

## МНОГОФУНКЦИОНАЛНО ОБЗАВЕЖДАНЕ В ЖИЛИЩНА ПЛОЩ

**Ангелина Велкова, проф. д-р Васка Сандева, проф. д-р Катерина Деспот**  
Университет Гоце Делчев - Щип, Р. Македонија - катедра "Архитектура и дизайн"  
e-mail: vaska.sandeva@ugd.edu.mk

**Крсте Мисирков** - п.к. 201, Щип 2000, Р. Македонија

## MULTIFUNCTIONAL FURNITURE IN THE OVERCROWDED LIVING AREA

**Angelina Velkova, Prof. Dr. Vaska Sandeva, Prof. Dr. Katerina Despot**  
Goce Delcev University – Stip, R. Macedonia, Department of Architecture and Design  
e-mail: vaska.sandeva@ugd.edu.mk

**Krste Misirkov** - b.b. P.O. Box 201 Stip 2000, Macedonia

### **Abstract**

*Nowadays, the world faces a number of serious problems due to the increase in population and the lack of resources. The overcrowded residential area shifts our focus on economic and social issues that are of great importance for the further resolution of problems arising as a result of overpopulation. One of the best solutions for the fast-growing population and it's parallel reduction of the free living space is multifunctional furniture. This solves the key problems, especially in the big cities, where in a small apartment it is possible with several multifunctional pieces of furniture to achieve a comfortable living space - sleeping, lunching, resting and completing other domestic tasks.*

**Keywords:** *furniture, environment, designer, design, space*

Several psychological studies of the environment have been made, stating that living in densely populated places affects emotional and physical human behavior. There are two different population-density definitions when it comes to the environmental situation: internal density - a measure of living space per person (for example, rooms per person, or square meters per person) and external density - the number of people occupying a large living area (for example, people per square kilometer). A densely populated, narrow space is strongly associated with human adverse reactions, such as stress and depression, so we need to focus on the design that can reduce the negative effects and help people adapt to their own home. This includes many other factors such as education, profession, human behavior, age, and so on. Which can affect the extent of the negative effects caused by the overcrowded living spaces characteristic of today society.

Due to all of these factors, which are undoubtedly related to each other, the incorporation of multifunctional or modular furniture becomes one of the more effective solutions to the sustainability of space.

Modular furniture is a system of multiple small units, so-called modules that have their own shapes and dimensions. These elements or units have several functional variations that combine the various functions in one piece to control material consumption, create opportunities for interaction between the object and the person, and effectively save and use the user's free space. At the same time, the cost of multifunctional furniture is usually more acceptable than when you buy

several pieces of furniture separately. This kind of design is increasingly becoming popular among the younger generation, which is actually the trend of today's furniture design.

In most metropolises in the world, the human average living area is getting smaller and smaller. More young people tend to move to larger cities, striving for the opportunities they give them and the active way of life they offer. However, this phenomenon gradually reduces the average living space. In addition, high population density brings many other problems, such as the big gap between the rich and the poor, the high cost of energy and the cost of housing. These are common problems in the metropolises of today. Transformative, multifunctional furniture that primarily serves to save space is one of the options to solve these problems.

The multifunctional furniture in the interior, whether it's an apartment, a house or a public building, provides more features and is adaptable to the needs of the user. It has great potential, especially in the market in large cities, such as New York (USA) and Beijing (China). These large cities have many common features. They have large populations, large gaps between the rich and poor, and a large number of small apartments. These features provide a good opportunity for the development of multifunctional furniture in order to save space.

Multifunctional furniture is designed based on the concept that furniture design must include at least two forms of appearance and function. It should have a plain or basic, assembled look and a transformed look. The simplest example of the function of modular furniture is the combining of two stools with supports to get a two-seater or a sofa, or placing multiple items, eg. cubes that assembled together provide a club-table with the possibility of sitting on the same cubes. Then converting an ordinary sofa into a double bed or a bookshelf also in a double bed or table with chairs and so on.

For people who have a small budget for furniture and are living in limited spaces, this can be the best option. One of the challenges for designers of multifunctional furniture is that furniture should be both aesthetically functional and physically functional.

### **Types of multifunctional furniture**

There are many types of multifunctional furniture from which users can choose. One of the basic would be the modular bed, which, depending on the needs of the client, could be transformed into a shelf, desk or other seating element, eg. a sofa. One of the most interesting features of this type of furniture is that most often there is no need to remove the items like books, notebooks, cups, etc. the transformation itself and the combination of elements - from one piece of furniture to another, is achieved most often with one easy movement and the joining of those elements. This design helps owners to use furniture effectively and completely. The most important function of the design of modular furniture is that it increases the availability of space, compared to filling your room with individual pieces of furniture, such as a standard bed, a desk and shelves.

Modular furniture for keeping clothes and other things in the bedroom is also very popular. There are a lot of different components that can fit into a wardrobe, in order to create a modular system that acts as if it is built into the wall itself. For example, the standard shelves can be inserted low in the closet and several pillows are to be placed on the surface itself so that this part can be used as an accessory for seating when putting your shoes on. Also, hanging rods that can be attached to

different levels contribute a lot to saving extra space, in contrast to those clothes hanging from a single bar.

*Pic. no. 1 Multifunctional furniture in the bedroom – shelves that transform into a king-size bed*



The modular elements in the bedroom can be in many layouts. The working tables we have already mentioned are a great element in the bedroom where we do not want to overload too many items. We can also make good use of the children's cots that can be further transformed into sitting and writing areas for children. Children's modular furniture is especially popular because a large number of different pieces can be added or modified over time as the child grows.



*Pic. no. 2 Transforming a child's crib as it grows, according to its needs – a baby crib → a bench for sitting → a desk for writing/doing homework*

Another room in which, depending on the number of people, the need for space utilization is changing is the dining room. Here, the table and chairs are used at most three times a day, this does not have to be the rule, because, as we mentioned the fast way of life for people today doesn't always allow it. So we can freely conclude that a whole dining table with six chairs is a big busy area that can very easily be transformed into free space. The possibilities of multifunctional furniture, if we have a good idea, can be applied in a wide variety of ways. The chairs can be folded up to a two-dimensional shape, which as such would then be attached to the already folded and reduced table, and this way we would get a compact shelf that would serve its practical purpose until the need to re-install the entire dining table.

Dining chairs modular furniture are also very useful and functional. There are modular tables that can be extended or trimmed according to the needs we have, or add storage elements, under or over the work surface.



*Pic. no. 3 Space - saving dinind table with two benches*

Also a very good concept for modular dining furniture pieces is the fitting of the chairs or the seating area along with the table, so it can be folded or disassembled as needed. This is also very useful in workplaces, in offices where a large table for meetings with multiple chairs is not always required.

Kitchenware modular furniture pieces are also very popular. Most modular kitchen cabinet makers often offer hanging elements with a single or double door option, which can be combined with shelves that slide themselves inside the hanging elements and can easily adjust the amount and distance, according to our needs. Also a good idea for modular furniture in the kitchen or dining room are the units that have all the elements integrated at the same time. So, we get a sink, stove, fridge, work desk and storage elements in a whole compact unit.



*Pic. no. 4 Modular kitchen – a compact unit that has all the essential elements of a functional kitchen*

This way, we don't only save space, we also increase the functionality of the kitchen itself. Easy access to each work area shortens the time it takes for any preparation in the kitchen.

### **Mutilfunctional furniture and target groups**

As mentioned, China and the United States have one of the largest and fastest growing economies in the world, with steady growth in GDP over the past years. Even after the aftermath of the major economic crisis in 2008, China still had more than 8% increase in the GDP rate. Therefore, the Chinese market is one of the most important for a number of industries, including the furniture industry. In the past years, the urbanization of cities has developed at a tremendous speed and it is

projected that this will continue in the next few decades. The level of urbanization increased from 18% in 1987 to 45% in 2010. This subsequently reduces the average living space and presents the opportunity for multifunctional, transformer furniture to develop and expand its use, especially in these parts of the world.

The market in the United States, who are world economic leaders, has great scope for a variety of products. The largest cities are the ones most popularized and in parallel with the increase in the number of inhabitants per m<sup>2</sup> the average living space is reduced. Here, too, is the emphasis on the big difference between the rich and the poor, which is most evident in cities like New York, where the prices of apartments are enormous, starting from the smallest living spaces area. With this, an average New York citizen, who is bound to spend more money on a one-bedroom apartment, the simplest way to save when it comes to his place of residence is to use multifunctional furniture that would save not only in finance, but also in the space that he uses.

### **Conclusion**

Practiacly used space gives fluidity in the dwelling, where we need to be relaxed and unbothered by unnecessary elements that invade the space around us. The easy movement of elements and space that gives us freedom to go from one room to another, without overcrowding and obstacles that are unnecessary in everyday life, are key elements in a home in which we aim to feel calm and rested. Our mental and physical health are directly related to our environment, therefore it is necessary to provide space that will primarily dispel us from the noisy daily life and provide us with time and opportunity for rest and relaxation.

### **References**

1. Despot, Katerina and Sandeva, Vaska (2017) Application and transformation of traditional forms in contemporary interiors. Applied Researches in Technics, Technologies and Education, 5 (2). ISSN 1314-8788 (print), 1314-8796 (online)
2. Ellen, L. The ABC's of Bauhaus, the Bauhaus and design theory. Journal design (2011)
3. Sandeva, Vaska and Despot, Katerina (2017) Graphic line as composer of forms in interior and exterior design. Applied Researches in Technics, Technologies and Education, 5 (2). ISSN 1314-8788 (print), 1314-8796 (online)
4. Димчев, Веселин, Изобразително изкуство. Методика, София, Изд. Просвета, 1993
5. Добрина Желева-Мартинс и Стела Борисова Ташева Теория на композицията, София, 2014
6. Желева-Мартинс Д. Тектониката в съвременната архитектура. Издателство на БАН. София. 1985. стр. 99 (in Bulgarian).
7. Петров, Георги, Дизайн пространствено оформление, София, изд. Болид, 2002, ISBN 954-612-014-6 [9].