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APARTMENTS AND OFFICES: HOW TO SATISFY BOTH PLANNERS AND USERS?

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Abstract

Two cases of user-environment mismatch and tensions as well as ways and modes of the users' adjustments to strictly pre-defined physical environments are presented and discussed in the article. The first case is historical — it analyses consequences of a mass housing program in the former Soviet Union where tens of millions of families coming from very different cultural and social backgrounds had to adjust their everyday life to extremely standardized physical settings. Using the results of the study carried out during 1978–1985 in several Soviet cities, the main areas of tensions and sources of discomfort reported by residents, are described and discussed. The second case focuses on a recent trend in workplace design called activity-based offices representing work environment where employees don't have their own (fixed, personalized) workplaces but are supposed to move from one zone to another, depending on the task or activity they are involved in. A study of activity based offices carried out in Estonia in 2018, indicates that employee's participation in the planning and designing of their work environment may help them better adjust to a novel and unusual workplace layout. The message from the both cases is that a better communication between planners and end-users as well as collaboration between them may help to reduce misunderstandings and the user's dissatisfaction with the physical environment where people have to live and work.

Keywords: mass housing, office environment, place attachment, user's satisfaction, planners-users collaboration.

Introduction

People and their physical surroundings are two different, but deeply interrelated realities: people's needs, behavioural habits, social relation patterns, on the one hand, and principles of planning and design, architectural traditions and technological innovations, on the other. Those two realities converge in our apartments and houses, in streets and workplaces, in public areas and images of our cities, sometimes creating satisfaction and happiness (both for the planners and the users!), but often also controversies and conflicts. When psychologists describe people-physical environment relations, they usually take the position of users and talk about meaningful places and place attachments, personalization and home-like emotions. When the same issues are addressed by planners and architects, their viewpoints and vocabulary are quite different; they are troubled by the functional

layout, external attractiveness and cost-effectiveness of buildings and not so much by the users' attitudes and satisfaction concerning their everyday environment.

Although the idea of a "user's impact and participation" in environmental design is an old and widespread dream, in practice things usually happen vice versa. According to Fischer, in spite of the pressure to have a "user's perspective", in the majority of cases *"...design professionals are regarded as the experts and end-users are the objects of their study during the design phase and the passive recipients of their work once it is finished"* (Fischer, 2003, p. 89). In the majority of cases, users are forced to adapt their behavioral patterns and schemes of interpersonal relations to the 'professionally' pre-defined physical environments, be it a high-rise apartment, a quadrilateral classroom or a park area with fixed sitting and talking places. Does such "technological determinism" have its cost? Is "anything goes" when designing physical surroundings a socially appropriate approach, are there some "human-defined" limits besides simple ergonomic and hygienic characteristics for rooms and spaces? Are users (inhabitants, city dwellers, travellers, office workers, etc.) able to adjust themselves to any kind of physical context, where a mismatch of the social and the physical leads to conflicts, alienation or simply the abandonment of places or territories? And vice versa, are the users ready to participate, do they have enough competence to do this?

In this article we are going to discuss two examples that represent the user-environment mismatch and tensions as well as ways and modes of the users' adjustments to strictly pre-defined environments. The first example is historical — it analyses a large-scale "social experiment" carried out in the former Soviet Union, whereby tens of millions of families coming from very different cultural and social backgrounds had to adjust their everyday life to extremely standardized physical settings. This is a case of the so-called Soviet high-rise residential areas erected during the 1970s and 1980s almost in every big city of the former Soviet Union. The second one is new, representing the recent trend in workplace design called activity-based offices. This stands as a novel way in designing office environments, a model where office employees don't have their own (fixed, personalized) workplaces but are supposed to move from one zone to another depending on the task or activity they are involved in.

In both cases the users (residents, office employees) are faced with a physical environment that happens to be quite different from what they had previously. In both cases, the users' needs and preferences were not adequately addressed, the layout of the physical environment has emerged from economical calculations, technological considerations and political preferences. How do the users adapt to the pre-defined rooms and places? Are there some lessons for planners emerging from those two different (considerations of time and scale!) but still similar (thoughts about ways of creating environments!) cases?

Both cases will be introduced by a brief background overview followed by empirical data representing the results of our studies on both cases. The conclusive part of the article discusses the possibilities of bringing user-centred (psychological) and planner-centred (architectural) approaches closer together while creating our everyday surroundings.

Case 1. Millions Moving to the Tiny Boxes

Background. After the Second World War, the housing situation in the Soviet Union was extremely difficult. More than a thousand cities had been destroyed as well as about 70,000 villages burnt down or made uninhabitable. Almost one third of the housing stock was ruined, especially in the western part of the country, and more than 25 million people lost their homes (Mikhailov, 1967). The rapid migration to cities and the post-war baby boom challenged the Soviet government to take radical steps for meeting the huge housing market need. The solution was to start building highly standardized high-rise apartment blocks in all larger cities of the USSR. In a short period of time (1958–1975) more than 600 house construction plants were erected all over the country that started to produce 'apartments-clones', i.e. living spaces with almost identical geometrical parameters. The number of rooms and dimensions of the apartments in those buildings were tightly controlled by the state construction law 'SNIP' that represented a set of mandatory requirements to be fulfilled when placing and designing building structures (СНиП). A special SNIP was issued in 1963, which became the basis for the design of a **first generation of the mass dwelling units** until 1971.

As of 1965 about 1.5 million apartments with quite similar geometric parameters were built in the USSR yearly, which differed from one- to five-room-apartments with the overall floor area of 28-80 sq. m. According to that SNIP, kitchens were supposed to take up 5–8 sq. m. maximum, a toilet room was limited to 1.1–1.3 sq. m. and a bathroom floor was 3–4 sq. m. The rest of the rooms (so-called living rooms) were limited to 8–18 sq. m. each (Ovsyannikov, 1982). The majority of built apartments had 1–2 living rooms. The technology of pre-fabricated constructions was economically advantageous and enabled to produce 5–9 story blocks usually consisting from 10 up to several hundred apartments. The same model for blocks and apartments was used in cities as well as in villages.

Although the new apartments were small and highly standardized for the whole country, it meant a huge step ahead in comparison with the previous situation where millions of families had to share apartments (using one room per family in multi-room historical apartments) or resided in village houses without water supply and sanitation. As a result, the number of persons on the waiting list to move to those apartment blocks (which were distributed for free!) started to snowball.

The permitted size of apartments in the **second generation of mass housing** construction from 1971 to 1991 was increased by 4–7 square meters. The production of the house-building factories achieved its peak in 1975 when the number of apartments built during one year reached 1.78 million (Ibid.). Afterwards the numbers gradually decreased so that in 1990 only one million new apartments were built (Federal'naya sluzhba gosudarstvennoi statistiki, 2006).

The architectural theories at that time had a popular hypothesis that the change in the direction of building activities in a social community in some part of premises depends on modifications in the spatial image of the inhabitants' lives. Then it seemed that an answer to the question of how to improve the geometry of a particular part of the environment should be sought in the study of a modus of the adaptation

of local population to it. An analysis of the unique lifestyle of domestic household implemented in a standard apartment could be the basis for design of better housing units. Taking into account the huge cultural diversity of the Soviet population, it was quite natural to test how families from the Caucasus and Central Asia, from Siberia as well as from large cities like Moscow and Saint Petersburg would adapt their multiple life form to this unified model of residential environments. Each socio-territorial community envisages a certain representation of geometric parameters and material properties that should be present in a physical environment in order to be called home. The geometric parameters of apartments in cities and detached homes in villages happened to be the same ones for all! Almost no alternatives existed in choosing one's place of residence.

Departure points in planning apartment block areas and the room structure of apartments in the Soviet Union predominantly included economic and technological criteria. To build more and in a shortest possible time! The needs and expectations of users were considered from the viewpoint of the *common sense* of planners who were trying to locate the main elements of domestic life (cooking, washing, sleeping, etc.) into tiny interior spaces prescribed by a SNIP.

Theoretical explanations concerning the design of high-rise blocks with small apartments rely on the experience of state-subsidized housing constructed in Western Europe after the First World War, as well as on the experience of New York City apartment houses where the challenge to have rooms of minimal dimensions was particularly important. Since the XIX century when Hans Auer (1883) noticed that "space is the soul of the buildings", the search for a spatial image of new constructions as better physical conditions for the more productive activities of society became the main direction in theoretical studies by the pioneers of modern architecture and anthropology. Migration to cities and demographic changes stimulated architects to continuously improve the concept of a single family apartment as a central idea of housing buildings during the entire XX century. However, most of the results of investigations of homes conducted during the last century by hygienists, psychologists, sociologists, and economists (due to their different understandings of the concept of space as a place, area, and zone), turned out to be inaccessible to engineers and architects, when the geometric parameters of "the soul of the buildings" were determined by fixed values as width, height, and area. The reaction of the population to adapting to the living premises has become a main subject for interdisciplinary investigations by soviet architectural scientists only after applying the recommendation of the United Nations concerning the concept of "a living quarter" understood as a rather detached and relatively independent part of the material structure of buildings using by people for living (UN, 1968).

Empirical study. There have been cases in other countries on which the Soviet high-rise ideology and practice rely, but the amount of construction and the degree of standardization of erected dwelling units have been unique in the whole world so inevitably creates debates and criticism concerning such practices. As critical voices become louder and louder about life in the new high-rise areas, the main institute (*The Central Research Institute of Experimental and Typical Dwelling*

Design established in 1963) responsible for the planning of residential buildings in the whole country initiated and conducted a study. The basic investigation of standard housing construction was carried out during 1978–1985 with the aim of analysing the real usage of apartment spaces by residents and to find out the areas of main tensions and sources of discomfort. Formalized interviews were conducted with the representatives of almost 5,000 households who inhabited apartment blocks in different parts of the former USSR (Heidmets, 1984; Kruusvall, 1980; Kartashova, 1985). Cities from various climate and cultural regions were included — from Ivano-Frankovsk in West Ukraine to Novosibirsk in Siberia and Vladivostok on the shore of the Sea of Japan. Tallinn was selected to represent the northern part of the country and Tashkent – for representing the southern part. This was the largest and definitely the most representative study of the housing situation in the Soviet Union. All authors of this article participated in a study team lead by prof. Kira Kartashova representing *The Central Research Institute of Experimental and Typical Dwelling Design*, and prof. Mati Heidmets from Tallinn University. Regional studies and analysis have been performed by prof. Vladimir Durmanov, PhD Viktor Ovsyannikov, PhD Yuri Kruusvall and others.

Results of the study outlined at least two big areas of mismatch and tensions between the residents' needs and their everyday physical surroundings they should use to embed their life.

The first — not enough space! Very small apartments created a physical environment in which practically each household experienced limitations or couldn't possibly implement desired household activities. The dissatisfaction with the size and location of rooms in an apartments was the main disadvantage mentioned by majority of respondents (Khachatryants, 1979). The lifestyle and daily needs of families turned out to be far from more sophisticated and space-demanding that the planners imagined. For instance, storage facilities: as there were no special storage rooms, most household items were stored in living rooms; some families tried to store household equipment, bicycles or prams, for instance, in cellars or in the stairwells. Inside an apartment corridors, toilet rooms and the kitchen were also used for storing various inappropriate items.

Balconies became storage places, too, followed by the pressure of the lack of living area, people closed the open balconies. The widespread installation of windows on balconies (although unauthorised) was an option to get some additional space to use. The monotonous identical look of standard buildings was transformed into a colourful mixture of balcony windows, doors, railings, often also with accompanying air-condition units. Regardless of the new aesthetic features in those buildings, technical problems emerged such as the collapse of structures, heating loss, and the deterioration of hygiene standards in apartments.

According to regulations, upon moving to new high-rise blocks families consisting of three people were entitled to have a one-bedroom apartment, families of four could have a two-bedroom apartment, etc. About half of the families in those blocks in Russia were and are still living in apartments where the number of persons in the household exceeds the number of rooms (Federal'naya sluzhba gosudarstvennoi statistiki, 2005). As a comparison, in Russia, Latvia, Belarus the housing stock contains

63%, 62%, and 57%, housing units that have less than three living rooms, while in the contemporary housing stock in France, the Netherlands and Germany the corresponding shares are 18.3%, 9.3%, and 8.2% (Federal'naya sluzhba gosudarstvennoi statistiki, 2011).

Second — stressing functionality! The actual usage of rooms in small apartments happened to be quite different from the initial ideas of planners and architects. Our respondents considered the kitchen as the most uncomfortable part of the premises. Most kitchens in standard apartments were designed without considering the use of home appliances; at the same time, refrigerators and washing machines were usually installed in the kitchen, but a third of tenants also used narrow corridors. Some residents mainly used balconies, but also living rooms (16.1%), bathrooms (19.4%) or kitchens (8.2%) for drying their clothes.

Due to the small size of a kitchen, many families were forced to put a dining table to eat at in living rooms (that were also small). At the same time, the kitchen was often used for other activities when it was not used for cooking or eating. It became the main place in which one could retire, talk with a neighbour or friends, and in a situation where living rooms became "personal zones", you could "play or do homework with your mom in the kitchen". However, the main drawback of having the kitchen as a separate room was the access to it: through the aisles, passage ways or corridors. As soon as it became possible to convert or remodel an apartment, many families tried to remove the partition separating the kitchen from the living room or pierce an opening in the wall. This reconstruction often added additional space to living quarters.

Similar attempts were observed regarding sanitary units, projecting and recessed balconies. The desire to increase the living space of an apartment by any means or to change the spatial organization of it was prevalent everywhere in the mid-1980s. Due to the small size of the rooms, many processes, like eating, washing or drying clothes, were moved to the corridors. For example, according to our respondents, washing clothes and installing a washing machine were moved to the kitchen (27–70% of the cases) or to the hallway (9–30% of the cases).

Having usually 1–2 bedrooms in the apartment complicated the meeting of privacy expectations. Almost half of the families living in new apartments in the city of Lviv reported that their children slept in the parents' bedroom. Very often possibilities for isolated sleep for grown-up children or sick and elderly members of the family were lacking. Families with children of the same gender had better conditions for comfortable sleep. Still, only a quarter of families could accommodate children of different gender in separate rooms (Durmanov, 1992).

Our studies concerning the second generation of mass housing construction presented a 'big picture' of the situation in the Soviet Union. To answer the questions about geometric parameters of housing units one of the authors of this article fulfilled a pilot study to create a spatial model of future apartments taking into account the residents' opinions (Ibid.). More than one hundred households living in mass housing participated jointly with the architects in developing the spatial model of a new apartment allowing them to have 50% more space than the one in which they were currently living.

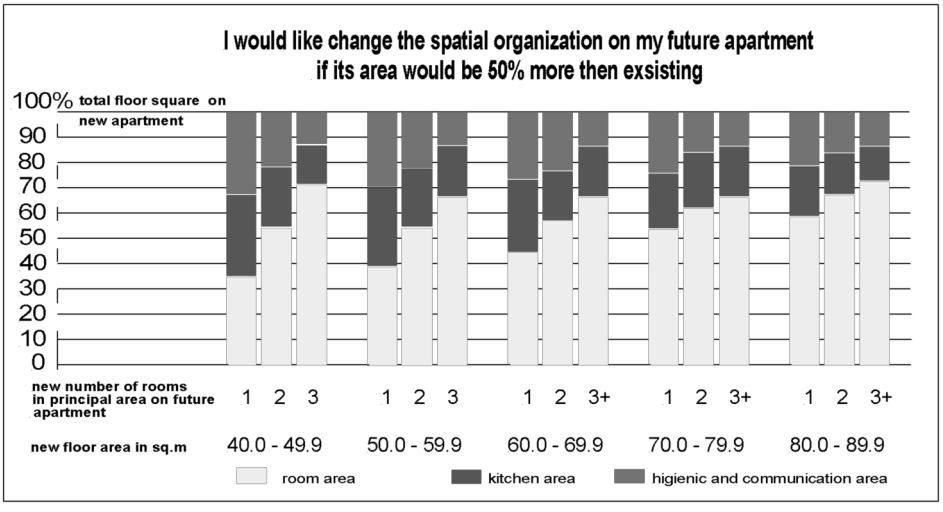
The results are presented in Figure 1. First of all, the additional space is expected for utility rooms (kitchens, storerooms, bathrooms, corridors, etc.) and then for principal rooms (bedrooms, living rooms, dining rooms). The dream apartments varied from having several small isolated bedrooms while the other households wanted to place a bed, sofas and a dinner table in one large room. It means that there is no direct relation between the desired number of rooms in an apartment and its floor area. Soviet households required that apartments of the nearest geometrical dimensions or shape of the living premises would have different numbers of rooms, which meant the future use of apartments with small and large rooms of diverse functional purposes.

Preferences were also dependent on the family composition, especially in case of bigger apartments. Having an apartment (up to 90 sq. m) with one large living room was the most preferable for young married couples, but not so for an adult mother with kids who dreamed of having several isolated bedrooms plus a living room (see Fig. 1 on the right). Health, status, income, the professional, religious and ethnic background also influenced the number of rooms needed as well as preferences concerning the placement of equipment in the apartment (sinks, bathtubs, cookers, refrigerators, TV etc). The study confirms the position that when the economic situation allows having a bigger apartment (more than 25 sq. m per person), the diversity of requirements is rapidly increasing.

Conclusions. The results of our study indicated that the highly standardized and unified spatial organization of the Soviet high-rise apartment blocks enabled a considerable improvement of the overall housing situation in the country, at the same time creating quite widespread dissatisfaction with planning of the apartments and with their spatial arrangements. The majority of families studied

Figure 1

Desired Organization of Premises in the Future Apartment



dreamed of changing the layout of rooms in their apartments; the most stressful areas are the kitchen, storage rooms, and sanitary units. The feeling that our contemporary lifestyle doesn't fit those very boxes was common both in the North and South, in small towns and big cities.

Still, it did not lead to strong public protests against high-rise areas (called micro-districts) or to sharp political criticism. One should keep in mind that in the former USSR apartments were distributed for free. Most families who were entitled to receive an apartment from the state waited in a queue for many years, often decades. The alternative called cooperative housing was available for very few people. In 1976–1980 only 8% of apartments were purchased or borrowed using the residents' funds (Federal'naya sluzhba gosudarstvennoi statistiki, 2006). On one hand, to get a 'present' from the state was a great event in a family's life, on the other hand, this very present created a lot of problems in its actual use. Also, an adaptation to the standard housing environment caused alternative construction activities of population that resulted in a general spontaneous and unregulated transformation, hence there was a loss in quality of the state's living environment.

This dissatisfaction pressurised to find solutions. Many residents rented state apartments in multi-story buildings preferring to build a single-family or summer cottage at their own expense. To meet this trend, urban citizens were allowed to build alternative small cottages on the cooperatives' garden plots (600 sq. m.) located near cities. Before the collapse of the USSR about 17 million families (from all 49.6 million urban families in 1989) had a garden plot or a "dacha" behind the municipal borders of cities (Durmanov, 1992). The broad sweep of the "dacha construction" significantly reduced the exploitation burden on urban dwellings. Part of the population began to use their city apartments as a way to generate additional income through renting them out or as temporary dwellings — summertime was spent at the dacha, wintertime – in a city apartment. Often the country cottage was used as a "real house", some sort of "family hearth". Perhaps this is the reason why the issues of planning the apartment organization was publicly not very worrisome, especially for wealthy sections of society who often saw a city dwelling as an additional investment. Architects, in turn, did not experience enough pressure from the customers to change something in the established practice. Still, in the late 1980s discussions rose concerning the need to change the whole system from mass standard construction to more individualized models, taking into account the history and needs of the local socio-territorial communities. But as the late 1980s were economically and politically difficult times for the Soviet Union, the ideas of individualized construction became topical again only in the late 1990s in the context of democratic changes and the transition to the market economy.

Currently the new generation of planners and architects designing housing on the former USSR territory are more focused on individualization issues. According to Konstantin Kiyanenko, a modern architect should be like "a gardener" who uses knowledge from all areas of modern science to create better fruits (Kiyanenko, 2015). It is important that the "garden" about which he or she takes care would deliver to the market not only externally attractive but also functionally useful and affordable products.

Removing geometric constraints from the private construction sector law allows an increase in the diversity of housing units (at least for some part of population) and takes into account more diverse needs of families. However, in spite the improved appearance of high-rise residential buildings in large cities, there is still not enough diversity in the spatial organization of apartments (Federal'naya sluzhba gosudarstvennoi statistiki, 2005). In this context it is very important to discard the dictatorship of house-building companies that used to be the main and most influential actors in housing policy. They often block attempts to move towards more individualized and diverse methods of design and production. Surprisingly, after the collapse of the system of centralized economy, the structure of public housing construction in Russia has not sufficiently changed. Most of the old and now privatized huge plants are still using technology from the last century and continuing to produce the same standardized clones. As the demand for housing is still very high, such an environment does not encourage the industry to change their ways of thinking and acting.

Case 2. Testing Activity-Based Offices

Background. In environmental psychology there is a long tradition of studying individuals' and groups' emotional bonding to different locations conceptualized as place attachment (PA) (Altman & Low, 1992; Lewicka, 2011). According to Gustafson, PA is a site-related cognition (thought, knowledge, belief), affection (emotion, feeling), and practice (action, behaviour) (Gustafson, 2006, p. 19). Attached 'sites' may include rather different physical locations — home, neighbourhood, home-town, home-country, but also a workplace or a favourite corner in a park; Barcus and Brunn list among them: "*...a house, a room, a 'hollow' or town, or a landscape, such as the sea, mountains, or prairies*" (Barcus & Brunn, 2010).

Emotionally bonded places do not randomly occur. Most of them represent the elements of physical environment that are directly or indirectly involved in a person's everyday life, carry a meaning and a value for him/her. Historically, one's home and its immediate surroundings – the neighbourhood – are most strongly attached places sometimes referred to as *"natural conditions of human existence"* (Buttimer, 1980). With the growth of individual resources and the increase in mobility the patterns of attached localities are also changing often taking concentric forms: "*...smaller places are incorporated within larger ones. Home apartments are parts of buildings that are parts of neighborhoods that are parts of cities that are parts of the country regions, countries, continents, etc."* (Lewicka, 2011).

Why is PA as a "psychological bonding process" important for planners, designers, and architects? As numerous studies indicate, PA is not simply a temporary emotion or a positive recognition of a familiar place. An attached place carries a meaning for a person or a group, it is valued and often perceived as a part of one's identity. Studies in the field of PA outline several correlates, as well as fields of PA impact. The perception of a place as an *"extension of the Self"* (Abel, 2015) often means readiness to contribute to the well-being of this location and its development. When residents feel attached to their neighbourhood they take care of it,

they are ready to participate in joint community efforts (Dekker, 2007, p. 372); a place identity is considered to be a strong predictor of pro-environmental attitudes and behaviour (Ramkissoon, David, Smith, & Weiler, 2013).

PA is also correlated with the sense of safety and security; places are often perceived as less dangerous by those who are attached to them (Billig, 2006). A number of studies describe links between migration and place attachment — a positive place attachment reduces the likelihood of migration (Barcus & Brunn, 2010). Also, a stronger attachment is often associated with greater well-being (Scannelli & Gifford, 2017). According to Lewicka, place-attached people compared to non-attached ones had a higher sense of coherence, were more satisfied with their overall life, and had a stronger bonding social capital and neighbourhood ties (Lewicka, 2011).

Hundreds of studies describe PA as a positively charged relationship between an actor and his/her physical environment. This reflects a mode of thinking and a way of life where the immediate physical environment is perceived by an actor as a part or an extension of his/her Self followed by respective attitudes and behaviours towards this "environmental Self". From the planners' and architects' perspective it means that the well-being of our physical surroundings, our homes and streets, schools and offices depends a lot on the users' attachments to those places. Garbage-filled, derelict and broken neighbourhoods usually indicate a low PA level among the residents, jointly built and maintained playgrounds near an apartment block tell an opposite story. Therefore, an attachment both with the immediate environment as well as with wider areas should be promoted and supported where possible also by means of design and architecture.

PA is often expressed by the personalization of places, by giving a personal imprint to a place, by displaying an actor's engagement in it. People use a big variety of signs and symbols that indicate their connections to certain locations, from placing family photos on their work desks to fighting for an "appropriate image" of their neighbourhoods and cities. Personalization represents a real or imaginable boundary building starting from the home's entrance door up to the national homeland marking attached and emotionally close areas. Identification with a place is often experienced as a sense of being 'at home' and this sense may extend far from one's house limits, including a home-town or home-land with their unique structure and visual layout. Hopkins and Dixon are discussing: "*...when the opponents argue that such buildings ('mosques in the West') would compromise the character of the local environment, they usually speak of more than architectural aesthetics. So too, those behind the developments are rarely simply seeking to establish gathering places for prayer*" (Hopkins & Dixon, 2006, p. 178).

Personalization tells about an individual or group identity to others indicating social ranks and life histories (Cuba & Hummon, 1993). It tells about defensibility, communicates ownership and marks territories, helps to distinguish borders and increases security (Omar, Endut, & Saruwono, 2012). Personalization creates a mental limit between one's own and another's, the "violation of the borders" of such a place is often perceived as an attack on the privacy and the integrity of a person.

Personalized sites that are usually also emotionally attached, express the ways how a person has "built" himself/herself into the physical world. Attachment and

personalization indicate which part of the surroundings has been considered by an actor to be close, and which remains outside of their psychological boundaries. It is *"...an interpretation of self that uses the environmental meaning to symbolize or situate identity"* (Cuba & Hummon, 1993, p. 112). In our history and traditions both place attachment and personalization represent two sides of a coin. It represents the person-environment bonding whereby places are stuck to persons or groups who will in turn get a feeling of security, well-being and confidence.

Activity-Based Offices — Work Environment without Personalization

One may ask: are the people-environment bonding models described by the constructs of PA and personalization universal? What happens if physical surroundings are organized in a way that doesn't allow any personalization of, and attachment to, the very places where there are long and strong traditions to do this? Many office employees have been faced with such a situation in recent years when their employers started to implement the concept and practices of activity-based offices (ABO). This is an office without any personal workplace (desk) or personally fixed rooms.

ABO is an office environment consisting of activity-based zones and places instead of person-attached ones — meeting areas, rooms for quiet work, recreation areas, coffee corners, etc. And unlike in traditional offices, employees have no fixed workplaces — desks, workrooms, private shelves (Wohlers & Hertel, 2017). It is expected that a person who leaves their workplace for more than a couple of hours will also clean their place of work in order to allow one of their colleagues to use the same place. Employees are free to choose a zone according to their preferences and scheduled activities. The only "personal" place in the office is a personal box in a storage room for storing one's own documents and private belongings (de Been, Beijer, & den Hollander, 2015). No attached desks, no personalization, everything is used by everyone. When you need to have a meeting, please move to the meetings area; if quiet work is needed you may hop over to the silent room passing a coffee corner on your way. All this is sharply different from the traditional understanding and interpretation of workplaces in the offices where the rule is that each and every person has a personal (and personalized) workplace. In ABO, all this is gone replaced by activity zones and functional areas.

The concept of an activity-based office emerged about twenty years ago in Sweden (Brunneberg, 2000). The idea was to save space and resources having in mind that some employees constantly travel, which enables planning of a workspace not for all employees, but for about 70–80% of them. Besides saving the resources the ABO ideology hopes to promote collaboration between employees, to have better information exchange between people and departments, as well as to increase the autonomy and freedom of employees in terms of working time and space use (Bodin-Danielsson & Bodin, 2009). As ABOs usually have a new and modern design, they are also meant to improve the image of an organization to indicate it is innovative and attractive.

ABOs are quite different from traditional offices in which each employee has a definite workplace and personalized location for keeping his/her personal and work equipment. The old way of expressing one's identity, status or position through physical markers is not possible anymore. Moving from the traditional office to ABO means that employees have to change their habits and behaviour, adapt to the new and quite different physical layout. Employees of ABO are facing similar challenges as described in Case 1 — they need to adapt to a new physical arrangement. They have to adapt to the work context in a situation where one of their deeply rooted desires – to have one's own place at work, to personalize it, to feel attached to this very place – is not possible anymore.

Empirical study 2018

Pros and cons of ABOs began to be debated also in Estonia after certain large organizations started to use this type of office layout a few years ago. In 2017 four Estonian governmental offices (ministries) were moved to a new modern building. One ministry started to use the working space organized according to the ABO principles (we shall call it Ministry A), others (Ministries B) preferred to have a combined system – personalized workplaces plus open office facilities (activity based zones). As Ministries A and B are located in the same building and use similar facilities the main difference between them stands – do employees have or have not personal workroom, the rest of the workspace was quite similar for all employees. A study was carried out in spring 2018 to analyze the way employees evaluate the new work environment in both cases and how they compare it with the old (traditional) office. Internet-based survey was used as a research method. 106 respondents represented the Ministry A (employees moving to the ABO-type office), and 191 respondents represented the ministries using a combined (COMBI) workspace (Ministries B). All respondents had used a very traditional work environment in their previous locations and moved to the new location one year prior to the study. The research questions also included:

1) how important is having a personal (and personalized) workroom and a personal work desk for the employees? Taking into account that in Ministry A the "clean desk" policy had been implemented, which was not the case in Ministries B.

2) how satisfied are the employees with their privacy during the workday? Taking into account that in Ministry A there are no personalized rooms, which is not the case in Ministries B.

3) are there differences in workplace attachment in the comparison of employees in Ministry A and Ministries B?

4) how do employees from the Ministries A and B compare the new work environment with their previous (traditional) one?

Results

1. Importance of personalization. According to the Mann-Whiney test, employees in the COMBI office consider a personal workroom more important

(Mdn = 6) than those in the ABO office (Mdn = 4), $U = 5392.5$, $p < .001$. Also a personal work desk is more important to COMBI people (Mdn=7) in comparison with the the ABO employees (Mdn = 5), $U = 4787.0$, $p < .001$. Figures 2 and 3 demonstrate summarized results — answers indicating the importance of having a personal and fixed workroom are summarized (very important + important + moderately important) as well as answers indicating it being not important (not important at all + not important). Employees working in the ABO regime consider personalized places considerably less important than the employees who are currently using the COMBI system.

2. Privacy in the workplace. According to the Mann-Whitney test, employees who are using COMBI offices are less satisfied with their privacy in the workplace (Mdn = 3) than those working in the ABO office (Mdn = 4), $U = 71543.0$, $p < .001$. Figure 4 demonstrates how satisfied both ABO and COMBI employees are with

Figure 2

Importance of Having a Personalized Work Room in the Office

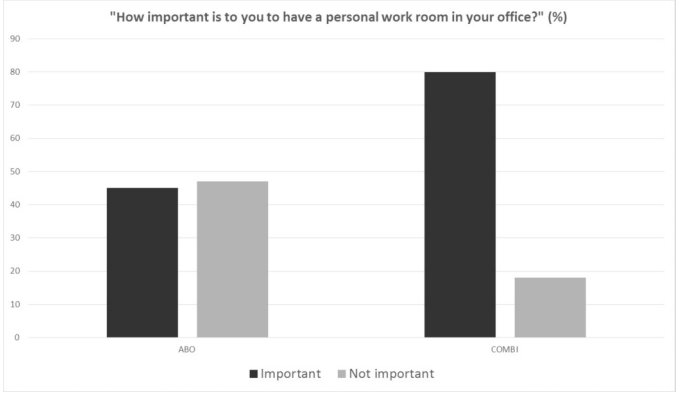
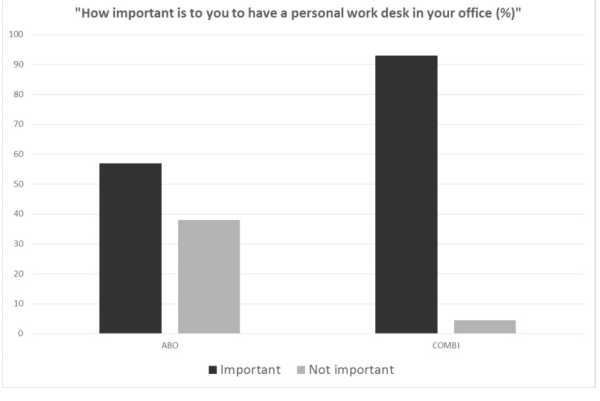


Figure 3

Importance of Having a Personal Work Desk in the Office



the privacy conditions in their current workplace. The answers indicating satisfaction (satisfied + satisfied + moderately satisfied) are summarized as well as answers indicating no satisfaction (not satisfied at all + not satisfied). The data indicated considerably higher satisfaction with the privacy conditions of ABO employees compared to the ones using the COMBI system.

3. Workplace attachment. To measure workplace attachment, the place attachment inventory developed by Williams and Vaske (2003) was included in the study. A 7-items Likert scale was used to assess statements that describe emotional bonding with a current workplace (meant as the whole space used by the Ministry). Inventory's reliability measure (Cronbach's alpha) equals .82 in this study. T-test indicates that workplace attachment in Ministry A was higher M = 3.60 (SD = 1.33) compared to the attachment of employees from the Ministries B, M = 3.18 (SD = 1.32), $t(292) = 2.63$, $p < .05$.

4. Evaluation of changes. Figure 5 presents the overall evaluation of respondents concerning changes in their work environment. They were asked, "*What is*

Figure 4

Satisfaction with Privacy at the Workplace (%)

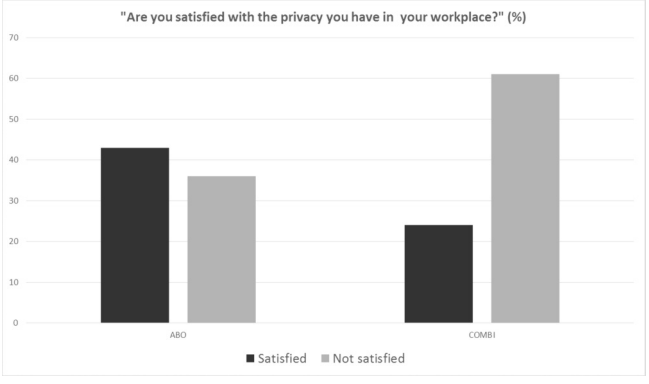
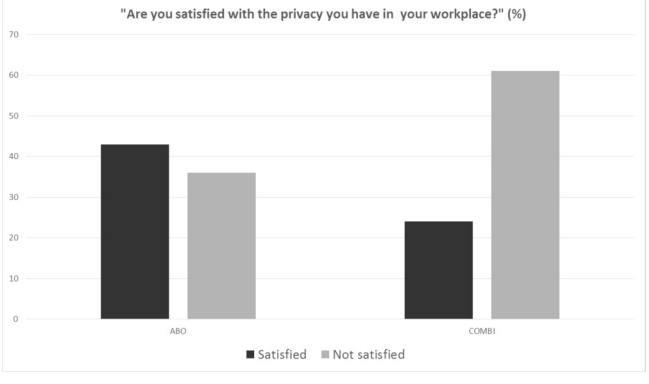


Figure 5

The Overall Evaluation of the New Office (%)



your overall evaluation of the new office, do you like it or dislike it?". In the table positive evaluations were summarized (like very much + like + probably like) as well as the answers indicating disliking the new office (strongly dislike + dislike + probably dislike). Once more, the ABO people happened to be more positive than the COMBI people.

Conclusions. At first sight the presented results seem to be paradoxical. Employees in the ABO system like the new conditions more than the users of the COMBI system; they have fewer concerns about privacy compared to COMBI people and about half of them don't consider having a personal workroom and desk important. Although Ministry A passed considerably deeper changes than Ministries B, a significant part of people from Ministry A seem to be more adjusted to the new working conditions. Does it mean that the widely and thoroughly studied ideas about the importance and value of personalization and place attachment do not find their expression in the case of ABOs?

Our hypothesis explaining those differences relies on how the change happened and specifically on the way it was prepared. In Ministry A, a special preparatory program that lasted several years was implemented. During this program a special study was performed in order to clarify the needs of departments and teams, several design alternatives were discussed with the employees as well as brainstorm sessions with the employees were held to define strengths and possible bottlenecks of the new work environment. Also visits to the other ABO offices were organized in Estonia as well as abroad, and rules of behaviour in different zones and areas were collaboratively discussed and composed.

In the case of Ministries B, the employees were simply informed about the future changes without any special preparatory program. Our explanation (actually a hypothesis) is – as people from Ministry A were better prepared and in fact participated in the planning and designing process, it was easier for them to accept the changes and adjust themselves to the new conditions. There was less uncertainty and fewer surprises for them.

Discussion

The cautious message from both cases is — it is important to pay attention and take into account the users' needs, habits and preferences on changing their physical habitat, while trying to improve the person-environment match and coherence that are represented by the users' satisfaction and emotional attachments to places, also by the readiness to contribute to the place's well-being. In spite of limitations of the both studies — one was performed more than a quarter of century ago, the other had a small and quite specific sample — they give us hints about the possible value of user's participation and indicate some unused resources in planning.

Of course, it is easier say than to do. The meaning of "taking into account" varies considerably. Kamaci lists eight ways of the users' participation from informing and consulting, to partnerships and citizens' control over the whole process (Kamaci, 2014, p. 8). Active and direct 'participation' by millions moving to their new boxes described in Case 1 was hardly imaginable, and yet... The collected data

in our study was also clearly underused, despite outlining several ways of improving the situation. The importance of the research component in planning and design should be once more stressed. Beside the users' direct participation, the indirect way through polls and surveys has a clearly underused value. It includes carrying out pre-design research describing the community or people who are future users of the planned buildings, rooms or public areas. It may also include the study of assessments and evaluations by those who are already using some types of physical layouts. In both cases presented the possibilities of research and collected data have been underestimated and underused.

Stressing users' participation inevitably raises the question about the role and position of planners in society — why not trust the people who have knowledge and experience in the field? Recent debates indicate that skills of communication with end-users and the wider public in order to explain them proposed ideas and solution, ask their opinions and advice are slowly becoming part of planners' professionalism, part of expected competences. Debates about the value and role of the users' voice and participation are growing not only in the field of spatial planning. A trend labelled *co-design* (Sanders & Stappers, 2008) represents broader, not just architect-user relationships. It is used for introducing technological innovations (software vs user), educational innovations (university vs school) and elsewhere. The palette of forms of cooperation is varied, *"... everything which encourages cooperation and facilitates creativity — ...pens, paper, Post-Its and craft supplies are all used... also co-design workshops often involve the use of games, brainstorming, roleplaying and creative exercises"* (Design Kit, 2018). The aim is to build bridges between worlds that still exist separately — the world of planners and the world of users.

Stressing participation and fair public communication is a part of a bigger game. It indicates changes in the whole culture of decision-making in society. Currently this culture is slowly but inevitably entering the eastern part of Europe as well. According to Damurski, this is a *"...vibrant theme in the former 'Eastern Block' where the system transition in the 1990s brought dynamic spatial, social and economic changes in urban areas, creating a new, unique context for local policy formulation. This situation gives an unprecedented opportunity to study public communication patterns 'in statu nascendi' (being currently created), to show the tensions between the existing formal and emerging semi-formal and informal planning phenomena, to depict the challenges of introducing communicative ideas to the planning practice, still in many ways embedded in the traditional administration-centred political culture"* (Damurski, 2015, p. 1574). We have to acknowledge that the future image and functionality of our cities, apartments and offices will primarily depend on this very culture.

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Квартиры и офисы: как удовлетворить дизайнеров и потребителей

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Резюме

В статье рассматриваются два примера пребывания людей в некомфортных помещениях зданий, что порождает среди их обитателей неудовлетворенность, вынуждая изменить характер жизнедеятельности, проявляющийся в трансформации назначения или геометрических параметров комнат. Первый случай представляет малоизвестные результаты обширных исследований массового городского жилища, которые проводились перед политическими переменами в СССР в 1978–1985 гг. Известно, что в послевоенный период в стране была создана уникальная жилая среда с особым способом распределения квартир, которая заставила десятки миллионов семей, принадлежащих к разным социальным сообществам, приспособить свою повседневную деятельность к одинаковому образу жизни. Исследование выявило основные недостатки таких жилищ и главные источники дискомфорта в них, а также обнаружило некоторые негативные социальные последствия, вызванные намерениями домохозяйств приспособиться к неудобным

физическим параметрам зданий. Второй случай фокусируется на оценке современной дизайнерской идеи, направленной на создание офисного помещения, в котором сотрудники не имеют собственных (фиксированных, персонализированных) рабочих зон, но могут свободно перемещаться и занимать другие рабочие места, исходя из постоянно меняющегося характера производственной активности персонала. Анализ существующих офисов, основанный на изучении работы административных учреждений и проведенный в Эстонии в 2018 г., указывает на то, что участие сотрудников в планировании и проектировании их рабочей обстановки может помочь им лучше адаптироваться к новой и необычной форме использования рабочего места. Главным содержанием послания авторов статьи специалистам, занятым улучшением качества искусственного окружения, сформированным в результате анализа этих примеров, является предложение по созданию соответствующих социальных условий в среде локальных сообществ, которые были бы способны обеспечить более тесное сотрудничество между конкретными производителями и потребителями. Возможно, активный обмен опытом и знаниями в среде экспертов приведет к росту взаимопонимания, столь необходимого современной практике проектирования зданий, которая продолжает пока оставаться для значительной части населения одним из источников растущей неудовлетворенности сложившимся городским образом жизни.

Ключевые слова: массовое жилище, офисная среда, привязанность к месту, удовлетворенность пользователей, сотрудничество с разработчиками.

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