorak, without makeup and additional stage aids - only the outfit and the voice is the perfect reincarnation. Or the role of Ilyka, a little boy, Buna's grandson played by an adult girl, Marichka Styrbulova, where her small height is at the right time, and her voice and demeanor makes us believe that the baby was actually playing on stage.

Contemporary theater may not be as large as in Soviet times, and performances need not be mass-produced. According to Les Kurbas, what is done massively and for the masses can no longer always be considered art. The great need for small theatre stages shows the variety of spectators and versatility of modern directors. Chamber atmosphere and interest of the almost prepared spectator for the action make theater accessible and understandable. Small stages and single-actor theatres hold full halls, for example, single-actor theatre 'Krik' or Shevchenko National Musical and Drama Theater on a small stage in the city of Dnipro, and it is not in the capital.

Yes, 'Buna' performance is shown on the small stage of Franko theater in Kyiv, the play has a national idea, historical facts of the Ukrainian state, reproduces the cultural traditions of the Ukrainian people (life, language). 'Buna' is a real story of one family in a village in Bukovina, it is a problem of complicated relationships and misunderstanding of generations (grandmother - grandson, grandmother -

great-grandson, mother and son), no less a modern problem - the workers who are looking for happy destiny abroad; the fate of the grandmother is hard, she survived dispossession and famine and was raised by her uncle's grandmother. In order to reproduce Bukovynian spirit, the actors and the director lived in a village for a month, where time seemed to stop.

Today, live theater acts encourage a large number of young people to get rid of empty pop-corn eating while watching movies, instead they choose small theaters to get spiritual communication, which unites and help to develop society.

Before the time of state formation of Ukraine, national culture was "deprived of the right" to acquire artistic and aesthetic form, so one of the tasks of Ukrainian theatrical education was to create an independent, free from other ethnos national and philosophical stage space.

Since, 'the folk tradition is the genetic heritage of the ethnic group' (Rogovskaya E.V., 2005), the cultural tradition of the theater unites societies of different nationalities and layers and develops patriotic moods. Cultural traditions influence different ethnic groups, this is a more general concept. Through theater you can study authentic art, cultivation of national identity, which is the spiritual force of a human being and society in general, where the synthesis of spiritual values of the people is used, and it influences the choice of a person in life.

The author's approach to the classic material of stage directors in a particular theater reiterates the ability to convey the actual material of a play or an event and awakens the viewer's affinity of thoughts and states.

By far, one of the most important points is again the art of the stage director and the actor, and with the help of stylization you can feel the sound of the language, peculiarities of the play, convey the essence to the viewer with the help of language. The language stylistics can be soft, gentle or sharp, you might even say that it holds a moment of poeticism that allows you to capture the viewer's attention. Thus, different theaters are united by language and rhythm.

For example, in a theatre in Khmelnytskyi in 2011 'Proposal at Goncharivka' by the great Ukrainian classic Kvitka – Osnovyanenko was performed, where the house of Shkuratykha, her yard and the whole street were mounted as a large circle. The performance was performed in a classical manner with a loud orchestra, a circle creak that moved slowly during the stage performance. This inspired director Igor Storozhuk to modernize the play and he made dramatic changes, reversing the idea of the play. As the director said, 'Let Kvitka – Osnovyanenko not take offend from heaven, to change the outputs of the heroes and unite so that everything follows one by one. Because you would have span that circle five times' ( Storozhuk I., 2019). The play came to life again, became rhythmic and livelier, corresponded to the modern rhythm of life, and the scenery changed - bright drawings, Petrikivka painting, and beau-

tiful Ukrainian songs were added.

The theater changed due to modernity. It was a great teacher and master, if the stage director felt it, if appropriate actors were selected, then the modernity itself came to life on stage. But on the example of I. Franko National Academic Drama Theater in Kyiv, we can say that the chief stage director should always be the leader of the theater to educate novelty to actors, not to detach from the tradition, to build the channel from the past to the present. In Franko Theater the director paid much attention to fine arts. This happened in the following way - young actors and artists were involved in the work of the theater not only to create the scenery, but also contemporary theater posters. Once an inventor and an innovator named Petritsky worked there. Constructivism was represented by Yeleva. Futurism also found its place in the theater thanks to G. Tsapon. Thus, brightness and uniqueness of the theater were revealed.

Today, one of the means of raising the actor morally on the stage is done at the expense of patriotic forces and at the expense of the patriotic spectator. For example, as in the play "There is no war ... There is". The premiere took place in autumn in 2018 in Shevcenko National Musical and Drama Theater in Dnipro. The author of the play is a writer, a volunteer Borys Humeniuk, the stage director is Vyacheslav Volkonsky. The role of the main character of the play with a call sign "Soldier" was played by a real warrior, an ATO veteran Igor Kirilchatenko and he was also an assistant director. The events on the scene turn out like this – a Soldier who returned home from the war, stops to have a rest in a cafe where the music of a hostile country is broadcast, he makes remarks, for which he is severely beaten, as a result he loses consciousness. Falling into coma, the Soldier is trapped in the captivity of his memory, he is in a transitional state between the inner and outer worlds, where he meets himself in other personalities. He is in danger and he is constantly looking for a gun as means of his salvation. In this state three entities are born - War, Love and Nature. Based on memories of hostilities, these entities create a new reality, thus removing the hero from the living world. His mother struggles for his life and his return to the real world. But it is not easy to distinguish fantasies from reality.

It can be determined, firstly, that the comparison of "war" for the people who fought to defend their homeland was the training that professional actors should master during their training. To have such a level of perception, the actor can learn the principles of acting and controlling his body and feelings for many years. The giants of this performance - the author and the protagonist experienced the events that are happening in the East of the country today, so the acting of the 'Soldier' was perfect. The movements were verified, every word and every event happened in a way that looked real. Here you can put together a brilliant symbolism of sunflowers in the hands of the actors with the combination of life essence and theat-

rical scene. The events are considered not only as a moment of war and peace, but also as moments of “foreign” sentiments in the country, namely words and manners. People of different views cannot unite, they separate the country, and it is a great tragedy for the people who protect our world. The great power of the word is shown. It is a school for spectators that they bring with them to develop their diplomacy, their mother tongue and the general culture of society.

In the play we see the tragedy of the hero, his experience of war and fears. When he returns to the peaceful territory, he sees free domination of the enemy that almost “kills” him. So what kind of enemy is that, Russian pop music or what? It is this work that leads us not only to the morality of tolerance, but also to the morality of national culture principles, national identity of society. If not the hostile culture, what would have happened then?

The play reveals the need to unite and develop the society culture. Where do we see this? We see it in the theater, we hear it in the theater. At the end of the performance, the audience was impressed, somebody simply applauded and somebody cried. People who do not understand, do not go and watch such performances, but those who watch, become more and more in number, and at the expense of their theatrical education, the structure of society changes. The theatrical exaltation makes it possible to feel the heartache of families that uphold the interests of our young country, and this pain germinates with a new grain of the fruits of freedom of choice. Would it have happen ... if?

Equally relevant is the play “The Wall” by Thomas Mettler in I. Franko National Academic Drama Theater in Kyiv in connection with events happening in the country right now. The play highlights the events of the war in a city occupied by the enemy and the desperate state of people, their understanding of irrevocable time, as it was will never be again. The gap between the occupied city and the rest of the world is a wall of separation, physical and moral. But there is nothing completely separated in the world. Overflows and consequences of events are restriction and destruction of life energy, misinformation of people, and all that “grayness” that we see in the performance - gray costumes of actors, scenery, just remind us of it. The main task remains to preserve humanness and not to become a ‘subhuman’ such as those who flooded the city. The creative profession of the actor may be appropriate and may help the indigenous people of the city to survive devastating events of the war. Such lack of society development requires novelty, new information, a breath of fresh air, and theater can satisfy such needs of society.

Such a difficult time is necessary to clear the dirt, the “darkness”. This state of the country is the moment of birth, in various places there are fluctuations trying to resolve the issues of morality, the essence of war. They can use that war for insanity for the sake of self-interest of a person or a group of people, and devastating consequences are destroying the whole world. Broken walls, or still ruined

will fall anyway. The wall can be not only physical but also moral. The essence of war process does not give results, but it is the essence of development and everything repeats, everything happens again. The Wall is a repetition. We remember the Berlin Wall, which existed until recently. When the wall was destroyed, people were united but the time of separation affected consciousness. Uniting did not come to an end. With the rapid development of society, walls are becoming more sophisticated. But ignoring the laws of nature does no good, it's like a "bird in a cage."

*Conclusions.* From the above material, it can be concluded that the actor should work on improving himself all the time – apart from acting trainings, it is necessary to have theoretical knowledge – to study traditions, cultures and modern trends in order to reflect properly events in the performance, thus, enhancing his socio-cultural component, and through performances educational component of society. The large flow of Western cultures to Ukraine makes it possible to produce plays which character is inherent in other cultures (Western European traditions and even America). In order to convey authenticity, actors must study culture, styles, behaviour of those people in order to make the play real and wouldn't be like a parody. Using a language that can not only be recited but also heard through a song.

Considering the play 'Proposal at Goncharivka' we approached the topic of music and choreography in Ukrainian theater. This topic needs detailed research, so it will be further developed in our next article. The ability to convince the viewer in this way is possible through vocal training and choreography.

*Research novelty of the obtained results.* Democratization today has the potential to make the theater an economically profitable process that can lead to its development, and thus to the elevation of cultural education in society. The changes that have taken place in recent years have raised the status of theaters in the eyes of young people, which is our future.

### References:

1. Veselovskaya G.I. Bilshе nizh teatr. Natsionalniy akademichniy dramatichniy teatr imeni Ivana Franka. 2001 – 2012. – K.: VD «Antikvar», 2019. – 328 s.: il.
2. Kurbas L. Aktor u nashii sistemi I pratsia nad rolliu/ Les Kurbas// Berezil: Iz tvorchoi spadshchini. – K.: Dnipro, 1988. – 51 – 59 s.
3. Kurbas L. Teatr aktsentovanogo vplivu/ Les Kurbas// Berezil: Iz tvorchoi spadshchini. – K.: Dnipro, 1988. – 60 – 64 s.
4. Rogovskaia E.V. Folklor iak zasib kulturnoi adaptacii i vihovannia patriotichnoi svidomosti osobistosti [elektronniy resurs]: – Rezhim dostupu: <http://eprints.zu.edu.ua/1797/1/05revpso.pdf>
5. Pasternak D. [elektronniy resurs]: – Rezhim dostupu: [https://ye.ua/kultura/40630\\_Narodni\\_pisni\\_ukrayinskiy\\_kolorit\\_yaskravi\\_dekoraciyi\\_\\_u\\_](https://ye.ua/kultura/40630_Narodni_pisni_ukrayinskiy_kolorit_yaskravi_dekoraciyi__u_)

Hmelnickomu\_pokazhut\_vistavu\_komediyi\_Svatannya\_na\_Goncharivci\_.html

6. Scenografiya. Poshuki vlasnoi estetiki (1920-2020)/ Uporiad.: A.I. Aleksandrovich – Dochevskii; tekst O.V. Kovalchuk. – K.: VD «Antikvar», 2019. – 304 s.



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