A sense of security and freedom in a residential environment

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ABSTRACT: The article is based on the results of a survey carried out among students of architecture faculties in several countries, which examined the students' knowledge of shaping the housing environment in such a way as to enable them to fulfil two basic and, at the same time, seemingly mutually exclusive psychological needs of a person: a sense of security and a sense of freedom. In examining these issues, particular emphasis was placed on the possibility of creating such methods of architectural education that would make students - future engineers - aware of the necessity to understand the needs of the human psyche, and provide an opportunity to develop design skills to create a space that meets those needs. This kind of architectural education is part of the search for an answer to an important question today: how in the contemporary world, in a constantly transformed environment, can a person retain their own identity, find a place to live, find their own existential space?

INTRODUCTION

Helping architecture students develop the ability to ensure the comfort of space use, especially residential space, should be one of the most important aspects of architectural education. Contemporary man, according to Heidegger's theories, seeks his own, intimate existential space [1]. His individuality requires that his immediate surroundings should not only satisfy his basic needs, but also provide him with positive psychological and spiritual experiences, addressed to him. Among many of these, the first thing to mention is undoubtedly the pursuit of a sense of freedom - the highest value of man, and the source of all democratic systems. The ideas developed by Pericles have survived for centuries and refer also to the space around us, which can be perceived as giving a sense of freedom or, on the contrary, taking away that freedom.

The spirit of freedom gives rise to another very important for the human psyche need, which is the sense of security, characterised by the lack of fear of losing intangible and material values, such as independence, identity, honour, health, life, work or property [2]. This need to introduce peace, order and harmony in one's own life is one of the basic existential needs of man. It is not without reason that fenced and guarded, gated housing communities, enclaves of small-scale buildings are (unfortunately) multiplying all over the world. Separated from external traffic, turned away from the external surroundings they are open to the internal space (Figure 1).

a)   b)

Figure 1: Separated from external traffic, fenced housing communities: a) in Sopot; and b) in Gdańsk (Source: FORT Taraszkiewicz Architekci Sp. z o.o. in Gdańsk).

The same can be said of large apartment buildings, offering comfortable living conditions in isolated, and well-guarded from unwanted guests, apartments (Figure 2 and Figure 3).
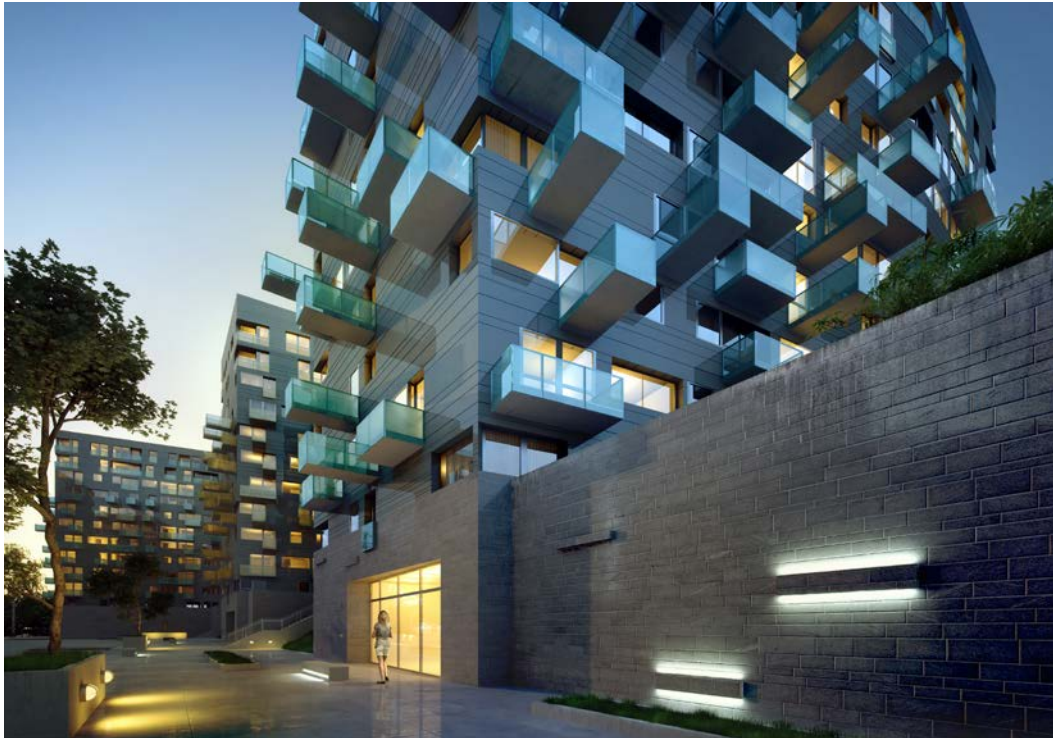

Figure 2: Apartment building in Gdańsk - external view (Source: FORT Taraszkiewicz Architekci Sp. z o.o. in Gdańsk).
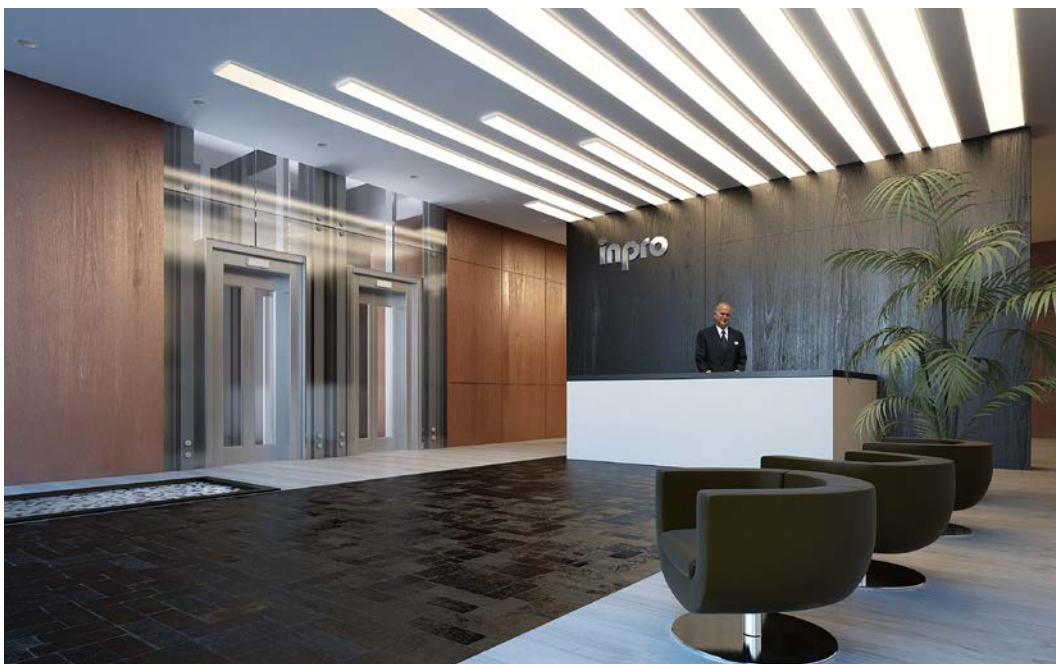

Figure 3: Apartment building in Gdańsk - reception (Source: FORT Taraszkiewicz Architekci Sp. z o.o. in Gdańsk).

This poorly conceived model of *safe* living, resulting from the lack of sufficient knowledge, is gaining more and more supporters all over the world, which is dictated by the overwhelming need to ensure for oneself and one's loved ones the highest level of life security.

Of course, the pursuit of a sense of security and full freedom at the same time can, but need not, be contradictory. Most often, the desire to be in a completely safe environment leads to the creation of various types of *barriers* to freedom. Conversely, the fewer *barriers*, the more freedom but less security. The architect's task is to find a subtle balance, appropriate for the place, time and task, between these elements.

What comes to assist the architect here is proxemics that not only draws attention to the physical aspects of human presence in the space created by the designer, such as ergonomics, light, sound or interior atmosphere, but also to the

adaptation of this space to the needs of people of different temperament, gender, upbringing, education, age and even cultural level. An American researcher, an anthropologist Edward T. Hall claims that proxemic patterns clearly prove the existence of some basic differences between people - differences that the architect cannot ignore [3]. Architecture students - future architects must understand the existence and nature of problems related to human psychological needs, and understand that people can be restricted by the space in which they have to dwell and live or on the contrary, they can experience positive feelings, such as the indispensable for human beings feelings of security and freedom.

PRINCIPLES OF PROXEMICS IN ARCHITECTURAL EDUCATION

The fact that modern man is fully aware of the needs and requirements of his living environment, the needs and requirements not only physical but also psychological, necessitates modifications in architectural education to create opportunities for students to learn how to satisfy those needs.

Rasmussen writes about experiencing architecture through such elements as: solid shapes and emptiness, contrasts, colour planes, scale, proportions, rhythm, texture, light or even of hearing architecture [4]. This holistic approach to experiencing architecture with all the senses allows contemporary man to open up to various impressions, and through their perception to reveal his true, individual psychological needs and his true essence. *Architecture is my space and, emotionally, only mine* (Figure 4).

Figure 4: Architecture that can be perceived with all the senses - a housing complex in Gdańsk (Source: FORT Taraszkiewicz Architekci Sp. z o.o. in Gdańsk).

Zumthor, in turn, draws attention to the need for dialogue between architecture and its recipient and the existing space, as well as the need for the creators of the architectural work to understand and feel the identity of the place [5]. Each new building is designed and built in a place that already has some, even the shortest and least important but its own history, its own climate, terrain, surroundings and landscape. It is the architect's duty to reflect the atmosphere of this place and to preserve, and maybe even enhance it to provide the recipient with a stronger sense of connection and identification with the redesigned space [6]. This emotional bond with the inhabited place and treating it as one's own leads, of course, to a sense of freedom and security. Conversely, the lack of identification with the place of residence and the lack of its acceptance causes psychological discomfort and stress for the residents [7].

Today's architecture students should be familiar with these theories and be able to draw on them to guide their future career [8]. However, the current system of architecture education covers these issues to a very small extent, focusing primarily on the physicality of man, while almost completely ignoring his spiritual and emotional sphere. The current architecture studies curricula are very broadly focused on stimulating creativity among architecture students, developing their spatial imagination, instilling knowledge from the history of architecture, combining many skills in the fields of technical knowledge, cost control, coordination of the activities of various specialists in the field of construction, while not providing any education in the field of proxemics, psychology or sociology. Hence, it can be claimed that such education results in a total ignorance of architecture students in terms of their ability to meet the needs of the human spirit, including the need for security and freedom.

To test this claim, an anonymous survey was conducted among students in six academic centres in Poland, France, Belgium and Tunisia: in the Faculty of Architecture at Gdańsk University of Technology; Faculty of Architecture and

Urban Planning at West Pomeranian University of Technology, Szczecin; Faculty of Architecture at Wrocław University of Science and Technology; Département d'Architecture INSA Institut National des Sciences Appliquées de Strasbourg; Département d'Architecture Université de Liège; and Ecole Nationale d'Architecture et d'Urbanisme (ENAU) de Tunis. A total of 150 questionnaires were sent out to second- to fifth-year students (Figure 5). One hundred and two completed questionnaires were received (Table 1).

a)   b)

Figure 5: Samples of completed questionnaire by students from two institutions a) Gdańsk University of Technology, Faculty of Architecture; and b) Département d'Architecture INSA Institut National des Sciences Appliquées de Strasbourg (Questionnaires translated into English by the authors).

Table 1: Number of completed questionnaires returned from individual institutions.

Name of the faculty and university	Number of completed surveys
Faculty of Architecture, Gdańsk University of Technology	39
Département d'Architecture, INSA Institut National des Sciences Appliquées de Strasbourg	25
Faculty of Architecture and Urban Planning, West Pomeranian University of Technology, Szczecin	20
Ecole Nationale d'Architecture, d'Urbanisme (ENAU) de Tunis	12
Faculty of Architecture, Wrocław University of Science and Technology	6
Département d'Architecture, Université de Liège	0

In architecture education, the role of cultural background is particularly important [9][10]. The selection of diverse European universities allowed to obtain answers from students from different educational programmes and cultural circles.

The survey included five questions:

1. Do you think that a person needs a sense of security in their place of residence? (yes/no).
2. Do you know how to create, using architectural means, a sense of security in a person inhabiting a space? (yes/no). If yes, describe it in a few sentences.
3. Do you think that a person needs a sense of freedom in their place of residence? (yes/no).
4. Do you know how to create, using architectural means, a sense of freedom in a person inhabiting a space? (yes/no). If yes, describe it in a few sentences.
5. Do you think that the pursuit of a sense of security and a sense of freedom are mutually exclusive? (yes/no). If no, describe it in a few sentences.

The uneven response to the questionnaire across the surveyed institutions was surprising, and also indicative of not only the students, but also of the teaching staff underestimating the importance of the problem. As indicated in Table 1, some universities responded vigorously, sending back numerous completed questionnaires, others responded with fewer questionnaires, and one institution decided that teaching proxemics principles at architecture faculties was completely irrelevant and did not return any questionnaires.

To the first question (Do you think a person needs a sense of security in their place of residence?) all students answered in the affirmative, intuitively sensing the need to experience a sense of security in the place of residence. However, answering the second question (Do you know how to create, using architectural means, a sense of security in a person inhabiting a space?) was extremely difficult for them, revealing a total lack of knowledge of proxemics and the possibilities it offers in the search for architectural means leading to the creation of space perceived by residents as safe. None of the respondents were able to look for an answer to this question in the analyses concerning individual characteristics of future residents – users of residential spaces designed by architects, or in creating architectural means to make residents identify with the surrounding space and treat it as their own.

Most (98 students) were looking for a method to achieve the security goal through the use of physical barriers, such as fences, burglar-proof doors or monitoring, which is, of course, the result of the traditional teaching method, applying a kind of unification in the theory of designing residential architecture and aiming for the *correct* residential space solution intended for an anonymous recipient. Interestingly, when thinking about safety in the residential environment, all respondents referred only to the use of protection against a possible intruder, while none of them referred to such basic functions of the residential space that give an obvious sense of security, such as protection against rain, wind, cold and heat [11] or the possibility of peaceful rest and recreation. Very few students (4 students) noticed the possibility of instilling a sense of security in the inhabitants by using the appropriate *human* scale of buildings, and creating semi-private and private zones.

All respondents answered in the affirmative to the third question (Do you think that a person needs a sense of freedom in their place of residence?), except one student who decided that there is no need for a sense of freedom in their place of residence. This respondent was probably a victim of the current method of architectural education.

The fourth question (Do you know how to create, using architectural means, a sense of freedom in a person inhabiting a space?) was answered in a rather naïve way, indicating again the already mentioned lack of proxemics knowledge and the inability to search for relationships between spatial solutions and the mental state of residential space users. Fifty-nine students did not answer this question at all, and 42 students sought the possibility of creating a sense of freedom in the inhabitants by using open views, introducing greenery and sunlight into residential interiors, which indicates a modernist, i.e. slightly out-of-date profile of the relevant university. Only one person, probably intuitively and not as a result of the knowledge gained at the university, answered that the sense of freedom can be gained if a resident has a choice in the way particular elements of his/her apartment are used, but did not develop this very valid thought.

The fifth question turned out to be the most difficult of the questions asked in the survey (Do you think that the pursuit of a sense of security and a sense of freedom are mutually exclusive?). Although almost all students, except one, replied that the pursuit of a sense of security and a sense of freedom are not mutually exclusive, none of them could explain in detail why. The total lack of answers to this question is very worrying and indicates that the issues discussed in the survey are completely alien to students.

The results of the survey strongly indicate that the current education of architects lacks any teaching components devoted to designing residential spaces adapted to different, sometimes very individual requirements of the human psyche. Maintaining this state of affairs is very harmful as it leads to an incomplete education of architects who cannot meet the needs of contemporary man.

CONCLUSIONS

Modern requirements for residential development go far beyond the norms and principles that have been accepted and established for many years. New needs and requirements emerge, resulting from higher user awareness, that designers should be able to meet. Graduates of architecture are nowadays facing the problem of coping with new, and increasingly more serious, challenges. The inability to meet these challenges can lead to long-term and permanently negative effects evidenced by living spaces ill-adapted to the psychological and emotional needs of modern man. Enhancing architecture curricula with subjects allowing future designers to create living spaces that meet the psychological needs of modern man will bring professional benefits not only to students, but also to those who teach.

The subjects that would enrich the curricula are mostly interdisciplinary from the fields of proxemics, psychology and sociology. Students should be acquainted with research techniques commonly used in these fields, in particular, within the framework of classes in a particular subject.

More specifically, they should be encouraged to use such research methods as:

1) observation and behavioural analysis as the main source of knowledge about the properties of the human psyche, its emotional and motivational states;
2) social interview which is a lively conversation, carried out according to a pre-established plan and on the basis of pre-prepared questions to gather information about the needs and preferences of the interlocutors;
3) questionnaire interview as a method to collect data by asking questions included in a specially prepared questionnaire, addressed to a properly selected sample of respondents - this method allows the respondents to respond calmly, thoughtfully and in writing to the questionnaire.

The students' research should end with the formulation of conclusions to be used subsequently in semester architectural designs of residential buildings.

Two years after the implementation of the suggested curricular changes, another study about the state of students' knowledge should be carried out using the questionnaire presented in this article.

The aim of this second survey will be to determine how the curricular changes will have improved students' understanding of the problems associated with the impact of spatial solutions on human well-being in a residential environment. If the survey's results are still unsatisfactory, further curricular modifications should be made.

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