Humans, Nature and Culture in the Information Technology Environment: European and Russian Models of Modern Park

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Abstract—**Interaction and mutual penetration of different cultures, ways of relating to nature and technology are particularly important in the modern age of informatization and globalization. This study juxtaposes two types of modern park cultures taking as an example Western European cyberparks and cultural historic codes of the "Artek" park in Crimea. The paper discusses problems of the role of philosophically methodological, culturological and creative attitudes to traditions and innovations.**

Keywords—engineering, nature; technology; methodology; park; cyberpark; cultural code; East; West;Russia; Europe

I. INTRODUCTION

Informatization and computerization of all areas of social life and global processes, encompassing nearly all countries, lead to establishing informational society as a modern type of technological civilization all over the world [1] [2]. At first glance, uniformity, erasing of cultural differences, loss of national identity prevail globally and lead to forming the person of a universal type. However, at the same time, at deeper levels of these processes there are tendencies for mutual penetration and convergence of different types of culture and human attitude to nature and technology, and on the other hand — for detachment, localization, preserving national cultural codes, and even return to the past [3].

Different and even opposing ways of relating to growing and quickly changing influence upon humans, their inner nature and environment, are detected in park and garden culture of the East and West, in particular, Western and Russian civilizations. Spontaneous processes, containing heterogeneous tendencies, demand deliberate attitude, mutual understanding, and creation of appropriate models of imaginative and responsible participation in designing innovative and conservationist behaviors for both experts in building natural and urban environment, and training of personnel, and members of the public [4].

II. EASTERN AND WESTERN ATTITUDES TO TECHNOLOGY AND NATURE

Different and even opposing types of attitude to technology and nature are rooted in long-standing cultural, civilizational, and historical origins. V.G. Gorohov wrote about different "Philosophies" of technology in different cultural traditions:

"In the most general form we can point out two main routes of perceiving technology in ancient cultures with indivisible religion, technology, and art:

striving for harmony of society and nature in ancient India, ideas of supporting existing social and natural order and practical enginery in ancient China;

way of aggression in Egypt and Mesopotamia, i.e. 'War' with nature (attacking it) with the aim of appropriating its reaches, creation of a myth of the machine (the social organism as a megamachine)" [5].

Indian civilization rejected the use of machines in ancient times, however in China machinery is used not to conquer, but to adjust to nature. This philosophy of technology and nature is reflected in park and garden art of China, Japan and other Eastern countries.

Greek culture does not a directly follow the aggressive Mediterranean tradition. It kept cultural codes of mythopoetic interaction with nature, absorbed into itself elements of the Eastern aspiration for harmony and discovered a way to achieve harmony of society and nature in Logos. However on the whole this philosophy of nature

was oriented to changing natural environment and creating artificial habitat instead of adapting to nature.

Heraclitus' priority of the unity and struggle of opposites prevailed over Homer's call for harmony through universal reconciliation and overcoming of struggle between people. This Logos was transferred to attitudes towards nature and technology.

In Byzantine era the Christian Logos embodies synergistic way of cooperation of man and God in mastering nature. Cosmocentric approach to nature gave way to theocentricity which contains in itself principles of divine harmony. Western Christian world already had characteristics distinguishing it from Eastern Christianity in the Middle Ages. It broke out of the constraints of ideative medieval civilization during the Renaissance. Anthropocentric type of attitude towards nature emerged. In recent decades technocentrism gathers momentum in the new European material and sensual civilization based on scientific and technological progress.

So, it is possible to distinguish three philosophies of approaching nature and technology, delineated by N.A. Nosov: Eastern, Eastern European and Western. The Western development model is about creating and using technologies for making easier everyday life and all human activities. "Both Eastern European and Eastern Civilizations Try to Solve One Global Problem – Transferring Spiritual Achievements into Everyday Practical Life" [6].

Russian civilization has Eastern European roots and, being Eurasian, evinces some traits of Eastern cultures. Western type of cultural and civilizational development gradually occupies the New World and in recent decades spreads into Eastern civilizations which outperform the West in some areas of technological progress. Today it is already possible to question the prediction by M. Heidegger that someday a free attitude towards technology can emerge in China, which cannot, in his opinion, arise in the West. But his another prediction of emerging of free attitude to technology in Russia is still has chances to become real, though this outcome can hardly be called inevitable. Everything depends on historic choice of the nation, inheriting those traditions.

Let's look at manifestations of Western European and Russian attitudes towards nature and technology with examples from modern trends in park culture.

III. CYBERPARKS: PROBLEMS OF TECHNOLOGY, METHODOLOGY AND CULTUROLOGY

In recent years cyberparks gain popularity in park and garden construction projects and in landscape architecture in the West, in particular, in Italy, Germany, and other European countries. They are based on principles of interconnection between information and communication technologies and public spaces with support for strategies of enhancing cyberpark usage and attractiveness.

The main aim of cyberparks is creation of research platform for interconnection between information and communication technologies (ICTs) and creation of open public spaces and their importance for sustainable development of urban communities. Studies of the consequences of this interconnection are carried out from the point of view of social, ecological, and urban design.

ICTs are a driving force, media, and tool, which acts as an intermediary between users and their virtual and real world. Public places have many functions, including territory for public meetings, where people can interact in the open and exchange information. ICTs beget and make possible innovative social practices in the open which force spatial and social experts to use them in politics, methodologies, design and research for creation of flexible and inclusive urban places [7] [8].

CyberParks deals with possibilities and risks, which ICTs offer users, through evaluation, design, and usage of public spaces. It takes advantage of mixing green experience with digital interaction by way of exchanging knowledge, experience, and ideas and also analyzing public spaces.

The concept of cyberparks is developed and introduced under the auspices of COST (European Cooperation in Science and Technology), a pan-european intergovernmental organization. This international non-profit association has a mission of supporting groundbreaking scientific and technological projects leading to new concepts and products with the aim of enhancing European research and innovative potential. This allows researchers, engineers, and scientists jointly develop their own ideas and take new initiatives, advancing multi- and interdisciplinary approaches. Spendings are aimed at promoting more effective integration of countries with less developed research ability into Knowledge Centres of the European research domain.

Anna Khromova, one of the authors of this article, has first-hand experience with this new trend in organizing open public spaces in Western European information-oriented society. She encountered problems only partly known in Russia. They are linked with growing penetration of digital technologies (smartphones, smart watches, tablets, etc.) and Internet, and also their use in public places (parks, gardens, squares). This rapidly growing mix poses two main questions. Firstly, how can we use digital technologies to encourage people to spend more time outdoors and pursue more active way of life? Secondly, what possibilities open to technologies in order to gain more knowledge about users and usage of public open spaces?

Experiences, shared within Cyberparks project, point at ICTs ability to enhance communications with (potential) users, transform creation of public open spaces into interactive process and build creative capabilities, maintain community participation and expand rights and possibilities. Besides development and implementation of mobile applications as a method of interaction between people, spaces, and technologies, there emerged a task of implementing possible advantages of technologies both for users and developers.

First of all, project developers from Russia had to solve theoretical, philosophical, and methodological problems. In

our approach characteristic priority of technologies was confronted by primacy of philosophy and methodology, and then culturology, dominated by the nature of spiritual reality of the man and his environment. We were helped by knowledge we got from studying philosophy of science and technology, in particular distinguishing between technology and methodology. Technology is a system of operations which we need to execute upon an object to get the desired outcome. On the other hand, methodology, according to definition by Russian philosopher G.P. Schedrovitzky, is an activity carried out in order to orchestrate activities of a subject. So, methodology is oriented towards a human being as a subject, as a personality, while technology is applied to an object which can be represented by a human being.

Juxtaposing the human being, nature, and culture as objects of technological practice, the developers found that Western notion of culture differs from its understanding in Russian mentality [9] [10]. Russian understanding of culture, outstandingly presented in the works of D.S. Likhachev, looks at it as a living, animated thing in constant dialogue with the man. In the West culture is, first of all, an ideal content, detached from the man, objectified, and embodied in material objects created by people. Culture, as well as nature, does not have agency or rights, as listed in the "Declaration of the Rights of Culture" by D.S. Likhachev. Intercommunication with nature and culture, as between people, is understood and practically implemented through communications technologies as exchange of information and interactive cooperation. In Russian culture, based on intercommunication, this notion denotes touching the soul of another, communion with his or her inner world, nonviolent, loving penetration of personalities into each other. It must be noted, though, influential ICTs and Western mentality quite quickly making inroads into Russian society, especially into youth culture.

It seems impossible to transfer notions of traditional Russian mentality to Western European soil, especially taking into account dominance of the technologies. However we deemed it very important to understand and express reality, totally permeated with ICTs, through our concepts and categories. This understanding should be reflected in the process and results of planners' activities. Works of modern Russian philosophers A.L. Dobrohotov and A.T. Kalinkin on culture [11], V.S. Stepin and others on classics, non-classics and post-non-classics [12] [13] were useful when developing methodology for creating cyberparks.

According to Dobrohotov, the urban environment as a hypercomplex system contains the following components: Nature, Culture and "Spirit" ("Geist"). This third component seems especially important because of addition to objectified understanding of culture. It is a teleologic creative idea, a man as a creative source: "Spirit" that does not only create culture but defines the man himself. This triad formed a base for tripartite methodology for activities of designers.

Stepin's concept allowed looking at the cyberpark from the point of view of Post-Non-classical stage of development of science, technology, culture, and building a historic park typology: first, classical park is a mechanism; second, non-

classical park is an organism; third, post-non-classical park is a self-developing complex open system. The park is considered a system, commensurate to the human being. The man is its part, as an example of such "Union" of the human being and park. CyberPark is a concept of open spaces, combined with information technologies and forming a single system, probably, capable of self-development.

Russian landscape designers concentrated mainly on theory and methodology, and European — mainly Italian — designers, working in close cooperation with us, dealt mostly with technology. These problems are described in more detail in the paper [14] and other our publications. In general, results are positive, though not all plans were realized and there were questions, needed to be discussed and solved. First of all, those are problems of convergence of Western technological trends and innovations with Eastern and Eastern European traditions.

IV. CULTURAL CODES OF HISTORIC LANDSCAPE OF THE RUSSIAN PARK

Modern parks — in particular in Russia — are oriented partly towards new tendencies and technological solutions, but in no small way attempt to embody classical and neoclassical approaches. We single out historic landscape of "Kiparisny" park in the International Children Center "Artek" among other park and garden objects oriented towards Russian cultural codes.

Researching landscapes of Southern coast of Crimea, it is impossible not to look at the history of our state, starting from incorporation of Crimea into Russian Empire in 1783, when Catherine II did everything possible to revitalize the blessed land, and till the modern times [15]. "Kiparisny" pavilions are the oldest in the "Artek" Center [16]. Now it is an object of garden or park art of regional significance "Kiparisny" and listed as a protected natural area.

Gardening in Crimea existed since the times of ancient Greeks, but it took totally different direction on the Southern coast starting from the late XVIII century. First of all, it was about creating beautiful parks and palace and garden complexes reflecting tastes, social and financial status of their owners. So any protected object of cultural heritage can be categorized as a cultural code: terrain, layout, spatial structure of a park, artificial hydrologic system consisting of water reservoirs, ponds, fountains, various architectural elements (colonnade, arbors, and grottos) including tree arrangements.

That's why it is so important today to carry out inventarisation of parks on the Southern coast of Crimea and in particular, in Hurzuf and Artek. It allows finding surviving historic elements of the parks which contain information about a historic period and present historic codes in space and time. Knowledge, understanding and ability to "Read" such codes allow to newly evaluating informational space of garden and park art.

This is especially important for territories of Russian country estates regardless of the climatic zone in which they reside. That's because Russian country estate culture is

characterized by saturation of space with elements creating special spiritual component and infusing our landscapes with warm-heartedness. Historic landscapes of Southern Crimean coast together with mountainous terrain, sea waterfront and Mediterranean vegetation are on par with European in beauty and spaciousness.

"Kiparisny" park preserves the following "Cultural Milestones" from our history:

First, remnants of a Genoese fortress (V-XV cc.), Pushkin Grotto and colonnade, the villa of prince Kavkasidze with a large park, and the mansion of A.I. Guchkov (1875) with household outbuildings, a patio, retainer wall, and fountain (4 terraces).

Secondly, historic layout of two villas — belonging to prince Kavkasidze and A.I. Guchkov — is preserved almost entirely, and that of the Maksimovich villa is preserved partly. Those objects form the basis of the modern park.

Third, the system of historic retainer walls and stairways (15 of them) in satisfactory conditions. They form somewhat modest but logical network of paths and arrange existing spatial structure of former Southern villas. Special attention should be devoted to terraces garden which requires recovery of the vegetative composition.

Fourth, after inventory analysis we found historic plantations and old-aged trees — 332 in total — aged between 100 and 200 years. Also, as we found out, the name "Kiparisny" comes from the fact that Mediterranean cypress represents 53 % of all old-aged trees. The cypress unifies compositionally disparate areas of former villas with their preserved elements into a single relatively harmonic historical and cultural space.

Fifth, we found out 7 types of historic plantations which can be discerned today and which were widely used for creating green spaces at Hurzuf villas at the end of XIX and at the beginning of XX centuries:

- Planting rows of trees along stairways for shadow, because young parks had open spatial structure — in 4 cases. In the fifth case trees were planted along the stairway on one side only;

- Planting in rows to highlight the inner space of the yard (square)

- Marking out legs of curtain walls or their corners;

- Planting trees in semicircles of different radiuses;

- Fixing of corners of Kavkasidze mansion;

- Classical solitaires (in the centre of curtain walls);

- Creating of classical triangle groups.

Sixth, all listed surviving architectural elements, types of planting, and old-aged trees require careful treatment because all of them can be categorized as cultural codes of historic landscape park "Kiparisny", which is especially valuable in the "International Children Center Artek".

V. CONCLUSION

In interaction of Western and Russian trends and traditions of the garden or park art it is important to strive, first of all, to mutual understanding. Adherence to cultural codes of your own people does not mean mixing disparate elements which begets chaos, as in multiculturalism, or isolating and refusing to adopt innovations. The key is striving for universality and panhumanism which is the essence of Russianness according to F.M. Dostoevsky. It is ability to understand and express the culture of other peoples and the soul of a person of any civilization. Important prerequisites for this are deeper theoretical studies, discussions and deliberations, audacious creative search for innovative solutions, educating new generations, capable to imbibe historic cultural code of their nation and pass it to future generations, and learn from other people sought-after, timely knowledge.

The most important thing in building gardens and parks, as D.S. Likhachev noted in his work The Poetry of Gardens, is not a pragmatic or even aesthetic function but narratives, coded in the language of this art in historic and cultural codes of the civilization. Understanding of these narratives depends not only and not so much on decoding technologies but on poetics, poiesis as genuine creativity, ability to put one's soul into his or her creation. Technology should play the role of a tool for creating latent narratives, "Accomplished Metaphysics", which requires formulating free attitudes towards it.

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