

OPTIMIZATION OF THE ELITE DWELLING WITH THE INDICATORS OF PSYCHOLOGICAL COMFORT

*V. Kalashnikova, PhD student
National aviation university, Ukraine*

INTRODUCTION

Relevance of the topic: social processes, material-space transformations of cities and lifestyle changes in Ukraine have put forward new requirements for elite dwelling designing. There is a need to create perspective models of elite dwelling which can provide a complex comfort of living, including physiological and psychological aspects.

Designing a dwelling is very complicated optimization problem. How can conflicting physiological, psychological, social and other human demands be considered against the background of numerous external factors and financial restrictions? How, at least, to assess the impact of each of these factors, different in quality, into the general state of comfort?

The use of standard optimization methods, similar to the one described above, is quite difficult here.

The only way is to use an evolutionary approach based on the systems' self-organization laws. In this case a compromise, quite viable in various situations, can be reached.

Analysis of latest research: J.N.Kovalev and N.M.Mkhitaryan developed a design methodology psychologically comfortable residential property for various psychotypes, but not treated task of determining links between social groups and psychological types, therefore, it is required to design a comfortable elite dwelling in various categories.

Aim: testing opportunities for application of methods for determining psychological comfort to find dependence between specific psychological needs and architectural and design solutions for elite dwelling, which should contribute to meeting the needs of people of different psychotypes.

Tasks: refinement of psychological characteristics of various psychotypes; definition of psychotypes prevailing for each social group; written of specific recommendations for architectural and design decisions, that are favorable for providing psychological comfort.

Expected scientific novelty: to determine terms of psychological, physiological and

biorythmical comfort at all levels of living environment for elite dwelling.

Expected practical implementation: the results can be used in the formation of elite psychologically comfortable of elite dwelling in the city and outside it, with the development of normative documents, teaching handbooks for designing different types of elite dwelling.

1. MAN, ENVIRONMENT, DWELLING

Let us look at the entire set of man-environment interactions. Evidently, the dwelling - a manmade system - can become effective only being in harmony with the connections developed over thousands of years between the man and the environment, not destroying, but refining them, adjusting them in accordance with the man's needs and his self-regulation possibilities [2].

Level 1 – integrity. Here a man and the environment are not isolated from each other as separate parts yet; however, the possibility of their separation already exists as some potential of free resources which can be used for this. Physically, the unity of the man and the environment is expressed, for example, in the fact that the man's body consists of the same elements and follows the same laws as the Universe. Mathematically, this unity is expressed through self-similarity, different symmetries and corresponding to them conservation laws, harmonic relations based on the "golden section" and Fibonacci numbers etc. If such relation did not exist, no interactions with the environment would be possible.

Level 2 – isolation. Here human self-awareness as the integral and self-sufficient whole separated from the world, his "inner self", or ego appears. The integrity manifests itself not only in psychic sensation, but also in the unique laws of a human body structure, its internal environment constant character, etc. Analogically, the Universe also represents a certain wholeness regulated by the laws of nature, rather than just a sum of separate objects.

Level 3 – actions and reactions. The existence of not only oneself, but also of the environment is realized, as well as impacts on it and feeling its feedback. For a man the reaction may be favorable and unfavorable, which is perceived in categories “good” and “bad”. The “knowledge of good and evil” takes place with the natural need to make and fulfill decisions, regulate wishes, etc., for which decisiveness and will are needed. For this level, generally, binary divisions are characteristic. Thus, for a man, there is a distinction between bodily and psychic components, left and right halves, male and female sex. For the Universe, substance and field, attraction and repulsion, space and time, etc. are distinguished.

Level 4 – space and time. Appearance of actions and reactions is followed by their arrangement in two categories (inheriting characteristics of the previous level, linked with number 2) which are generally called space and time. Based on the self-organization theoretical scenario, three parameters should be given to each of them. So it is indeed: space is three-dimensional; time includes past, present and future. Ternary divisions are just as characteristic for our consciousness as the binary ones. For instance, we distinguish energy, information and entropy, three months of summer, three social estates, etc.

Level 5 – receptors and sensations. On the basis of the same scenario, one should assume the existence of three organs of sense perception consisted of five elements. Indeed, we distinguish internal receptors, causing the feelings of hunger and thirst; interfacial receptors defining the equilibrium sense and coordination of movements; and external receptors – sight; hearing; the sense of touch, smell, and taste. Nobody knows exactly how many internal or interfacial receptors exist, however, as to the external ones, there are definitely five of them. Nature also includes phenomena and processes which have a quinary division, for example, five states of a substance five fundamental interactions.

Level 6 – nuances. Here each of the receptors distinguishes eight levels of one and the same action. It is done approximately. For example, we distinguish 7 colors (in ergonomics the eighth color, yellow-green, is added to them), 7 sound tones corresponding to 7 notes, etc. Experimentally stated Miller numbers, 7-9, are known. They characterize the number of similar objects that can be perceived simultaneously by an average man. In the same way, the perception of nuances of color and sound is quite individual, and it is quite difficult to generalize here. It should be mentioned that octal

structures occur quite rarely in nature, for example, for a small number of crystals. It looks as if at this level self-organization is not completed, and there are no other levels of interaction. Now let us examine the distribution of potentials. If we follow the law of harmonic relation (the whole relates to the bigger part similarly as the bigger part relates to the smaller one, i.e. in the proportion of 1:0,618), expressing the wholeness of the system, then the distribution of potentials among the levels will be the same as shown in fig. 1.

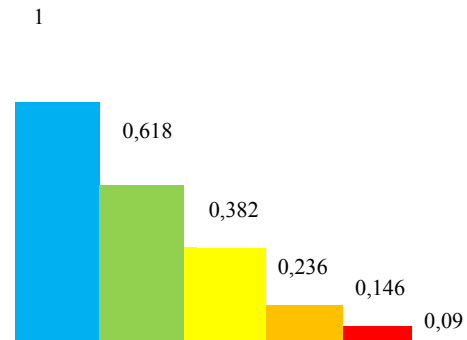


Figure 1. Distribution of potentials among the levels.

But let us heed the following. If we count the sum of the potentials of levels 2-6, it will be equal to 1,472, i.e. bigger than the potential of the first level, on the basis of which the further self-organization occurs. Everything falls into place if we recall that self-organization is impossible without external impacts. Thus, a missing potential is taken from the external environment, and its value is determined by the need to make up for the deficiency of the potential (Fig. 2). At that, it also obeys the law of harmonic relation.

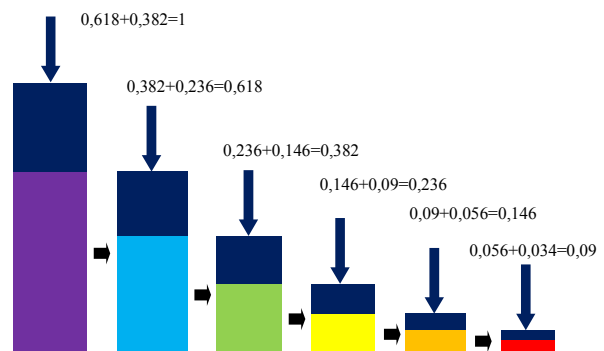


Figure 2. The influence of the external environment on the system’s self-organization.

Let us have a closer look at fig. 4 to make the conclusions which will be important further on. Weight coefficients of each of the levels should be

taken proportional to their potentials, i.e. 1, 0,618, 0,382, 0,236, 0,146, 0,09.

Based on the fact that the potential of any previous level is greater than the compound potential of all elements of the next level, it can be derived that its characteristics cannot be reduced to the characteristics of the elements of the following level.

To put it simple, these characteristics will be qualitatively different. Actually, it is the transfer of the part of the previous level's "quality-colored" potential to the following level that conditions the above mentioned inheritance of the previous level's characteristics. The same is true for the appearance of new features conditioned by the external influences.

There is an exception from this rule: the interaction at resonance frequencies can change a potential very strongly. It can have both positive and negative results. For instance, the presence of art objects or religious symbols may radically transform featureless interior – and it is a plus. But if the vibration frequency of the window blocks coincides with the noise frequency of a tram passing outside, the windows will tinkle and chatter and quite soon will deteriorate.

2. PERCEPTION AND COMFORT

Let us generalize the concept of perceptions at fig. 3, by which we understand the methods of interaction with outside world. Let us also group perceptions according to the levels shown in fig. 1 and 2.

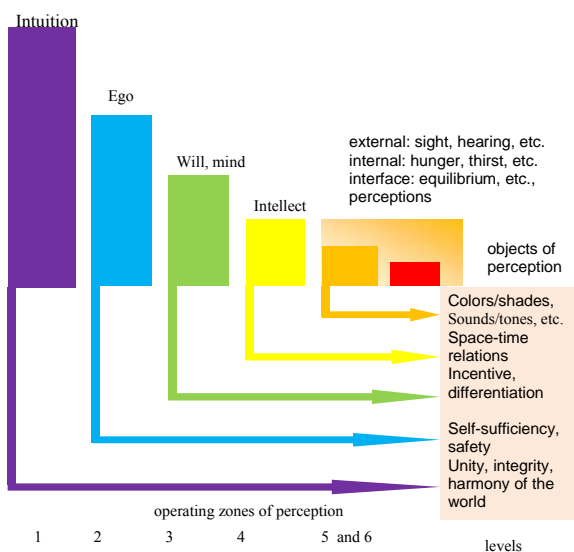


Figure 3. Structure, succession, and characteristics of perceptions.

Let us comment on Fig. 3.

1. The perception of any object goes not only "bottom-up", from individual signs to a generalization, but, more importantly, in the reverse order. The perceptions of the first levels create a certain context, and it is only in this context that special characteristics can be perceived;

2. In a similar way, ego, will, mind and intellect are not merely the analyzing structures, but they are also the sense organs with their specific objects of perception, without which individual experiences do not give the overall picture of the object. By ego we mean the person's perception of oneself as a whole; by will – one's desire to influence the world around, in accordance with the decision whether it is good or bad for the person; by intellect - the perception of spatial and temporal forms and relations.

3. The importance of separate kinds of perceptions is determined by their belonging to different levels, and the weight coefficients are determined according to fig. 3.

4. Within each of the levels, certain kinds of perception may have a greater weight coefficient than others. For example, a man is believed to obtain up to 90% of information by sight – so it is sight that must be distinguished comparing to hearing, smell, etc. The conditions of perception must also be taken into account.

5. Let us also note that no specific sense organs correspond to the sixth level, thus in future it must be regarded together with Level 5, as shown in fig. 3 by uniting them in one structure.

Let us continue our analysis and try to correlate those psychological characteristics which can be tested to determine the individual characteristics of a personality with the kinds of perception.

Usually one and the same term implies multiple characteristics reflecting different degrees of development of any kind of perception. For example, by a general term "intuition" we also mean mystical inclinations (this is from the category of extrasensory powers), as well as the insight and simply "the ability to feel the state of affairs."

At that, the degree of their development depends on the absolute value of the potential, characteristic for a specific person, and, partly, on external conditions.

Thus, let us show which characteristics will be used to describe each of the perceptions, and what sensations will each perception cause depending on its development. Note that the list of characteristics is not a dogma here; they can be replaced by the synonymous ones or supplemented.

Correction for temperament and age.

Temperament is one of the most popular characteristics of a person, known since the Antiquity. Back then 12 temperaments were distinguished. Today only four are distinguished; psychologists call them as follows: sanguine, choleric, phlegmatic, and melancholic persons. It is obvious that the temperaments can be linked to the value of the potential of a man, or the man's vital energy. Then the influence of temperament on the state of comfort/discomfort can be represented graphically (fig.4).

To a certain extent, the same pattern can be traced in the age-related changes: "sanguine" energy of children is eventually followed by melancholy inherent in many elderly people.

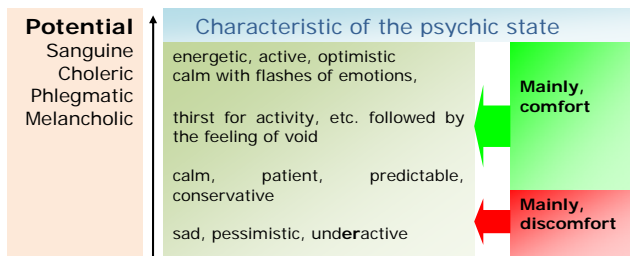


Figure 4. Influence of temperament on the sensation of comfort/discomfort.

To a certain extent, the same pattern can be traced in the age-related changes: "sanguine" energy of children is eventually followed by melancholy inherent in many elderly people.

Recognition and decision making.

Decision making is an important point in assessing the level of comfort. Along with the generalized decision, there are specific and compromise ones. Making decisions is associated with various forms of pattern recognition and information processing mechanisms. These are complex and largely unsettled issues belonging to the sphere of psychology, cybernetics and many other sciences. For us, it is important to state the following [3]:

1. The human psyche is a complex system, where each of the levels (we have already clarified their composition) reacts to external stimuli in a specific way. There can be different ways of making decisions - intuitive, strong-willed, rational, and emotional - each of which is a specific form of interaction with the environment, corresponding to one or the other type of perception, so it requires some corresponding information and is characterized by certain duration.

2. The sequence of information processing in the course of the recognition and decision-making, according to the recent data, is shown in fig. 5.

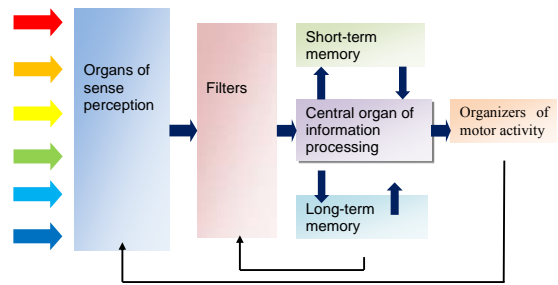


Figure 5. Information processing in the course of recognition and decision-making

3. As it is seen from figure 5, the central organ of information processing receives data either directly perceived, or from short-term or long-term memory. Since they are either inborn, or are the products of the same perceptions, only in the earlier period of time, they are structured in the same way as the perception considered above. Consequently, their impact on the assessment of comfort/discomfort state is analogical.

3. PERSONALITY TYPES

Having examined the characteristics of a personality, let us turn to the definition of psychological types. Knowledge needs, motivations, emotions, and other characteristics for each of them will make it possible to identify specific sets of requirements for a dwelling. Thus, the dwelling will be comfortable not "generally", which is impossible in principle, but "specifically" in accordance with the peculiarities of each of the psychological types. The classification will once again be based on the types of interaction with the outside world – the perceptions.

So, we have the following six psychological (personality) types [1]:

1. A **"Balanced Personality"**. Here, the potential distribution among the levels is perfect; such person does not experience inner conflicts and health problems. He has various demands with distinct priorities for his dwelling, on the whole, forming a harmonious unity. We can say that the dwelling built in accordance with his demands will be perfectly balanced as well, which will allow us to trace the entire chain of relations among perceptions, motivations, needs and requirements for the dwelling, and in future to deduce "formulas of comfort". In reality, such harmonious personalities can rarely be met.

2. **"Contemplator"** (purple color). Here, the same as for the other types, the balance between the levels is already broken. Since the total value of the

potential is constant, the increase of certain qualities - in this case, intuition - will be at the expense of others - above all, the ego and will. Therefore, contemplators are inclined to have a quiet way of life. As for the dwelling, their requirements are minimal: it should be located in a quiet, beautiful and, if possible, deserted place and meet their biological needs.

3. "**Egoist**" (blue color). Enhancing ego, will and mind takes place at the expense of intuition and, to a lesser extent, of intellect and senses. It is fraught with health problems - mental and physical. Priority demands for dwelling are prestige, self-sufficiency and, to a lesser extent, transformability.

4. A "**Fighter**" (green color) is characterized by high inclination for self-realization, also by conflict character and aggression (will prevails over mind), which cannot but lead to both physical and mental disorder, because intuition, ego and intellect are oppressed. This is the "**Martian**" type, whose motto, like that of Porthos, is "*I fight because I fight*". The vigorous and varied activity puts excess demands for the dwelling's transformability. The corresponding emotional state should also be encouraged - for example, by bright colors in the interior, etc.

5. An "**Up-and-coming Researcher**" (yellow color) is not inclined for such escapades. He rather likes predictability, order and stability: "Money loves peace and quiet." But within these limits, he can be quite vigorous, energetic and intelligent (mind prevails over will), both in business and in science. "*Strengthening of the mind*" takes place mainly at the expense of the senses, and some people even know how, consciously or not, to sublimate sexual energy for "*creative goals*", which was noted by Freud. Demands for the dwelling are as follows: a strict and conservative style, clear and time-tested solutions, and calm tones of the interior - however, the wealth and social status must certainly be manifested.

6. A "**Artistic Personality**" (orange color) is prone to certain exaltation, cultivation of his emotional states and sensory experiences. All these can coexist with extreme commercialism. Sometimes such people have good intuition, but more often they are inclined to take various superstitions for the truth. This implies that the gain of sensory feelings occurs at the expense of mind, will, and the analytical part of the intellect. A dwelling may have eccentric, outré and even provoking solutions, under the essential condition to provide a refined sensor comfort and the atmosphere of glamor.

Now let us check our classification - are the marked types really fundamental and universal? For this purpose let us turn to a totally different source, the history of human societies. The development of mankind shows that in those societies where the social organization was not defined by some "idée fixe", but developed in the natural way, the estate, and then the caste structure was formed. Moreover, the social division took place depending on the motivations determined by the dominant forms of communication with the outside world. Take, for example, India, where the caste system has been preserved almost till today. Thus,

- those who are inclined to serve gods and tend to self-denial and contemplation (intuition) belong to the priests, the Brahmins;
- those who crave power and can override others in cruel fight (ego, will, mind) belong to rulers and warriors, the Kshatriyas;
- those who are entrepreneurial and looking for wealth (intellect) belong to free traders, farmers and artisans, the Vaishyas.

Note that all of the above are able to make important decisions independently. Beyond this boundary are the service workers and slaves, the Shudras, whose primary goal is to obtain sensual pleasures, as well as the outcasts, the Chandalas.

If we take a look at the feudal Europe, Russia and the Muslim countries, we can observe a similar picture there as well. The same applies to most countries of the ancient world. Thus, the fundamental and universal character of the selected psychological types is confirmed by the historical experience.

4. IDENTIFICATION OF PSYCHOLOGICAL COMFORT

The level of the dwelling's comfort is a subjective indicator. However, the professional literature focuses on ensuring the physiological comfort while the psychological component is often ignored. A typical example is the book by Robert Leroux [6], where the psychological components are presented on one page only. The list of discomfort factors given there include:

- an unpleasant internal or external appearance of the house;
- unpleasant or noisy neighbors;
- living on a high floor that brings a feeling of isolation. It is easy to see that the list is very controversial and far from being complete. The mechanisms of influence of the listed factors on the psychological state are not disclosed, and the author

mentions the list only in the chapters on the design of the exterior, as well as ensuring security and safety.

Particular information on the impact of separate factors on a condition of a man can be learned from the works on acoustics, coloristics, etc., as well as from the dwelling exterior and interior design. In the latter case, the authors often do not present quantitative estimation. On the contrary, in the works regarding ergonomics there are numerical estimations but their applicability is limited by the area of machine operator's activity.

The received data, in its turn, is the basis for the selection of certain compensating measures.

While determining psychological comfort and its components, we should base on the fact that a man, being a complex system and a subject to the laws of self-organization, remains at the same time a part of the man – dwelling - environment system. Let us introduce the concept of comfort and discomfort, and consider how they are manifested at different levels of personality organization and how they relate to perceptions, states of consciousness and various forms of decision-making. Then let us show the effect of the dwelling on the nature of the processes in view.

The concepts of comfort and discomfort.

We shall call a comfortable state of a man the state which is characterized by the following features:

- the harmony between the man, the, dwelling and the environment;
- physical and mental health;
- presence of sufficient stamina for the adaptation;
- “youth” of all components of the man-dwelling-environment system.

Let us consider each of these characteristics separately. The harmony between man, dwellings and the environment. Since the cause of the immutability of the body's internal environment, the ability to regenerate, and the exchange processes between the system's components is the need to preserve the system's integrity, its violation would inevitably lead to significant physiological and mental disorders that will be perceived as discomfort. And such condition can become chronic if for a long time the integrity of the system cannot be restored. This is the most important sign belonging to the first level of the system organization.

Specific signs of integrity violation are: the lack of symmetry at some or all levels of organization; inharmonious distribution of potentials between the levels and elements; inability to adapt.

The health is restored due to those influences of the environment or the dwelling that help to restore the man's integrity. It is impossible to achieve comfort without the presence of external factors and their harmonization with internal factors.

The man's physical and mental health is interpreted as a simultaneous state of constancy of physiological characteristics and mental equilibrium. This feature emphasizes the importance of the internal factors. It should be noted that disequilibrium in the peace of mind is sometimes useful for launching certain activities ("throes of creation"), but it is still perceived as discomfort. This contradiction can be removed by the differentiation of various rooms of the dwelling. In some of the rooms, the conditions of targeted discomfort may be created deliberately.

The presence of sufficient stamina is absolutely necessary to adapt to changing external conditions, such as seasons, atmospheric pressure, time of day, etc.

And finally, the “youth” of all components of the system implying the presence of both flexibility and the ability to change, as well as the existence time reserve, is also a sign of the state of comfort.

On the contrary, we shall call a state of discomfort the condition characterized by one or a set of the following features:

- lack of harmony between a man, dwelling, environment;
- physical and mental illness;
- insufficient stamina to adapt;
- “old age” of the system components;

The psychological component of comfort and discomfort correlates with the types of perceptions and states of consciousness.

For the 1st level an indicator of comfort is a feeling of good fortune, being lucky, favorable course of events, harmony with the environment.

For the state of discomfort, a sense of “*streak of bad luck*”, being unlucky and disharmony is typical.

For the 2nd level of comfort an indicator of comfort is a sense of self-sufficiency, health, peace, joy, optimism, faith in the future. This is the consequence of inner harmony and the sense of beauty and eternity of the outer world.

For the state of discomfort, a feeling of illness, internal conflict, frustration, pessimism, approaching death, ugliness of the surrounding landscape, people, evanescence of the world, etc. is typical.

For the 3^d level the comfort is characterized by the sense of freedom and the sense of

superiority, confidence in the achievability of goals, in other words, the "the winner's mindset". The man's will plays the dominant role in such feelings.

For the state of discomfort, the feelings of weakness and self-doubt, the fear of failure in reaching goals are typical. At the 4th level, there are two groups of parameters corresponding to the sensory perception and intelligence. Therefore, the feeling of comfort will include both the sense of time-space order, "rightness" of the outer and inner world, as well as the intellectual recognition of these as logical and cognizable.

The feelings of chaos, incognizability, chance, danger, depression, anxiety, worry, insecurity, and weakness will bring the state of discomfort.

For the 5th level the number of comfort indicators increases. A comfortable state is characterized by the sense of balance, stamina, sensory comfort, "harmony of the elements" at the level of intellectual constructions and direct perception of the outer world.

The sense of imbalance, burnout, sensory weariness, "hostility of the elements", etc. brings discomfort.

For the 6th level and subsequent levels we should talk about the contribution of certain feelings and nuances of differentiation of their separate elements. If the sight and hearing are healthy, the feeling of this is a contribution to the overall feeling of comfort and, on the contrary, poor sight and poor hearing are the source of anxiety, feelings of inferiority and other related feelings of discomfort.

Since each level has the corresponding calculated potential, it is possible, knowing the priority and the ratio of perception conditions, to identify quantitatively the contribution of any indicator in the sense of comfort/discomfort [4].

Evaluation of the relative importance (weight) of various indicators of comfort/discomfort.

A. The locality or globality of the indicator action is determined by the fact that it describes either several levels or only one of them. Accordingly, the importance of the indicator is estimated as the sum of the potentials of the involved levels of man-environment interactions, expressed in relation to the potential of the first level. Specifically, the weight of the indicator is expressed by k_1 coefficient, for each of the layers involved. Here there is an alternative – to use $k_1 = 0,618$ for a "Balanced Personality", or choose it based on the results of the testing;

B. The perception conditions coefficient k_2 expresses the degree of difficulty of the indicator perception; for each of the layers it is in the range of 0 ... 1;

C. When summing up, the sign "+" should be ascribed to the indicators if they are the indicators of comfort, and the sign "-" in the opposite case.

Considering all stated above, the "formula of comfort" that characterizes the sum of the comfort indicators of all the levels of p expressed in conventional units is the following:

$$p = \sum_{i=1}^n \sum_{j=1}^{m_i} \pi_{ij} \cdot k_{1ij} \cdot k_{2ij} \quad (1)$$

where n is a number of levels; m_i - the number of indicators of the i -th level. Here the greater value of p corresponds to the better comfort.

The correction to the "formula of comfort." In conclusion, we shall show the correction made by the physiological indicators to the general assessment of comfort. Obviously, they can only affect the sensations perceived by receptors and reaching the central nervous system, i.e., they correspond to levels 4, 5, 6. But these components are already included in the formula (1). Thus, the correction is not required. But it is possible to estimate the contribution of all these parameters in general sense of comfort: it will be $1 * \Phi^3 = 0.236$ for a "Balanced Personality" with relevant corrections to other psychological types.

What other conclusions derive from the material provided above? Evidently, there exist the means to improve the dwelling quality, yet not used. These are the means capable of endowing the dwelling with new characteristics: enhancing the "vital force", increasing efficiency, preventing stresses and diseases. Also, there exists an instrument that allows analyzing the indicators attained and developing measures for their improvement. Its effective use can bring significant competitive advantages.

Let us also note the analogy between the activities designed to improve the psychological comfort and means of increasing the physiological comfort. However, the greatest effect will be achieved through joint performance of these activities.

5. CLASSES OF THE ELITE DWELLING

There are two classes of the elite dwelling „De lux” and „Premium”. Table 1. details the

Table 1. Classes of the elite dwelling.

№	Feature	Characteristic	
		class „De lux”	class „Premium”
1.	Buyers	Politicians, businessmen, pop stars.	Patrimonial aristocracy, rich artists, businessmen.
2.	Priorities	Uniqueness, prestige, transformation.	Uniqueness, prestige, transformation.
3.	Region	Capital, city-millionaires, resort regions.	Capital, city-millionaires, resort regions, regional centers
4.	Location	Administrative center, historic center, resort zones.	Prestigious area, historic center.
5.	Building type	Row houses, cottages, penthouse.	Row houses, cottages, penthouse.
6.	Style	Baroque, Classical, Empire, Rococo	Classicism, modernism, functionalism.
7.	Color range	Bright colors, play on the contrast, the active use of gilding, which causes a feeling of luxury, wealth, solidity, stability.	Bright, warm, neutral colors.
8.	Spatial organization	The organization of the space environment reminiscent of the royal palaces and castles.	Functionality.
9.	Furniture	Volume static sculptural furniture with richly upholstered, furniture of mahogany.	Simple, rectangular.

characteristics of each class of the elite dwelling (buyers, priorities ,region, location, building type, style, color range, spatial organization, furniture).

6. OPTIMIZATION OF THE ELITE DWELLING

Contemporary construction possibilities extend far beyond the achievements of the still recent past: providing a dwelling with heating, water supply, safety and communication systems is just the background against which new targets stand out: compensation of disharmony of vital rhythms; disease prevention, and creation of conditions for self-improvement. Here, we should also pay attention to the idea of “*a dynamic home*”, which implies the use of state-of-the-art technologies and computer facilities [5].

Thus, following the given recommendations, any person can reasonably choose a location, ensure independence and security of a dwelling, determine the number, shape and size of rooms, select the control means for mood.

However, even having defined his wishes exactly, a reasonable person should not stop. It is necessary to check whether the selected company can implement those wishes. Of course, first of all,

external factors must be taken into account, such as the ability to help the client in the course of the interview to specify the order, using a rich arsenal of systems methods, traditional ideas and latest achievements in psychology. However no less important is the design culture. Do the designers know about the “*formula of comfort*”? Do they have adequate skills to find the best solution satisfying the priority requirements of the customer at reasonable cost? This is a multi-criteria optimization itself, information about which might be rather dry, but very useful for selecting a construction agency. Every person decides for himself whether to delve into the intricacies of the concept of comfort and the questions of construction, or withdraw entirely, entrusting it to the professionals. However, as the dwelling is chosen for years to come, and the state of health and the possibilities of self-realization depend largely on its quality, serious consideration must be paid to this question.

Consider (figure 6) the distribution by particles in % personality types for customers of the elite dwelling.

Preliminary results indicate that among buyers of elite residential property dominate personality that relate to psychotype “*egoist*”, is also a notable proportion psychotypes “*resouceful researcher*” and “*fighter*”.

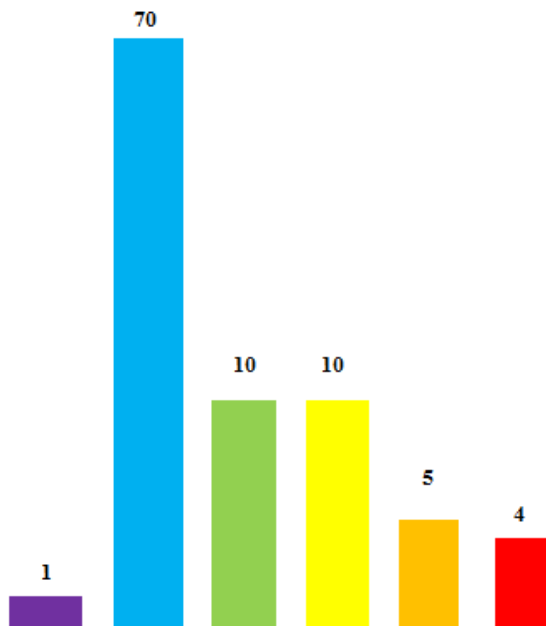


Figure 6. Distribution by particles in % personality types for customers of the elite dwelling

Testing opportunities for application of methods for determining psychological comfort to find correlation between certain psychological needs and architectural and design solutions for the elite dwelling, which should contribute to meeting the needs of people of different psychotypes and publication of preliminary results in table 2.

CONCLUSION

The elite dwelling ideal to one person may not appeal to another. Therefore, to make a sound choice, you need to know your psychological (personality) type, the needs and priorities conditioned by it. The article offers the characteristics of personality and present them in the understandable and visual form. All characteristics are correlated with the specific for each psychological type requirements for dwelling

Table 2. Correlation between personality types and architectural solutions.

№	Personality types	Characteristic				
		Environment	Style	Transformation	Design	Comfort
1.	Balanced Personality	Completeness	Eclecticism	The smooth change of house	Integrity space	Harmony
2.	Contemplator	Harmony with nature	Ecostyle	damping	Openness nature	Tranquility
3.	Egoist	Background for the manifestation ego	Baroque, Classical, Empire, Rococo	System «clever house»	Many different rooms	Richness
4.	Fighter	Environment for unity and struggle	Japanese style, minimalism	System «dynamic house»	Transformation	Security
5.	Up-and-coming Researcher	Space for finding ideas and problems	Classicism, modernism	Spatial temporal organization	Rationality	Wisdom
6.	Artistic Personality	Environment for creativity	Create your own unique style	Changes to the creation of masterpieces	Space to find inspiration	Freedom

which, in this way, acquire a personality-grounded nature. And they do not depend on such volatile factors as the influence of fashion or a well-organized advertising campaign.

We all desire for harmony between our dwelling and the environment. At the same time, we want it to be expressive, to emphasize our social status, to create the feeling of space, but to be comfortable, to please the eye with its colors, but

not to annoy with too bright colors. Experts know what architectural and design techniques should be used to meet certain wishes. But, as we can see, these wishes may be contradictory, and to achieve the universal satisfaction is impossible in principle. Therefore, an architect designs a house “for an average person”, “for eternity”, “as it is required by the modern style”, in the end, according to his personal preferences. However, it would be better to

build the elite dwelling in accordance with preferences and needs of its future owner! But for this, the customer must be able to explain the designer his demands, with clear awareness of what styles and decisions correspond to his own psychological type. Based on the need to prepare the reader for such a talk, I present the information on choosing the construction location, architectural styles, space planning features, creating the interior, service organization, constantly correlating the requirements defined by certain psychological types with specific design solutions and trends in the development of the elite dwelling.

How to assess the current level of comfort? How to correlate it with spending, to determine the effectiveness of investments? Can the dwelling lose its attractiveness in the foreseeable future? What advice can be given if we consider the dwelling in the context of real estate?

The techniques and recommendations answering these very important questions are given in this article.

Based on the reasonable recommendations of this article, the terms of psychological, physiological and biorythmical comfort at all levels of living environment for the elite dwelling (ensure harmonic relations with surrounding world; self-sufficiency; transformation; space-planning excisions; sensory comfort) are determined. The results are verified by analyzing complex counterparts. This article has formed specific recommendations for architectural and design decisions, that are favorable for providing psychological comfort of owners of the elite dwelling.

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