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**STRATEGIES FOR FORMATION OF ANTI-VANDAL URBAN  
ENVIRONMENT: ECONOMIC, ERGONOMIC, CULTURAL AND  
PSYCHOLOGICAL RESOURCES**

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***Abstract***

In the age of information technology, intensive development of science, the acute social problem remains unchanged – unauthorized transformation or destruction of public property or vandalism. Development of “smart city technologies” should be inextricably linked with the path of anti-vandal protection and prevention, both through direct methods, and indirect: cultural, architectural, psychological, economic methods, including marketing. This is the optimization of the location of urban facilities and the creation of an ergonomic environment and a psychologically comfortable atmosphere in the territory. As a rule, vandalism has an unambiguous and extremely negative assessment, since it has material costs due to changes of the environment, including the social environment, when it is being unattended, can cause epidemics of deviations.

In the study, the authors emphasize strategies to form an anti-vandal city environment. The problem of organizing a megapolis anti vandal environment is considered as an interdisciplinary approach. The information strategy includes “openness” of information about the city budget, the strategy of sublimation is realized by the organization of population leisure in a megacity, strategy of improvement is based on the ergonomics of the urban space. These strategies can be the basis for creating a comfortable megacity environment.

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**Keywords:** Competitiveness of the territory, vandalism, urban environment, urban cultural space, prevention of vandalism, urban space ergonomics.



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## 1. Introduction

Vandalism is an acute social, economic, legal, and political problem, but numerous manifestations of this problem have become the habitual background of human existence in modern cities. Nevertheless, the study of this phenomenon in native and foreign science is not spread. The absence of complex interdisciplinary representations about this phenomenon, its origin and genesis, predictors and forms of manifestations both in the real and virtual environment of the city makes it impossible to prevent vandalism and its destructive consequences effectively. Vandal manifestations are dangerous for modern society due to their consequences associated with a destroy of the aesthetics of the environment and obvious economic losses due to destruction, deterioration, costs for the restoration of public, municipal, state property, historical and cultural monuments. Nevertheless, the study of vandalism as a strategy of interaction in the information space of the city, assessment of economic damage from its consequences, identification of vulnerability zones for vandal manifestations from the perspective of the subject and environment, based on the achievements of modern psychological, sociological, cultural, and economic sciences, allows one to:

- prepare an effective system of prevention of vandalism in the urban environment;
- identify public moods by markers of vandal activities;
- determine the role of urban environment in the provocation of destructive behavior for the further management of urban building and improvement of urban space for increasing the quality of life and social well-being of the population.

## 2. Problem Statement

The urban environment of modern cities does not correspond to the needs and demand of the population (“Zaryadye Park” was opened in Moscow and became a subject of vandalism the day after the opening (Centre for Traffic Management, 2011). This may be due to a conservative approach in the design of the urban environment, the purchase of low-quality materials and components for the organization of the city's space, as well as low awareness of citizens about the features of the organized environment. As a result, the money were spent both for the purchase of these materials and for compensation for damages caused by vandalism in relation to the materials purchased. (Expenses for the construction of “ZaryadyePark” near the Kremlin amounted to 14 billion rubles, of which 4 billion rubles were spent on landscaping. At the same time, vandals destroyed about 10 thousand plants and the roof of the “Media Center” pavilion/ Total damage of the park caused on the first day was about 400 thousand rubles (Centre for Traffic Management, 2011).

## 3. Research Questions

What are the main components of the environment of the city, which do not provoke destructive strategies for residents' vandal behavior?

## 4. Purpose of the Study

The formation of a model of anti-vandal urban environment and its components, taking into account specific strategies for its implementation.

## 5. Research Methods

The study of vandal behavior in Russian studies is presented within the framework of psychological science (Vorobyeva & Kruzhkova, 2013). In foreign studies, vandalism is discussed in many ways: as a phenomenon at the junction of deviation and art (Y. El Rashidi, E. Mushtaha, F. Hamid, B. Luvaas, etc.), as a historical reality (F. Brandfon, J. Barnatt et al.), as a problem of educational institutions (G.R. Mayer, P.A.C. Van Lier, F. Vinaro, etc.), as a strategy of human-urban interaction (L. Barr, T. Yilmaz, R. Olgun, G. Diogenes, E. Richardson and others). Also vandalism is considered from the standpoint of statistical indicators of damage in various sectors of the national economy of individual countries: industry, transport, construction, etc. In recent years (2010-2016) in foreign publications, special attention has been paid to information damages in the Internet, their causes, development, likely consequences and measures of confrontation (A.G. West, S. Kannan, I. Lee, S.M. Mola-Velasco, S. Heindorf, A. Susuri, J. Tramullas, P.B. de Laat, etc.). In the approaches of economic science, some theories that have been developed indirectly describe the environmental regulation of the individual's behavior (the theory of transaction excerpts of Coase and Menger, the theory of the behavioral economy of Arieli, the theory of connection between the engineer and the Veblen's value system, the theory of bounded rationality of G.Saimon, the "basic psychological law" of J. Keynes (the "Keynesian" model of a man), the theory of the "irrational beginning" of J. Akerlof and R. Schiller, the Comon's institutional economics). Nevertheless, despite the existence of separate publications on the subject of studying environmental and personal factors of vandalism in the urban environment (G. Brown, A.S. Devlin, M. Duneier, H. Molotch, etc.), a comprehensive study of this problem in the present conditions of dynamic information virtual and real environment of urban space is not carried out.

In our study, we consider the problem of forming anti-vandal urban environment from the perspective of an interdisciplinary approach. Thus, T. Veblen in the theory of "idle class" argued that the behavior of the "idle class" is often due to the desire to emphasize its privileges through "demonstrative consumption" and "demonstrative waste", and the lower classes sometimes try to copy the behavior of the "idle class". F. Night has the priority in the identification of a special kind of risk-insecure uncertainty. Both authors occupy extreme positions in assessing the influence of the environment on a person. The market through the formed city environment, through the media, advertising, affects the person, his psyche, introduces his developing and deforming elements, the result of which is vandalism.

Difficulties in the formation of optimal strategies for anti-vandal urban environment are associated with a state of modern culture that sociologist Z. Bauman defined as "fluid modernity" (Bauman, 2008). The meaning of this metaphor is the attempt to save the modern citizen from the bonds that his city traditionally imposes. This, obviously, is the reason for the paradoxical status of urban vandalism. On the one hand, this practice is the realization of the creative potential of the subject ("I see the world", "I remove barriers, impediments, resistance"). On the other hand, visual representations of vandalism cause a natural rejection of the majority of urban inhabitants.

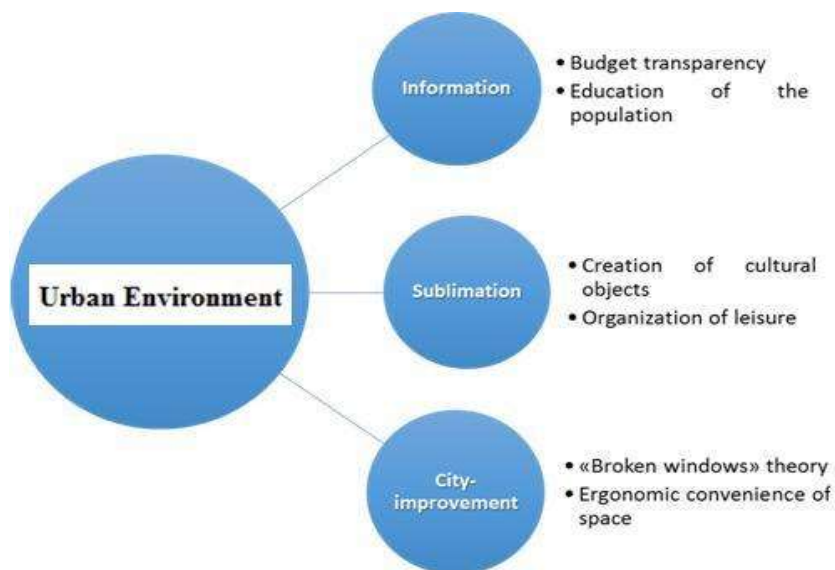
## 6. Findings

The problem of assessing vandalism is quite complicated. As a rule, society does not notice the significant damage caused by vandalism to the state, municipal and private property. In Moscow, the

consequences of vandalism in the metro are equivalent to 55 million rubles for 2013, and 44 million rubles – for incomplete 2014 (In the suburbs, 2014), the greatest damage is caused by unauthorized painting of cars (graffiti). Traffic lights damages are amounted to 1.8 million rubles in Moscow in 2014 (Jacobs, 2011) and another 3.5 million rubles – for Moscow land transport.

The government of the Russian Federation in 2017 allocated 20 billion rubles from the federal budget for the implementation of the national priority project "Urban Environment and Housing and Utilities", and the whole implementation of this national project in 2017-2020 will require 71 billion rubles from the federal budget of the Russian Federation (Bauman, 2008). According to this project, the Ministry of Construction of the Russian Federation plans to increase the level of satisfaction with the quality of the urban environment to 80% by 2020. It should be noted that vandalism is considered by us as a marker of dissatisfaction of the subject with the environment. According to American sociologist S. Karr, satisfaction with the environment is associated with comfort, rest, passive and active interaction with the environment (Centre for Traffic Management, 2011).

Based on this, the following environmental features are distinguished: utility and functionality, the ability to reduce individual consciousness, work according to the laws of dramaturgy – compensation for the world's inferiority (Centre for Traffic Management, 2011). Thus, it is possible to point out the main characteristics of the strategies for the formation of anti-vandal urban environment (Figure 01)



**Figure 01.** Strategies for the formation of an anti-vandal urban environment

The information strategy includes budget transparency and education of the population. The transparency of the budget is defined by us as the accessibility and understanding by the population of the interdependence of their destructive actions in the environment with financial consequences for them. Education of the population implies an increase of legal and cultural competence. The information strategy is implemented through a set of tools for the development, dissemination and use of information products in the urban environment. As a rule, in the role of information holders can be: the media, local authorities, non-state structures, libraries, the Internet. The meaning of transparency of the budget and budget process is not only the availability of information for society. Transparency allows each citizen of the city to

understand the language of the budget and its figures, see what the taxes are used for, and transparency of the budget creates conditions for discussion.

The strategy of sublimation includes the creation of objects for the subcultures of the city (for example, sites for street art, skateboarders, etc.), as well as the organization of residents' leisure. Leisure, as a rule, acts as a structural part of free time; its content is always filled with activity. The main feature that differentiates leisure time from free time is the possibility of choosing activities based on one's interests and spiritual and moral preferences. A city dweller can manage leisure time at own discretion in accordance with his value orientations. There are several types of leisure: developing, entertaining, domestic, sports, socio-political, destructive. There is the need to form an anti-vandal city environment in order to prevent the spreading of destructive leisure among residents of the city. It is necessary to direct the regulation of residents' leisure to the formation of such type of leisure activity, which would correspond to the needs of the society in organizing socio-cultural leisure, since leisure is perceived as the main sphere of life activity, and the general satisfaction with life in the urban environment depends on satisfaction with leisure.

The strategy of improvement is based on the theory of "broken windows" and the ergonomic convenience of space. The authors of the theory of "broken windows" suggest that vandal actions are stimulated by deformations of the integrity, orderliness and normality of the environment (Mishina, 2012). O. Newton agreed with the theory of "broken windows" in his "architectural" approach, he suggests that most of the acts of vandalism are subjected to the most defenceless objects (Vorobyeva & Kruzhkova, 2013). The ergonomic convenience of space will save the environment, as well as exclude destructive behavior in relation to those objects that are uncomfortable and interfere with life activity in a given environment.

Thus, the creation of a comfortable environment for a dynamically developing megalopolis must correspond to several conditions:

$$E=St+Din+F+R+AC-NgSB-EB \quad (1), \text{ where}$$

E-urban environment, St-comfort of the urban structure, Din-dynamic of urban infrastructure, F-freedom of choice, R-reasons (motivators and meanings), AC-possibility of anticipatory behavior, NgSB-negative behavior stereotypes, EB-ecological barriers.

- St- comfort of the urban structure: more than a third of citizens of Moscow said that they do not like the city and they stay in it temporarily because of the need to get education or work.
- It is important that the infrastructure of the city allows the resident to realize the needs of livelihood and leisure quickly, qualitatively and without additional efforts: proximity of sports to the place of residence, entertainment centers, and centers for additional education, recreational spaces, and playgrounds. It is important that the level of improvement corresponds to modern paradigms, and doesn't produce a depressing impression on the citizens.
- Din-dynamic of urban infrastructure, its flexibility, adaptability to a changing society. Adaptation of the existing infrastructure and organization of a new one in accordance with the needs of citizens, the organization of its accessibility and convenience, dynamism in the spirit of time and, at the same time, the formation of the target vector of the development of community of the city.

- F- freedom of choice, choice of available behavior options, the possibility of applying the cultural norms and rules established in the territory, the traditions, the possibility of adapting them to the current requests of the resident, and on the other side, the possibility of socializing the needs of residents.
- R-reasons (motivators and meanings), studying the meaning of the choice of the territory of residence and the development of a building design and land use, taking into account the needs of the residents of the district, creating conditions for the formation of socialized meanings that develop both residents and society;
- AC-possibility of anticipatory behavior, predicting the development of the situation and the alternative consequences of one's behavior. We need clear management of the territory, the inevitability of the punishment for antisocial behavior and, what is more effective, encouragement of prosocial behavior. So, when somebody puts recyclable garbage into a vending machine, he can get coffee chocolate or fodder for homeless animals as payment, - we reduce garbage in the streets, we socialize citizens.
- NgSB -stereotypes of negative behavior have been already formed in the territory, as predictors of the endemic spread of deviations including vandalism. So the stereotype of "unfavorable region" increases vandal activity in the territory (Vyrva, 2017). We need opportunities to oust negative stereotypes, transform them into socially desirable ones, replace them with new ones.
- EB-ecological barriers. Constant monitoring of the ecological situation, environmental management, organization of ecological education, active gardening of the city, renewal of technologies for waste collection and processing (formation of conditions and motivation for separate collection of household waste, removal and processing of solid household waste, organization of use recycling by enterprises, and promotion of alternative modes of transport (bicycle, scooter, etc.).

One of the ways to increase the ergonomic convenience of the socio-cultural space of the modern city is an attempt of functional zoning of the architectural environment. Traditionally, the architectural environment of the Russian city has a binary functional structure, where the residential and production environments act as antagonistic principles. The modern Russian city "lacks" public space. An attempt to "diversify and add" new types of urban environments, for example, public environments with their further internal specialization and orientation to alternative strategies for consuming the socio-cultural space of the city, is a justified way out of this prevailing mono-stylistic illiberality. The urban planning theorist D. Jacobs claimed that the city needs the so-called "Generators of diversity", which potentially can "revive" its environment (Jacobs, 2011). As such "generators of diversity" can act not only traditional commercial and retail enterprises, but in many cases those that stimulate the diversity of cultural opportunities (schools, confectioneries, flower shops, sculptures, cinemas, etc.). Actually, according to D. Jacobs, the "recipe for diversity" consists of four rules: the district and its constituent parts must perform at least three functions for people; quarters should be short, and streets and corners, for which you can collapse - are frequent; a visual landscape of different in age and condition buildings should be formed in a district; it is necessary to have a high concentration of people, for whatever reasons they are here. An important observation is

compliance of all four rules – the absence of one of them reduces the ergonomic convenience of the urban environment.

## 7. Conclusion

Modern megalopolises are complex organisms, sensitive to changes in the socio-economic environment. It is impossible to study social processes in the structure of a megalopolis within the framework of one scientific paradigm, a trans-disciplinary approach is necessary and simultaneous application of opposing theories is necessary, too. In addition, the work on the socialization and adaptation of residents to changing environmental conditions is needed, which can be realized through the permanent monitoring of needs and social moods, the creation of comfortable conditions for every inhabitant of the city through the constant modernization of urban infrastructure, planning ergonomic development of residential and business quarters. Without an outstripping development of the infrastructure of the city there is an endemic of deviant behavior of citizens, as a marker of dissatisfaction with the environment. This is how vandalism increases, including due to the impossibility of responding to life situations if the infrastructure of the megalopolis is not adjusted to new needs.

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