ARCHITECTURE FOR AUTISM.

IMPROVING DESIGNS FOR AUTISTIC INTEGRATION

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Abstract

Autism is regarded as the most severe psychiatric syndrome of early childhood. Because the disease cannot be fully treated, the autistic child becomes the autistic adult, its condition depending on the severity of the syndrome and mostly on the treatment process. Since any person will spend about 75% of his life as an adult, the task of autism treatment is to prepare children to gain independence and to insure integration into society. As a result, people with autism need to be prepared at the earliest age to interact with other children and integrate into the public school system, which will determine a mental development similar to normal people. [1] By doing this, autistic and non-autistic will learn similar sets of skills which will later facilitate their integration. Also, because they will get in contact with autistic children at an early age, non-autistic people will have a clearer understanding of autism and therefore be able to easily integrate them in work and social activities later in life. [2]

Present design methods for autism treatment centers concentrate either on skill development (Sensory Design Theory) [3] or rigid adaptation to day-to-day circumstances (Neuro-Typical Approach) [4] without paying much attention to future autism integration. The paper focuses on analysing architectural methods that should be implemented in autism treatment institutions in order to facilitate the transition between the therapy environment and public education circumstances. The study establishes the difference between integration and assimilation of people with autism and refines present design approaches in order to achieve a more efficient integration process. Also, the study aims to improve the design methods that are presently used in treatment facilities, in order to make a better connection with post-therapy situations by introducing variation of sensory stimulation in the therapy spaces as well as interaction spaces for autistic and non-autistic peers inside autism treatment centers.

Keywords: architecture, autism, sensory design, autism therapy, neuro-typical, autism design, autism center, autism architecture, autism integration

1 INTEGRATION AS A SUSTAINABLE TREATMENT METHOD - A UNIVERSAL APPROACH

As treatment for autistic people progresses, the focus towards integration becomes more and more approachable. By applying the therapy at an early age and concentrating both on quality and quantity of treatment, children with autism have the best chances to acquire the knowledge and skills necessary to be able to integrate in activities that normal children of the same age do. The problem now lies on preparing society to deal with problems that autistic people have. This can be done on two distinct fronts: education and environment. Since people with autism have deficiencies in the social behavior department, it is easier for society to learn how to interact with them rather than teaching autistic to interact with normal people. If society does not get educated in this mater, there will always be a gap between the two groups, because autism cannot be treated permanently and autistic will never be regarded as equal members of the community.

On the other hand, the sensory issues that autistic people possess need to be considered. Taking into consideration the models established for manipulating environments to accommodate people with visual and motor deficiencies, in the same way we can create spaces that address the comfort and security of autistic people. By eliminating the toxic environment, autistic will have an easier task in interacting and manipulating the surroundings therefore facilitating the learning process.

Once these two concepts are put into facts, we can no longer talk about a process of assimilation, but about a process of integration. This means that rather than forcing one group to adapt inside the other group, both groups make efforts to understand and interact with each other.[5] If we manage to educate society on this subject and adapt the environment to accommodate autistic needs, the process of integration will become sustainable as public space will be transformed into large autistic treatment facilities and each individual will become a therapist.

2 ROLE OF ARCHITECTURE

In order to create a unitary integration process, actions need to be taken both in the immaterial field (input from education) and on the physical space, by modifying the tangible context to accommodate autistic needs. Since architects are the creators of built environments, the task for providing suitable surroundings for people with autism falls into the realm of architecture. In this regard, both inside public spaces and outside urban environments need to be studied.[6] Once the presence of autistic people in society is recognized and autistic deficiencies are identified and understood, architects will be required to provide solutions for autistic integration, similar to policies made of people with motor or visual disabilities. As a society, we have a clear moral responsibility for the disabled and people with autism should not be forced to rigidly adapt to present surroundings, the same way as paraplegic people should not be forced to adapt and *walk* up the stairs.

Under no conditions should architecture be disregarded in this process. The sensory issues that people with autism have represent great boundaries for learning and development progress. As shown in studies made by Magda Mostafa [3][7][8] and many others (A.J. Paron-Wildes [9], Christopher Beaver [10], Theo Peeters [11]), the presence of low stimulus environments plays an important role in sustaining attention and concentration levels. Once the space is manipulated to provide safety and comfort, autistic people will have an easier task in maintaining focus in the different interactions that they need to undertake.

Another important aspect in creating a suitable environment for autistic is spatial guidance. In both outside and inside spaces, navigation through the surroundings should be made by establishing clear paths and directions for each function. Also, similar to autism treatment facilities, every objective needs to have a definite mark in order to be clearly identified. This is needed in order to address the generalization issues that autistic people have. Because individuals with autism lack the capacity for abstract thinking, they will have difficulties in identifying similar spaces that possess the same function. But as soon as straightforward marks are created, autistic people will gain confidence for interaction with that space.

These key aspects for creating autistic friendly environments improve both the lifestyle of people with autism, but are also beneficial for all people that navigate the public space. As stress from over stimulating urban environments becomes a big problem for contemporary society, policies for improving autistic integration will also serve the general population.

3 VARIATION OF SENSORY STIMULATION THEORY

Present design approaches regarding autism treatment centers focus either on a rigid adaptation to present environmental circumstances (Neuro-Typical Approach) [4] or on isolation from sensory stimulation that can establish a comfortable environment for skill development in autistic patients (Sensory Design Theory) [3]. Both methods rely on environmental characteristics that make them suitable for autism treatment centers although they possess features almost opposite to one another.[12] Rather than choosing one design approach over another, a firm effort should focus more on how to combine all their qualities into a single coherent architectural method.

As skill development and generalization abilities are the most important tasks that therapy addresses, it makes sense to create separate spaces to conduct both of these activities in order to achieve the best results. While skill development requires a sensory neutral environment that creates comfort and security necessary to boost concentration levels, for the generalization abilities, the required environment needs to create a variety of

sensory situations in order to insure that a learned ability does not have strict environmental limitations. Both activities are part of present practices for autism therapy and also extremely dependent on the built environment in which they are conducted. Moreover, sensory neutral surroundings become an essential part of autism treatment centers when the therapy needs to be applied on children with severe autism or with patients with high sensory disorders. More than 85% of people with autism spectrum disorders perceive colors with a higher intensity than normal people. Heavy colors such as red, with a high vibrance, similar to fluorescent tones. Approximately 10% perceive colors normally, while 5% of autistic observe them less intense than normal.[13] Thus, architectural designs for autism treatment centers should incorporate both design approaches in order to keep up with treatment necessities and offer suitable surroundings for autism therapy.

Autism therapy is mainly targeted towards children and focus on establishing the key abilities and social skills that facilitate their possibilities to integrate in the public education system.[14] This means that in order to achieve the best results, architectural design needs to resemble the environmental features (both sensory and social characteristics) that exist in current public schools, while still maintaining suitable circumstances for autism therapy. The best solution for this would be to create a variation of the sensory environment beginning from strongly controlled area, towards a sensory saturated space and environment closely resembling the public school system. By doing this, patients will have a suitable environment for skill development and generalization abilities that gradually transforms into spaces that literally mimic day to day public and school environment circumstances. To put it straightforward, the Variation of Sensory Stimulation Theory is a combination between the Sensory Design Approach and the Neuro-Typical Approach, that gradually transitions from the first to the second and insures the best results for autistic integration, mainly to the public school environment. This model is presented as a series of layers with different sensory features that contain sensory controlled environments for skill development as well as neuro-typical spaces necessary for establishing and putting into practice the acquired skills. The number of layers is defined by the stages present in autism therapy and represent a development in complexity towards sensory saturated environments present in day to day life. While the sensory controlled spaces necessary for skill acquirement transform into areas similar to classrooms, the neuro-typical spaces develop into a design that mimics outside public areas. Also, the sensory design areas should begin with individual therapy spaces and advance towards general public learning spaces.

On the Variation of Sensory Stimulation Theory, the relation between each layer is unidirectional, from lower complexity to higher complexity, while the relations between neuro-typical spaces and sensory design spaces is collaborative and interdependent. The layers can be stacked both vertically (with low stimulus areas at the top) or on a horizontally grid. Also, the dimensions of each layer should be correlated with its complexity since larger areas with higher human activity deliver higher sensory stimulation. (Fig.1.)

In addition to the standard sensory and neuro-typical spaces, each layer can contain a number of supplementary functions correlated with the treatment programme and sensory requirements such as: snoezelen rooms (controlled multisensoy environments)[15], playground rooms, relaxation areas, workshop spaces, cafeteria and so on.

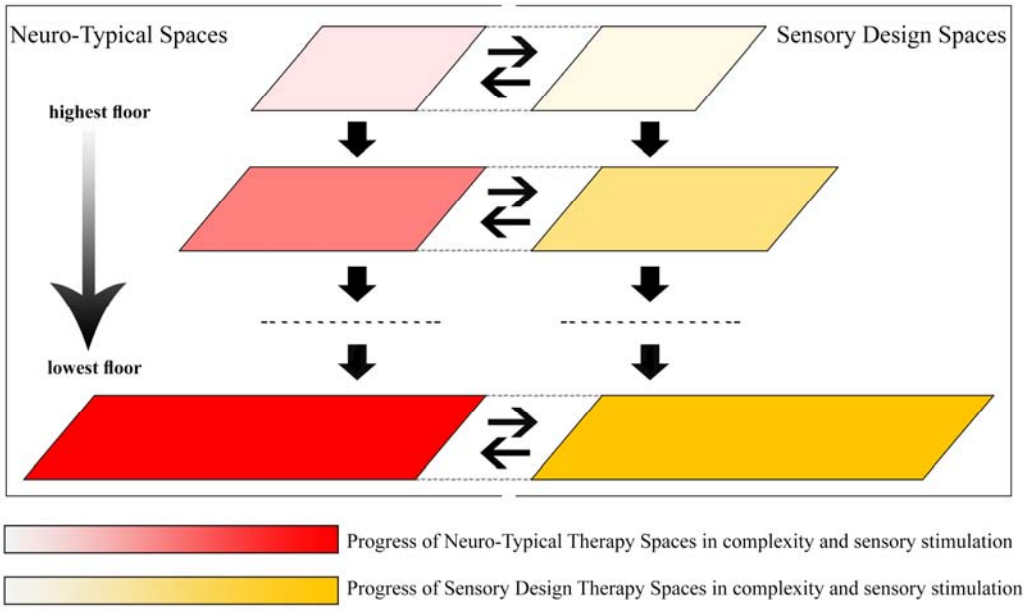

Fig.1. Model of Variation of Sensory Stimulation Theory (vertical layer placement)

4 INTERACTION SPACES

As mentioned in the first chapter, the task of autism integration relies both on the therapy that people with autism are subjected to and on the public education and perception of autism and the disabilities that people with autism possess. Autism treatment centers should not be isolated in spaces outside the city, but rather be located inside the urban area where they can establish relations with cultural, education and health institutions. This will facilitate interactions between autism patents and the people outside, especially children studying at nearby schools and kindergartens. In this regard, the public interface becomes an extremely necessary part of an autism treatment center and a tool for awareness and integration.

To further facilitate integration possibilities for people with autism, the treatment center needs to possess interaction spaces designed and placed at the limit between the therapy area and the public spaces. The activities will involve both patients and people from the outside and it will provide benefits for people with autism by observing and learning from the behaviours of normal people. Also, by interacting with the patients, people will learn about their disabilities and necessities and will have an easier task on integrating them into their day to day lives.

As it involves activities with lower predictability features, interaction spaces are designed especially for patients at an advanced therapy stage or with lower sensory sensitivity and it will become the last training exercise before they will be able to cope with activities and environments outside the treatment center.

The interaction spaces need to be large enough, modular and flexible to be able to accommodate many activities and circumstances that people may come across in day to day lives, from school environments to public spaces. Also, interaction spaces should have both indoor and outdoor areas in order to cover more levels of sensory stimulation. In this regard, outdoor spaces become very important since they involve a larger degree of impredictability due to different sound and weather circumstances.

The interaction spaces should be viewed in a way like a theater stage, where patients, therapists and people from outside can act situations that autistic people may come across outside the treatment center once the full time therapy is over. These areas become a key element of a treatment center because generally people with autism find it very difficult to deal with new situations. Therefore, interaction spaces have the task of practicing as many situations as possible in order for autistic people to get used to different circumstances. Also, because they will interact with different people from outside the treatment center, patients will be comfortable in communicating and connecting with people no mater what physical or psychiatric features they possess.

The same placement inside an autism treatment center should be given for the psychiatric office specialized on autism. Maybe not as important for facilitating integration, but extremely necessary for diagnosis and therapy, the psychiatric office should provide easy access from both the treatment area and from the public interface. This function will serve as a means of evaluating the progress of patients already included in the treatment process, as well as provide counseling and diagnosis for oncoming patients.

5 CONCLUSION

Integration for people with autism is a hard task due to all the autism deficiencies, but also a necessary one. As treatment for autism evolves, problems receive more and better answers that materialize in a greater gain in abilities necessary to live in today's society. In order to make the process sustainable, actions need to be taken inside both groups (autistic and non-autistic people). This will allow both autistic people to understand and adapt to standard behavior and non-autistic to learn to interact with autistic despite their deficiencies. Also, as shown above, in terms on architecture and environment, the adaptations will be directly beneficial for all members of society.

Fortunately, the incentive for autism integration goes beyond the moral value. As autism prevalence is on the rise in all countries around the world [16], the social structure of society will plunge. Also, since autism care and treatment requires great effort, time and training, the financial burden will increase substantially. [17]

Autistic integration is determined by both the human factor and the environmental factor. The therapy for people with autism is already addressing these aspects on patients, but this will not be sufficient if society is not ready to accommodate their disabilities. Design approaches for autism treatment centers such as the Sensory Design Theory and the Neuro-Typical Method have become excellent tools for the autism therapy, while the Variation of Sensory Stimulation Theory and Autism Interaction Spaces take the issue of integration a step forward.

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TEENAGERS' MOOD IMPROVED BY COLOURED LIGHTS

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Abstract

It is already known that colours have positive or negative effects on peoples' moods. People have different opinions regarding the same colour in a room [5]. For example, pinkish rooms were described in some studies as being "warm, gentle and stimulating; childish, young, fresh and funny", while others have described these same colours as "pushy, demanding and glaring; stale, tasteless, vulgar and slovenly." Contrary to pinkish rooms, greenish rooms were perceived as relaxing, calm, retreat rooms, which evoked connotations of nature. Spath [6] found that colours can influence mental and physical activity. According to Harrington [4] not all reds stimulate the same emotional response. He states there are four negative emotions (aggression, anger, rage, and terror) linked with dark yellow-reds, and five positive emotions (amazement, ecstasy, joy, love, and passion) associated with light blue-reds. According to Je [7] there are differences and similarities regarding colour preferences between Korean and Canadian students: students from both countries like red, blue, neutral colours and dislike yellow but there were different preferences regarding red-blue hues, red hues, grey hues and white hues [7]. There is no research to date with regard to the affect coloured light has on teenagers' mood. This paper presents the findings of a coloured light study in living environments seeking to understand how different coloured lights might affect teenagers' moods. Twenty-three British teenagers, aged 13-14 years old, male and female, participated in the 'Coloured Lights in my Bedroom' study which was held in a room with no windows so that the artificial lighting would not mix with natural lighting. Only 22 properly completed the questionnaire. One of them did not scale every emotion maybe because he did not know the meaning of the words.

In the study, participants were instructed to complete the PANAS Questionnaire (a mood scale which measures both positive and negative affect) under eight different coloured lights: : red, light-green, green, light-blue, blue, pink, yellow, and white. Results show overall positive average results indicating that the participants have only experienced positive moods under each different colour. Light-green had the most positive effects on teenagers' mood followed by blue, light-blue, red, yellow, green, with pink and white being equal.

Our results contradict some studies and agree with others. The dark red light from this study created positive moods compared with the dark red colour from Harrington's [4] study which was associated with negative emotions. However, the reds from Harrington's [4] study are not red lights as used in the present study, therefore, the colour perception of reds might be different when comparing the two studies. According to Lee [12], red light is perceived as uncomfortable, but our results indicate otherwise with red light affecting in a positive way teenagers' mood. Research shows yellow light is the most pleasant and comfortable colour lighting, perceived as elegant [12]. Our study shows light-green light has the most positive effect upon teenagers' mood, yellow light being one of the last choices regarding the positive scale.

The study has thrown up many questions, especially about the possibility to map findings from studies of colour affect onto studies of coloured light affect. It is possible that the addition of lighting in the colour has a significant effect on the way the colour 'feels' to the participants. Future work is exploring this by asking teenagers to comment on printed colours in a large questionnaire study which asks about predicted affect of coloured walls and ceilings in teenage bedrooms.

Keywords: Innovation, interactive design, colour light, teenagers.

1 INTRODUCTION

A significant body of research finds that colour has an important impact upon human's lives, being highly important for visual communication [1]. It is already accepted that colour can positively influence physical and emotional well-being: "colour affect people, has physical and psychological effects, and may influence the behaviour and balance of emotions" [2]. Cool colours such as blue and green are associated with calm feelings while warm colours such as red and orange are associated with active feelings [3].

According to Harrington [4] there are different red colours for positive and negative emotions. Not all reds stimulate the same emotional response. In Harrington's [4] study, four negative emotions (aggression, anger, rage, and terror) are linked with dark yellow-reds, while five positive emotions (amazement, ecstasy, joy, love, and passion) are associated with light blue-reds.

1.1 Colour preference

People have different opinions regarding the same colour in a room [5]. For example, pinkish rooms were described as "warm, gentle and stimulating; childish, young, fresh and funny", by some people while others would describe then as "pushy, demanding and glaring; stale, tasteless, vulgar and slovenly." Contrary to pinkish rooms, greenish rooms were perceived as relaxing, calm, retreat rooms which evoked connotations of nature. Greenish rooms were associated with health, being described as clean, pure, peaceful, light-hearted, confident, soothing and tranquil [5].

Spath [6] found that colours can influence mental and physical activity. Her study started with a test in several shopping centres: a pink (Cool Down Pink) coloured cabin was used in order to research people's reaction to the colour. The results show a significant decrease in blood pressure which suggests that the pink colour relaxes people. In the second part of her study, Spath [6] used the same pink colour (Cool Down Pink) in four prison cells in Switzerland. Results show the aggressive behaviour decreased since 2007, with prisoners in these cells being much more relaxed than those in a white cell. The social influence of pink colour (pink is associated with female or gay colour) cannot be controlled by a prisoner, therefore in some individual cases the prisoner "will not relax and the blood pressure decrease will not occur" [6].

Je [7] demonstrated there are differences and similarities regarding colour preferences between Korean and Canadian students: both countries like red, blue, neutral colours and dislike yellow; there were different preferences regarding red-blue hues, red hues, grey hues and white hues [7].

1.2 Interactive installations

The present study is one of several pilot studies created to understand teenagers' colour light preferences in order to design an interactive surface where teenagers will communicate their feelings through colours using a mobile app. Imagine two teenagers each have an interactive painting in their room. They will be able to send colours to each other using the mobile app. For example, when Teenager A sends blue colour to Teenager's B painting, the light of the interactive-surface in the room will change from a preset colour to blue. Teenager B can send a different colour to Teenager's A interactive-surface. Imagine that each colour sent express a certain mood. Using this interactive installation, both teenagers can express their mood and also change the colour light in a friend's room based on their mood. The intensity of coloured light in one's room will depend on the size of the interactive-surface.

Triolin AV is an example of an interactive surface which has an effect on people's mood by using light and sound in a dark room. When the user presses the surface, visuals start reacting around the pressure point, and music is triggered. Participants can easily change their mood depending on the colour and sound intensity they are playing within the dark room. If the spandex is not being pressed by the user then the installation would not react. An algorithm created allows the music to speed up and slow down or get louder or softer, based on depth of pressure [8]. The installation is made from rectangular interactive spandex walls. The system was designed using Processing, Max/MSP, Arduino and a Kinect. The Kinect measures the average depth of the spandex (this spandex material is used as an interactive surface) from the frame it is mounted on [8].

Triolin AV provides a very expressive visual and musical experience, which has an effect on people's mood.

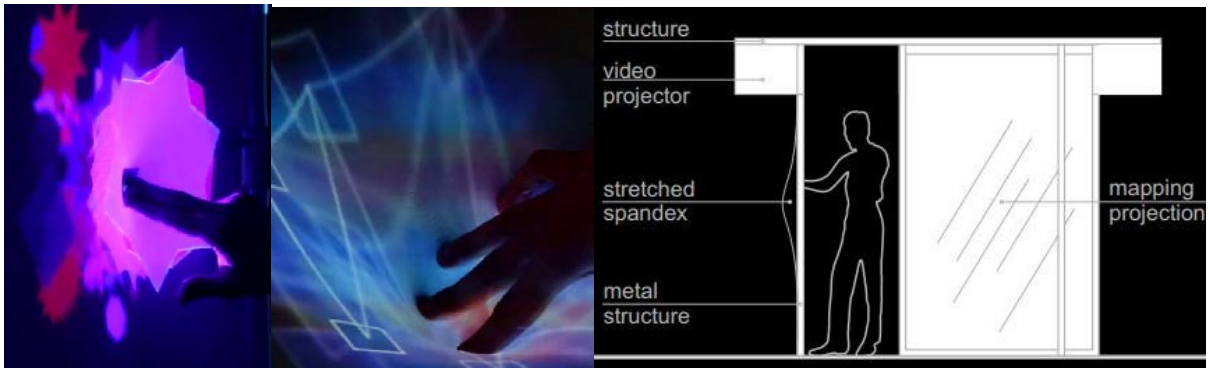

Fig. 1: Triolin AV, an interactive installation; prototype and side view [source: [8]]

2 COLOUR STUDY

The study described here took place within a MESS day event held at (ANON). A group of 23 teenagers, both males and females, attended a full day event at (ANON) and participated at three different activities in a round robin process. The three different activities were run in three different rooms. The pupils were attending as part of a school event and so it could be argued that their ability to consent-out was reduced. Prior to beginning the day they were told that the University was carrying out some research and that data would be gathered but they were also reassured that at no time would their names be asked for. They were told that papers might be published from the findings from the day. One teacher, who did not get involved with the research activities, accompanied them. 'Coloured Lights in my Bedroom' was one of the three activities that the pupils attended.

2.1 Participants

23 British teenagers, aged 13-14 years old, male and female, participated in the 'Coloured Lights in my Bedroom' study which was held in a room with no windows so that the artificial lighting would not mix with natural lighting. Only 22 properly completed the questionnaire. One of them did not scale every emotion maybe because he did not know the meaning of the words.

2.2 Procedure and apparatus

The aim of this study is to find if teenagers like or dislike being surrounded by bright coloured lights in a room.

Therefore, they were instructed to complete the PANAS Questionnaire in order to find out how they feel under 8 different coloured lights: red, light-green, green, light-blue, blue, pink, yellow, and white (see Fig. 2). The two LED lights were approximately settled on two adjacent corners of the room.

Fig. 2: The study room under different lights: red, green, blue, pink (purple), yellow, white.

Fig.3: The way the two LED lights were settled in the study room

The PANAS Questionnaire is a "scale which consists of a number of words that describe different feelings and emotions" [9]. It was used because it measures the state emotions (changeable aspects of emotions). State emotions are measured in terms of both positive and negative affect at the same time. Research shows that people can feel both positive and negative emotions simultaneously [10], [11]. Teenagers had to indicate how they felt in the moment when the study room was full of coloured lights (8 different coloured lights for max 3 min each) choosing from 20 adjectives and scaling them from 1 to 5 (see Figure10).

1 Very Slightly or Not at All	2 A Little	3 Moderately	4 Quite a Bit	5 Extremely

_____ 1. Interested	_____ 11. Irritable
_____ 2. Distressed	_____ 12. Alert
_____ 3. Excited	_____ 13. Ashamed
_____ 4. Upset	_____ 14. Inspired
_____ 5. Strong	_____ 15. Nervous
_____ 6. Guilty	_____ 16. Determined
_____ 7. Scared	_____ 17. Attentive
_____ 8. Hostile	_____ 18. Jittery
_____ 9. Enthusiastic	_____ 19. Active
_____ 10. Proud	_____ 20. Afraid

Fig. 4: PANAS Questionnaire: teenagers had to choose from those 20 adjectives using a scale from 1 to 5.

The score can be either positive or negative. Scores can range from 10-50, with higher scores representing higher levels of positive affect and lower scores representing lower effects of negative affect.

Two other questions were added to the PANAS Questionnaire to see if teenagers were affected by the coloured lights and to know if they would like to have a similar system at home. They had limited answers for both of these questions: Yes/No/Cannot tell/Did not notice respectively Yes/No/Cannot tell. For the purpose of this paper, all the questions will be analyzed.

2.3 Results

Twenty-two teenagers understood the task and were able to answer all questions. One of them did not scale every emotion from the PANAS Questionnaire. All questions were analyzed and the results are discussed in the following sections. The first analysis focuses on the PANAS Questionnaire results: how teenagers' feel under 8 different coloured lights. It uses two different ways of analyzing the results. The second analysis focuses on the effect of light on teenager's mood and the last analysis shows if teenagers want a similar system in their homes.

2.3.1 PANAS Questionnaire results under 8 different coloured lights

Version 1

From a total number of 22 participants, under red colour, (17) teenagers felt positive, while (5) felt negative. Light-green colour made (21) teenagers feel positive, only (1) feeling negative. Green colour had a positive effect on (15) pupils, a negative effect on (4) pupils and a neutral effect on (3) teenagers. Light-blue colour made (19) of them feel positive, while only (3) felt negative. (18) teenagers felt positive under blue colour, (3) of them feltnegative and only (1) had a neutral feeling. Pink colour had a positive effect on (20) teenagers and a negative effect on (2). Yellow improved the mood of (19) teenagers, while (1) teenager had a

negative feeling and the other (2) had a neutral mood. Under white colour light, (13) pupils felt positive, (4) negative and (5) neutral.

Version 2

In this analysis, the positive results from each colour were summed and the total divided by the number of participants in order to obtain an average result of positive moods. This average result was divided to 10 (the number of positive adjectives used in the PANAS Questionnaire) in order to obtain a score which relates to the PANAS Questionnaire scale (Fig. 4, the top image).

The results show teenagers generally have a positive mood regarding all the 8 lightning colours. The average scores from 22 teenagers regarding positive and negative moods under each coloured lightning are shown below. Unsurprisingly the average score of positive mood is higher than the negative regarding pale colours. Light-green had the most positive effects on teenagers' mood with an average score of (2,54). Blue light was the second preferred with a positive average score of (2,37). On the third place was light-blue colour (2,35), followed by red (2,29), yellow (2,24), green (2,05), pink and white (each with an average scale of (1,95)) (see Fig. 13).

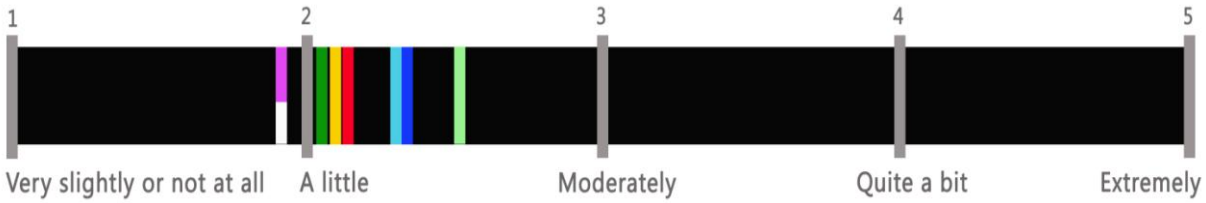

Fig. 5: The positive affect score

The negative average results start with red coloured lighting (1,5), green (1,44) being on the second place followed by white (1,36). Light-blue and pink have the same average score (1,34), followed by blue (1,32), light-green (1,27), and yellow (1,18).

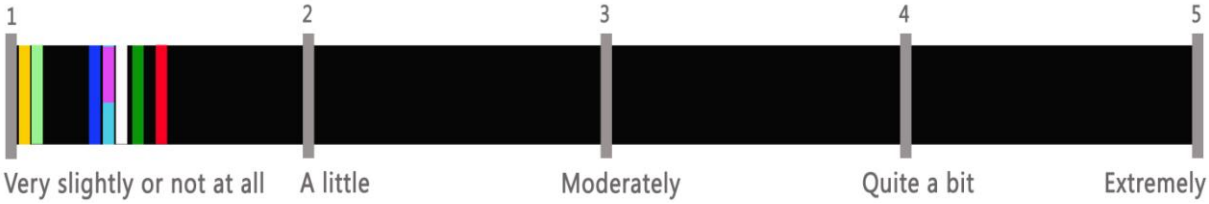

Fig.6: The negative affect score

There is quite a big difference regarding the positive and negative average mood scale for each colour as can be seen in the following: light-green [(2,54), (1,27)], blue [(2,37), (1,32)], light-blue [(2,35), (1,34)], red [(2,29), (1,5)], yellow [(2,24), (1,18)], green [(2,05), (1,44)], pink [(1,95), (1,34)], and white [(1,95), (1,36)]; [(positive),(negative)].

2.3.2 Colour lights' effect and similar home system

Twenty-one of the teenagers reported being affected by the coloured lights while only one did not notice if the lights affected her mood. 19 teenagers would like to have a similar system at home, 2 of them would not, while one could not voice an opinion.

2.4 Discussion

Our results contradict some studies and agree with others.

According to our results, the average positive and negative scales for red light are (2,29) and (1,5). As stated earlier Harrington's result [4] are showing four negative emotions

(aggression, anger, rage, and terror) are linked with dark yellow-reds, while five positive emotions (amazement, ecstasy, joy, love, and passion) are associated with light blue-reds. However, these reds are not red lights as used in the present study [4]. The red used in this study is a primary red light. It does not have neither yellow nor blue shade, but it is dark and bright.

The dark red light from this study created positive moods compared with the dark red colour from Harrington's [4] study which is associated with negative emotions. With regard to the type of emotion, the negative and positive emotions used in Harrington's [4] study can be associated with negative and positive moods from our study. For instance anger versus irritable, nervous, jittery, hostile; terror versus scared and afraid; ecstasy versus excited and enthusiastic, or passion versus inspired, determined, active. Moreover, according to Lee [12] red light is perceived as uncomfortable. Our results show the opposite, that red light affects in a positive way teenagers' mood.

Research shows yellow light is the most pleasant and comfortable colour lighting, perceived as elegant [12]. Our study shows light-green light has the most positive effect upon teenagers' mood, yellow light being one of the last choices regarding the positive scale. Even though it is not with regard to colour light, in other studies results show the preferred colour patches vary from light green and blue colours, to yellow, white, pink, and red [13].

According to Lee's [12] results, people like bright coloured lights for their environment. Therefore red and blue lighting were perceived as heavy and agitating while the most preferred lighting colours were cyan, yellow and white. Our results contradict Lee's [12] study which says blue and dark colours make people feel gloomy, tired and sleepy [12]. In our study dark blue light was the second most preferred as a coloured light with positive effects. This result agrees with Nakamura [14] where blue colour was the most preferred one. Moreover, red light, another dark light, was on the top four of teenagers' preference in our study. However, there are differences regarding participants: our participants were teenagers, while the others were adults.

Therefore, it might be concluded teenagers have different preferences in lighting than adults. However, the number of participants is small and further studies have to be done with a larger number of teenagers, both male and female.

2.5 Conclusion

Interactive colour installations can be created using colours and teen-computer-interaction. Nowadays, teenagers spend most of their time in their bedrooms. Their mood changes often and suddenly. Imagine a futuristic bedroom where teenagers will have the opportunity to change the wall's appearance any time, without the need of painting the wall and having a messy room. They could use a phone app which allows them to post and share their mood with others on an interactive LCD wall in each of their bedrooms. A second installation will recreate a similar intention with interactive textiles, for example an interactive duvet cover for teenagers to convey their mood using colour lights.

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MAPPING THE GENETIC JUNGLE GENERATING THE URBAN SPACE. (URBAN FORM)

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Abstract

A scientific project that was conducted over a period of 15 years is aiming to identify all the genes contained in all the chromosomes of the human body is a source of great hope and also of considerable ethical dilemmas.

The scientist James Watson was awarded with the Nobel Prize for discovering the structure of DNA molecule bielicoidale, a complex organic compound that contains instructions according to which the desired the cells develops "an improvement" of human beings by correcting their genomes. Detection of genes whose abnormality causing certain diseases proves the potential of modern genetics, but also its limits.

Knowing that the yearly process for population increase (the latest studies of the United Nations) is 6.5% representing practically a doubling of every 11 years is outlined special magnitude of the problems that contemporary society lives. The question is: will we live longer. But really will we live better?

The essence of the urbanization process is the continuous develop of urban lifestyle in the two directions (extensive development of urban lifestyle alongside an intensive one).
Urban image is scroll through a metamorphosis process from the city with the unique identity to the city connected to global information streams.

If Kevin Lynch "focuses on identity and structure of urban images" 1 neither the fields less tangible of significance it should not be overlooked. Fields of meanings become the new mental space of the urban dweller and implicitly new image of the city.

Today when technological and scientific progress prefigures the possibility of a fantastic projects considered half a century ago, becomes thereby necessary to redefine the URBAN COMFORT and therefore QUALITY OF LIFE.

„The city that you imagine is the accumulation of stages and unique experiences. It is presented as an elastic system, vibrant defined The relationship between movements and events that are in the same time LINKED and AUTONOMOUS. We speak of a network system which is articulatds, information layers generating an outline which is fluctuating".

The hope that people can learn how to live on this planet without destroying the physical and social basis on which depends the human species should not remain a simple desideratum. The framework of our actions must adapt to new conditions.

Contemporary urban theory should be updated in an interdisciplinary manner with the areas such as cybernetics, medicine, geography, etc.

"Without neglecting contemporary modes and new trends enveloping space defined at the interface level (interior and exterior) equally interesting for theoretical research and architectural practice "

In conclusion, in addition to concern for the quality of urban life, cities must follow both spatial and social coherence and ensure continuity in development to allow adjustments without trauma or major costs.

Keywords: Space, molecule, quality of life.

1 ARGUMENT

The article explores the dynamics of large global cities, and how they disconnect people from awareness of the basis of their own survival. It goes through different sections exploring the dynamics of the city.

A scientific project that was conducted over a period of 15 years is aiming to identify all the genes contained in all the chromosomes of the human body is a source of great hope and also of considerable ethical dilemmas.

The scientist **James Watson** was awarded with the Nobel Prize for discovering the structure of DNA double helix molecule, a complex organic compound that contains instructions according to which the desired the cells develops "*an improvement*" of human beings by correcting their genomes. Detection of genes whose abnormality causing certain diseases, proves the potential of modern genetics, but also its limits.

Knowing that the yearly process for population increases (the latest studies of the United Nations) is 6.5% representing practically a doubling of every 11 years is outlined special magnitude of the problems that contemporary society lives. The question is: will we live longer. But really will we live better?

2 RESEARCH CONTEXT

The essence of the urbanization process is the continuous develop of urban lifestyle in the two directions (extensive development of urban lifestyle alongside an intensive one).

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[1] Chirvai Dana, Vasiliu Alexandru, "Locuirea spre o arhitectura durabila", 2011, Ed. UAUIM/ Habitation Towards A Sustainable Architecture

The hope that people can learn how to live on this planet without destroying the physical and social basis on which depend the human species should not remain a simple desideratum. The framework of our actions must adapt to new conditions.

Contemporary urban theories should be updated in an interdisciplinary manner with the areas such as cybernetics, medicine, geography, etc.

"*Without neglecting contemporary modes and new trends enveloping space defined at the interface level (interior and exterior) equally interesting for theoretical research and architectural practice*."[3]

Peter Weibel in Create Your Bucharest[2] (talking to Peter Weibel, head of the jury and Director of the ZKM) said:

"*Now the science and technology represents the promise of innovation, creativity, of change and growth. Therefore our society is represented by of science. Only the art which has connected with science and technology still have a chance to be financed by the government in the future*".

Remember of specificity of our times that pure geometric forms are designed not only as separate entities but as plastic items that are part from a crowd.

The modern building is almost always the result of a complicated process composed of algorithms in order to obtain the "game" and plastic variation.

An ambiguity arises from the beginning, namely, in the moment when the term structure is linked to the idea of the system. Some people clearly distinguish the two concepts (in such a manner that a "structure" is considered as invariant substance of the other "system") identifies others. The synthesis of structure and form an actual generates the the object of architecture.

Public space has been a subject of analysis. The morphology of the shape, the active mode of living, lifestyle that a community passed it in common, in a particular stage can be defined a certain space. If the term of public space is generally attributed to free spaces that are characterized by the idea of opening at territorial level, the idea of public space becomes a pole of attraction with the role of coagulation, the definition and delimitation.

We can conclude that there are at least two distinct forms of organization namely urban and territorial spaces extra urban. We should not forget that the spatiality of living environment is the result of human actions. The physical framework is in continuous process of change. The level of perception of a space changes themselves.

The relationships of collaboration of the people are situated on the neighborhood levels, the interaction and communication, human states may generate design principles, which can define a particular urban public space.

"*The coherence whereby a place is defining its role at regional level and territorial ensure its attribute space allowances (required) useful place / in the relations in territory) becoming part of, and reporting element in framework of determining the directions for future development.*"[3]

In order to achieve the environmental objectives, of advanced technologies we can provide useful resources and tools with a increased efficiency. At the same time we must follow the pursued impact of advanced technologies in the psychological comfort field and also in the social sphere.

We do not believe that it is possible establish a relationship of commitment to future generations without closer relationship with the natural environment as well as with the social. Traditional means / the use of

[2] *Create Your Bucharest* is aimed at artists, designers, and architects, including teams as well as students of art, design, and architecture

[3] C. Constantinescu, *Rolul spaţiilor publice în definirea organizării ariilor urbane şi a teritoriilor comune*

natural materials include plant elements etc.) will contribute at ensuring their presence URBAN COMFORT, so necessary.

"*You can no longer oppose to this contemporary technicism, any pastoral sentimentality, but mostly to find your original vigor to build the new human permanences."*[4]

According to **Brett Scott,** a journalist, campaigner and former derivatives broker, and author of The Heretic's Guide to Global Finance: Hacking the Future of Money (Pluto Press: 2013)

"*How do you bring marginalised voices into the city, to the ears of people who implicitly benefit by remaining ignorant.* Out of sight, out of mind*. It's a crucial battle for holistic fusion. Because, the countryside and the city appear to me like the imagined split between body and mind, physicality and intellectuality, hard labour and innovation. And, in the same way that the artificial distinction between body and mind needs to be fought, the consciousness of the city needs to be fused with the consciousness of all those vast tracts of the earth's surface that feed into it*."[5]

3 STUDY – HOUSING IN BUCHAREST

"The city for the people!" is the familiar rallying cry of the reformist architect.

Also, in the contemporary crowded city, the multi storey housing blocks should encourage social behavior and community sense for the inhabitants.

Beyond the good lodgments quality this study project is researching the way to find answers to the sensitive interacting with urban context, to explore the limits between the city and the housing complex as a social system.

The studied land lies in the south of Bucharest, in sector 4 on Toporasi street and is in the vicinity of Giurgiu road, the artery linking with the north-south axis of Bucharest and it`s radial rings . The main points of interest in the vicinity of the site are Belu Cemetery in the north and Progresul market in the east. The land with an area of approximately 7710 square meters is flanked by two side streets, Basarabilor in the est and Stefan Voda in the west, an alley / dead end street in the north and Toporasi street linking the north-south and east-west axis. Important access directions to the site are from highway Giurgiului and Toporasi Street, specifically in the south-east zone of the site.

The project is inserted and interacting with its context. To preserve as much of the site qualities as possible, the buildings follow topographic contours of the surrounding streets. The heights of the volume is gradually increasing and decreasing as a sensitive dialog with the build context.

The housing concept started from the idea of making an enclosure surrounding a central green space as an urban oasis.

[4] Academician arh. OCTAV DOICESCU

[5] BRETT SCOTT, *BRINGING THE JUNGLE TO THE CITY: A TECHNO-SHAMANIC QUEST TO RECONNECT URBAN LIFE TO ECOLOGICAL REALITY, 2014*

A gradation between public and private has been organized through built and inner green area sequences: access ramp, public space, parking on the public space or underneath the buildings, pedestrian path, halls, housings and loggias.

The buildings are lifted from the ground with empty ground levels, thus making the entire site and surroundings usable and perceivable.

People use the entire site, regardless of where they live. They walk underneath and between the buildings and across the site; they meet along the many pathways, or under the buildings.

It took in consideration the main access directions mentioned above and created a series of passes directed towards the access to the south-east. These accesses lead towards the main sources of vegetation in the area. Depending on the area height we have created a tile to mitigate the height difference between the decomposed area with a height of GF-GF+1 and the structured based on GF+8 GF+16.

Thanks to the varied area height, and the sun study, it retracted the high part of the enclosure towards the north , to be able to benefit from as much natural light as possible.

The contextuality concept was made taking in account the theme regulations.

So it managed to fit the requested site, an interior totaling a number of 103 apartments distributed in the required percentage manner, but also a number of public and semi-public functions, and to meet the requirements of urbanism, there were arranged a number of 105 underground parking spaces and 23 parking spaces on the ground floor, all things being required by a percentage of occupied space of 35% asked by the theme. It organized a number of support functions for both the proposed assembly and the surroundings: commercial, workshops, after-school. All are united through arrangements designed to attract the audience and create a space to raise the quality of the area. Other functions have been designed to use the building itself as a place of promenade / relaxation. As such it has created access towards the green envelope, which is partly open towards the public and can be used for leisure and relaxation, along with the café located in the north-west of the enclosure.

When designing the apartments it took in consideration the double orientation for natural ventilation and natural light capitalization. This initially led us to use horizontal cursive distributions, but this create some ethical and security issues, so it opted for the classic components of circulation with stairs, elevators and ventilation/facilities housings.

In organizing the flats it tried to achieve a maximum of flexibility, it hooked the living room and the kitchen with a dining area , matrimonial bedrooms, children's bedrooms, living room when appropriate, respecting the zoning of day and night .

The exterior materials of the project are marked by using in a high percentage of green space usage. For the roof envelope it choose the green terrace, partially trafficable , terrace which assures a higher grade of thermo insulation of the superior part and witch, together with the water collecting system assures a part of the projects sustainability

It created a series of arrangements of paving, at the ground floor, which mark the main access routes and passages. For the closings of the interior we used a system of brise-soleil, realized from vertical wood bars, which offers both the dosage of light, but also the intimacy and the closing of the spaces. The exterior envelope was thought as an interpretation of the space in which the proposed project is situated.

The different pattern of openings of various sizes creates a random pattern, reminding of the variety of houses from the destructured urban environment.

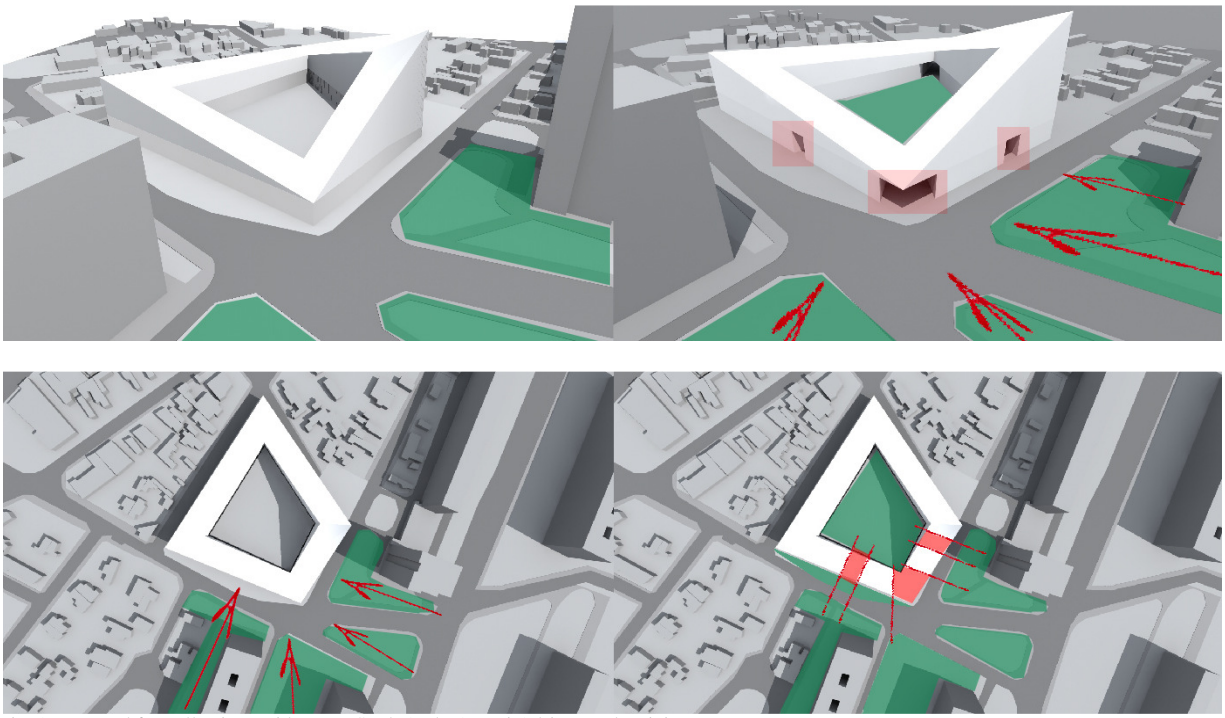

Fig. 1 Proposal for collective residences - Stud. Arch. Acomi Adrian, Malancioiu Razvan

Fig. 2 Proposal for collective residences - Stud. Arch. Acomi Adrian, Malancioiu Razvan

4 CONCLUSIONS

In conclusion, in addition to concern for the quality of urban life, cities must follow both spatial and social coherence and ensure continuity in development to allow adjustments without trauma or major costs.

„*Nature scarcity in cities has been observed for centuries. Only recently have we detailed the acute symptoms of separation anxiety felt by urban society. Urban greening creates projects that simultaneously restore our health and invite plants and animals to reclaim their place among us.*“[6]

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THE CLASH OF ZEITGEIST AND TIMELESSNESS: THE CHALLENGES OF BUILDING TRADITIONAL ORTHODOX CHRISTIAN ARCHITECTURE TODAY

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Abstract

In Romania, the communist regime stifled the development of religious architecture for many decades, leading to an acute need of new places of worship which in the last twenty-five years has been answered, for the most part, without the proper consideration. However, some noteworthy progress has been made, which should be acknowledged and evaluated in order for it to have a positive impact on the design of new churches.

The root of the difficulties encountered by the architects who try to tackle this delicate task is a conflict of worldviews between the Orthodox Christian culture and the contemporary secularized Western (or perhaps Westernized) culture. The Orthodox Christian worldview has not changed for almost two thousand years, leading to an enduring architectural tradition which, after the important innovations which defined the liturgical space in the Early Christian and Early Byzantine eras, limited change and variation to regional particularities, adaptation to locally available materials, and minor influences coming from other cultures. On the other hand, the available materials and technologies and, to a degree, even the mindset and professional education of architects, belong to a completely different culture. This potential conflict needs to be negotiated in a thoughtful manner by the designing architects. The most difficult task is, of course, to re-create the traditional, symbolism-rich configurations while using the construction materials and technologies available to us today.

The paper will revise briefly the symbolism of the church as a place of worship and how it was conveyed by the geometry, the lighting and, to a degree, even the construction of traditional historical churches, in order to set up the criteria for evaluating new church architecture. This evaluation will focus on three case studies, with other examples to be considered as needed. The first case study will be the Church of the Students from Timişoara, designed by architect Şerban Sturdza, which is a faithful copy of a historical church, St. Nicholas from Curtea de Argeş (14th century). The façades imitate even the details of the original ones, down to the shape and size of bricks, stones and mortar joints, while interior views before plastering show that industrial, standard brick was used. This design shows that the use of traditional materials is possible; however the excessive restraint shown in following the original makes this an exceptional gesture that cannot be repeated by many architects: how many exact copies of historical churches can we build? The second case study is the church of St. John the Baptist from Alba Iulia, designed by architect Dorin Ştefan. Unlike the previous example, this is definitely not an exact copy of anything, but a fresh approach to tradition. The architect takes some unprecedented liberties in his work; however his main purpose is not innovation for its own sake, but "to set aside any aesthetic search" in the attempt of creating the appropriate "encasement for the sacrament". He was also trying to capture and convey his childhood experience of going to church with his grandmother. While Ştefan's approach is strongly rooted in tradition, it also very personal and it would be very difficult for it to serve as an example for other architects. The third example is a chapel in Bucharest designed by architect Radu Teacă. The architect tried to capture the essence of

traditional geometry and also the essence of traditional construction, in his use of brickwork as the shell around the roof and vaults. His approach, although intended as an actualization and reduction to essentials of traditional Romanian church architecture, is in fact so successful that it seems to be based on Byzantine typologies. The most noteworthy feature is perhaps the craftsmanship of the carefully jointed brickwork, which enriches the severe geometry of this chapel with the warm materiality of a handmade surface.

The conclusions will focus on the strong and weak points of the three design approaches and how they open up paths to be explored in future designs of Orthodox Christian churches.

Keywords: Orthodox Christian church architecture, Romanian church architecture, contemporary church architecture.

1 INTRODUCTION: HISTORICAL CONTEXT AND ITS CONSEQUENCES

We cannot discuss the progress made in building new Orthodox Christian churches today's Romania without understanding the tremendous difficulties which had to be overcome. This introductory analysis may seem superfluous to Romanian readers, but is necessary both for those who are not familiar with the Romanian society and its recent history and for those who, being immersed into it, may sometimes "not see the forest from the trees".

1.1 Historical Context

After the Second World War, Romania became a "socialist republic" with a communist regime imposed by occupying Soviet Union armed forces, which remained in place after the retreat of these forces 1958 until 1989. Although religious freedom was officially a protected right, in practice this right was limited. Clergymen and laity had to keep a low profile or face decades of political prison. Religious education in school and churches, even in the form of sermons, was forbidden: one of the famous transgressors was Fr. George Calciu-Dumitreasa. The designing and building of new churches was brought, with very few notable exceptions, to a standstill. All new urban developments ignored the religious needs of their inhabitants. On the other hand, the regime missed no opportunity to demolish existing churches, especially after the earthquake of March 4 1977, when the pretext was the damage suffered during the earthquake. The post-earthquake cityscape opened up Ceauşescu's appetite for a Pharaonic urban development of Bucharest, leading to the destruction of even more churches. A handful of historical churches which would have been demolished to make room for this development were saved by being moved from their original sites tens or hundreds of meters.

After the fall of the communist regime in 1989, there was therefore a tremendous need for new places of worship, which generated an intense designing and building activity. Though less intense now, this activity has still not ceased. Unfortunately, the quality of the resulting architecture is far from excellent. Some of the new churches are an eyesore, especially to the educated eye. Most of them look like half-baked pastiches or collages of "traditional" elements, sometimes with added "original" elements to express the free spirit of the architect. On the other hand, most of the renowned Romanian architects have created at least some sketches of their vision of new church architecture, which were for the most part ignored by the potential promoters (founders). There are also exceptions; this paper focuses on three noteworthy places of worship designed by renowned Romanian architects.

1.2 The Vague Requirement of Being Traditional

The mandatory but vague requirement for new Orthodox Christian churches has been for them to be "traditional". This has not been of much help to architects who tried to do more than a "please the customer" approach. Church architecture, even in the highly conservative Orthodox Christian world, differs by time and place, leading to the conclusion that architectural tradition (unlike the – always capitalized – Tradition of the Church, which is defined as the teaching handed down by Christ to the Apostles and from them to the subsequent generations) is not fixed, but allows for variation. Each of the architects who tried their hand at church architecture took some freedom in inferring which are the essential features of a traditional church design and what can be their innovative contribution. Or else, they tried to follow the "checklist": sanctuary apse (usually also side apses); one dome on a tall drum *(turlă)* or sometimes three; arches and vaults; ornaments.

Comparing the "traditional" churches that have been built to the "untraditional" churches that have not been built leads the careful observer to the conclusion that many of those who had decisional power to accept or to reject church designs had a loose, confused and/or subjective concept of what makes traditional architecture traditional. In other words, too often "traditional" is taken to mean "looking familiar to the beholder", who may feel that a poorly proportioned concrete box adorned with familiar-looking domes on drums, apses, arches and so forth is traditional, while a simple, beautiful design thoughtfully based on a Byzantine typology is not. Moreover, this familiar-looking aesthetic may also look familiar for the wrong reasons: a painful example of this situation is the design for the new Patriarchal Cathedral (currently under construction), nicknamed by the unfavourable public *"Casa Poporului cu turle"* (The House of the People with domes on drums).

1.3 The Burdensome Responsibility of the Architects

It may seem, from the previous subchapter, that the responsibility for the quality of contemporary church architecture lies with the founders, who lack an architectural education and ask absurd things from the architects. However, it is the architects' responsibility to acknowledge their own shortcomings, to improve their professional formation, and to be able to correct the distorted perception others have on architectural tradition with adequate arguments. This is even more difficult to do than it sounds.

An important obstacle to the quality of new church architecture is that most Romanian architects are not aware of the cultural difference between the Orthodox Christian Church and their own professional culture, which is heavily Westernized and secularized, [1] or simply feel the Church is "backward" and should "catch up" with the society at large. They follow the axiom "architecture as the expression of the Zeitgeist". This is the result of having not received a religious education and/or a culturally sensitive professional education, which would have acknowledged that there are cultural groups for which Modernism and its subsequent developments are not the appropriate architectural expression, as they express a different worldview. It should be noted that Eliade [2] and Heidegger, [3] in slightly different words, agree that the architecture of a society mirrors its worldview *(Weltanschauung);* the means for expressing the Zeitgeist (i.e. the worldview of the contemporary Westernized and secularized society) are not necessarily appropriate for expressing the spirit of Orthodoxy which, except for small cultural variations, is timeless.

Consequently, a second obstacle is the architects' lack of familiarity with the vocabulary and syntax of traditional church architecture, best understood in its historical unfolding in Early Christian, Byzantine and Post-Byzantine architecture, with specific regional and/or national developments. The traditional architectural language is the thoughtfully formulated response to the question of creating a symbolically meaningful liturgical space. Of course, ideally architects should also be familiar with the (not many) original literature references on the meaning and purpose of church architecture [4] or at least to experience the traditional liturgical space as inhabited by the praying community during services. A trap to be avoided is the oversimplification or "stripping" of all ornaments and/or other features perceived by the Modernist-minded architect as superfluous. The opposite, more obvious trap would be to treat the church as a Christmas tree which has to carry an ornament on every little branch.

Finally, a third obstacle, which prevents many architects from approaching the question of church architecture, is the idea that "new" materials such as concrete or steel should also generate a new geometry. If that happened with Modernism (and it is debatable whether new shapes were derived from the new materials and their specific qualities, or simply found in them the appropriate constructive means), it should not be necessarily be so with church architecture. It is not the quality of available constructive means, but the desire of combining the symbolism of basilicas with that of domed rotundas that generated the quintessentially Byzantine dome on four arches and spherical pendentives that is the core of many traditional typologies, including but not limited to domed basilicas, cross-in-square (inscribed cross) churches, or Romanian Post-Byzantine three-conch churches. Available constructive means (brick and/or stone masonry) merely allowed this newly devised (in the 6th century) invention to exist. Rather than a reason for inventing new typologies, variations of the constructive means seem to be more of a pretext for variations in ornament, such as the diversity of decorative masonry designs based on various combinations of brick and/or stone, or the interchangeable usage of monolithic stone columns with masonry pillars of square or rectangular section. Being aware of this, architects should be able to shift their focus from inventing new geometric typologies based upon contemporary materials (a noble but overwhelmingly difficult task) to finding elegant solutions for building the same symbolism-rich typologies with the materials and technologies available today, be they old or new.

1.4 Three approaches to contemporary church architecture

This paper will present three case studies, three different approaches to Orthodox Christian architecture by contemporary Romanian architects. Each approach has its strong and weak points; each of them holds valuable lessons for the future of church architecture.

2 THE MEANING OF ORTHODOX CHRISTIAN CHURCH ARCHITECTURE: A BRIEF REVIEW

Writing about the meaning of Orthodox Christian church architecture is a tremendously complex task. This brief chapter will only serve to outline the main directions of church symbolism and how they are conveyed by church architecture, in order to make the reader aware of the complexity and the difficulty of the task of designing Orthodox churches today.

2.1 The Meaning and Purpose of Orthodox Christian Church Architecture [5]

2.1.1 The cosmologic symbolism

The Orthodox Christian church does not differ from the religious buildings of other traditions in that it is a representation of the Orthodox Christian worldview, i.e., literally, of how the Orthodox Christian faithful see and understand the world. Beautiful and harmonious, the world is a cosmos (word meaning in Greek not only "world," but also "order, orderly beauty") created by God. This cosmos is composed of a material, visible world and a spiritual, invisible world; the material world is composed of the earth and the dome-like sky. Man is believed to be an image of the cosmos, also having a two-fold material and spiritual nature, and therefore the church is also an image of man.

2.1.2 The symbolism of salvation

The purpose of the Church as a mystic theanthropic Body of Christ is the salvation of human beings, which in the Orthodox Christian understanding means to be united to Christ and to become Christ-like. The "economy of salvation" is the succession of events leading to the constitution of the Church and of her sacraments (mysteries) and in the future to the institution of the heavenly Jerusalem, a mystic city where the faithful will dwell together with God in an eternal blissful state (Revelation 21 and 22:1-5). The architectural church is both an image and symbol of the Church and of her future existence in/as the heavenly Jerusalem. Moreover, salvation symbolism is strongly connected to one of the prefigurations of the Church, Noah's ark, which saved humanity from disappearance during the Flood.

2.1.3 The mystic and mystagogic function

Church architecture is not merely a neutral background for rituals and services. In the church, the community members take part in the mysteries (sacraments), receiving the sanctifying Grace. The architectural space and all the liturgical arts (iconography, music, metal working and so forth) assist the believers in these sanctifying acts. We can observe how they create an appropriate spiritualized atmosphere, but they also serve to make visible, symbolically, the spiritual reality that remains invisible to the faithful, and moreover they serve as "steps" towards this reality.

2.2 Means for Conveying the Symbolism of Orthodox Christian Church Architecture

2.2.1 Geometry

The most meaningful geometrical gesture is the juxtaposition of the usually four-sided nave (naos), a symbol of the earth with its four regions or cardinal points, to the sanctuary, usually terminated by a semicircular apse covered by a conch, an image of heaven. The 6th century invention of spherical pendentives as a device allowing a hemispherical dome to rest on four arches, and therefore on a square bay, enriched the vocabulary of symbolic geometry. These four arches, especially when continued with four barrel vaults as, for example, in the cross-in-square typology, define a spatial cross floating between the upper, heavenly level of the dome and the lower, earthly level of the four-sided floor. The cross (an obviously important Christian symbol) is also present in the rarer free-cross churches, in the Early Christian transept basilicas, and in three-conch churches, the nave of which is flanked by a pair of apses similar to that of the sanctuary. The octagon, less used in the history of Orthodox Christian churches, can be found in centrally-planned typologies and in the constructive device which uses eight arches and four corner squinches (trompes) to allow a hemispherical dome to span a square bay. The

eight sides of the octagon symbolize the "eighth day": the supra-temporal "day" which has begun with Christ's Resurrection and will continue into eternity.

However, the meaning of geometry is not limited to cosmological or theological symbolism. For example, Fr. Dumitru Stăniloae wrote that the curved geometry of Orthodox Christian churches makes the faithful feel embraced by Christ.

2.2.2 Light [6]

Light is undoubtedly one of the "main characters" of Orthodox Christian architecture. While light should be one of the important actors in architecture, the place of light in Orthodox Christian churches is also connected to the theology of uncreated divine light. Visible light is understood to be a symbol of this (usually) invisible light. In the morning, sunlight floods the church from the east, enveloping the priest who serves the liturgy; in the early evening, during vespers, the amount of sunlight is limited by the lack (or smaller surface, in larger churches) of windows on the western façade. If there are windows piercing the base of the main dome or the drum below the dome, sunlight also comes in from above at all times of the day. Both the east-west and the above-below gradients of light are consistent with the heaven-earth geometric symbolism. Consequently, too much light (as in an entirely transparent or translucent box) would only serve to limit severely the symbolism of light.

2.2.3 Gold and gilding

Although one of the materials used for decorating a church, gold deserves its own subchapter. Free from oxidation, its bright surface reflects a characteristic warm, yellowish light which is understood to be a symbol of the (normally) invisible uncreated light. Iconographers use gold foil to colour the auras around the heads of saints or sometimes the whole background of icons; the most spectacular are the golden backgrounds of mosaics (made from transparent glass pieces and gold foil) which may envelop the whole upper section of churches. Gold is also used for making or finishing various liturgical objects.

2.2.4 Materials and construction

Unless we narrow the scope of investigation to very specific regions and/or time frames, there is no uniformity in the treatment of materials and construction methods. From the care taken to create masterful decorative masonries or to paint and/or scratch over the plaster the image of masterful decorative masonries, it seems this is an important feature; however, many churches are (and have always been) simply plastered. Of course, stone is mentioned in the Bible many times, including the building of the Jerusalem Temple by King Solomon, while brick is made from clay, as was Adam in the Genesis account. Also, Christian believers are likened to the living stones of a spiritual temple, the Church (1 Peter 2:4-6; compare to Ephesians 2:19-22; 1 Corinthians 3:16-17, 6:19-20; 2 Corinthians 6:16). Wood is the material of Noah's ark mentioned above, but also of the Cross. Multicoloured marble claddings remind both of King Solomon's Temple in Jerusalem and of St. John the Theologian's vision of the heavenly Jerusalem.

2.2.5 Ornament, craftsmanship, materiality

There is still more to investigate about the place and meaning of ornament in Orthodox Christian architecture. At times, ornaments have the shape of a cross or of other explicit symbols. In many other occasions, ornaments seem to be simply embellished functional elements: cornices, window frames, column capitals and bases. In the same category of embellished functional we can include also decorative masonry. However, decorative masonry may also be included in another category of elements used to break up or fill out large flat surfaces – although there are also many churches, especially, but not exclusively, from the Early Christian or Early Byzantine epochs, which feature extensive unadorned surfaces. In the case of decorative masonry or of regular, un-plastered masonry, the craftsmanship contributes to the beauty of the surface; Horia Bernea would call this beauty "rich materiality". [7]

3 FIRST CASE STUDY: CHURCH IN TIMIŞOARA BY ŞERBAN STURDZA

3.1 Description

The "Church of the students" *(Biserica studenţilor)* in Timişoara was designed by architect Şerban Sturdza and the PRODID team in 1995. [8] In 2011, services were still held in the lower church, but finishing works for the upper church (murals) and for the complex around the church were being resumed. [9] The upper "Church of the students" is a faithful homage to St. Nicholas' Princely Church in Curtea de Argeş, a 14th century Late Byzantine church built with the local means as the church of the princely court in the then capital of Wallachia. They are

both cross-in-square churches of balanced, somewhat sturdy proportions (an impression enhanced by the scarce decoration, as Palaiologan façades are usually visually lightened by niches and arcades), topped by a dome on a moderately tall drum; façades feature exposed brick-and-stone masonry, with very few ornamental features, and copper roofing. Sturdza's version uses traditionally sized bricks for the facing masonry and industrial bricks for the rest of the structure, which is a mixed brickwork and concrete structure. The thickness of the walls and the use of brickwork as a "lost" formwork for the concrete vaults create a brick-surfaced interior, allowing the use of true fresco for murals, as concrete is not fully compatible with the lime plaster base of true fresco. The upper church is elevated as on a pedestal above the lower church, which features a low wood board ceiling, exposed brickwork walls, and exposed concrete pillars inspired by traditional Romanian stone crosses. The two floors of the church allow the creation of superimposed entrance spaces connected by stairs and by an artificial earth mound which makes the upper level easily accessible. The surrounding complex, which is currently under construction, aims at creating an urban space for the student community and for the city at large. The complex buildings and the catwalks connecting the church to these buildings will create a contrasting setting enhancing the otherness of the church architecture: a Byzantine jewel in a Modernist setting. [10]

3.2 Strong Points

The faithful imitation of an established prototype has freed the architect from the worry of missing out on something essential: the geometry, the lighting, the ornaments, and even the materials are very similar to the original. Therefore, the new church carries the same symbolic meanings and provides the same paintable surfaces as the original. Freed from the complex task of reinventing traditional architecture, the architect could focus on how to build it, which was not as simple as it may seem: a similar approach, a monastery church in Turda, which imitates the 16th century church of Mihai-Vodă Monastery in Bucharest, fails to match the refinement of the ornate brickwork detailing of its prototype. This only proves that, as Ludwig Mies van der Rohe once said, "God is in the details" – and church architects and builders should not forget it.

On the other hand, the boldly original concrete pillars of the lower church prove that there is still room for innovation and creativity in church architecture, that not everything has been "said" yet and that we are not condemned to "speak" in exact citations taken from our ancestors' work. One may argue that the cross-shaped pillars are also citations – but they are used in a surprising, Scarpa-esque manner.

3.3 Weak Points

Unfortunately, Sturdza's approach is not repeatable, or at least not unconditionally. A second imitative approach based on the same prototype would have to be more adventurous in its reinterpretation of the original. Could we perhaps pick other prototypes to imitate? What if we can't find another prototype of the appropriate size and appearance?

Also, now that Post-Modernism is no longer fashionable, some architects may be uncomfortable with the concept of "citing" from historical prototypes, and especially with extensive citations. However, in the history of church architecture, citation and imitation, accompanied by minute innovations and variations, are the norm, while major innovative breakthroughs are the exception.

4 SECOND CASE STUDY: CHURCH IN ALBA IULIA BY DORIN ŞTEFAN [11]

4.1 Description

The church which greets the travellers on the right side of the national road leading from Alba Iulia to Zlatna and Abrud has a distinct, original and yet eerily familiar, appearance: a large white square with an oversized icon of Christ drawn on it, topped by a hat-like roof. This church design would not have been created unless the priest who commissioned it, Fr. Jan Nicolae, had seen Professor Dorin Ştefan's design for the Patriarchal Cathedral competition in 2002. St. John the Baptist's church in Alba Iulia is a smaller, simplified version of Ştefan's cathedral design, retaining some of its themes.

It is important to note that Ştefan was not trying to imitate traditional architecture or to play with the established symbolic geometry of the square and the circle, but, in his own words, "to set aside any aesthetic search" in order to create "the encasement of a sacrament (mystery)" *("învelişul unei taine").* His inspiration was in his previous experience of liturgical spaces, especially (but not limited to) his childhood going to church with his grandmother, and not in library documentation, which he consciously avoided. The result is an inimitable synthesis of the most diverse traditional influences mixed with Modernist elements.

The body of the church is a box-like shape proportioned as a 12/12/24 metre double cube, with slightly tilted undulations of the east, south and north walls suggesting the three apses of a three-conch church and, at the ceiling level, the shape of a cross. The west wall is slightly curved towards the interior, creating a welcoming, embracing façade. There are no interior subdivisions, with the exception of a low iconostas, not yet erected. The only glazing is a narrow glazing strip placed between the walls and the roof, making the latter appear as floating. The roof, which originally was supposed to have a flattened, wing-like section, eventually received the round bump which gives it its characteristic silhouette (not unlike the roof of at least one *skete* chapel on Mount Athos) and which allows it to house the dome, the only accident in the flat ceiling. This flatness suggested to the iconographers Ioan and Camelia Popa another important feature, the gold foil treatment of the ceiling and of the soffit of the eaves, with only the dome and the area around it bearing images and text.

4.2 Strong Points

First and foremost, it should be noted that Ştefan succeeded in creating a beautiful, harmoniously proportioned design, something sorely missing in so many of the more "traditional" contemporary approaches. His "secret" is his focusing on the mystic function and symbolism, as well as his drawing from his personal experience of liturgical space.

This church design, very much like the Early Christian and Early Byzantine basilicas, is very appropriate for bearing the symbolic meaning of the ark: both Noah's ark and the ark as a tabernacle *(chivot).* It also reinterprets the geometry characteristic to cosmologic symbolism. The symbolism of light is also present, coming from above (albeit following the architect's intention of creating an uninterrupted surface for murals) and enhanced by the gilded ceiling.

4.3 Weak Points

Unfortunately, Ştefan's approach would be difficult to emulate by anyone lacking his personal experience of liturgical space, which goes back to early childhood, and/or the talent and skill which allowed him to distill this experience into architectural design. This makes Ştefan's design even more valuable in itself, but does little to help others in their own approaches.

A possible weak point is the lack of an east-west light gradient, which may lead to an insufficient level of natural light in the sanctuary during the liturgy; however, this may be at least partly compensated by the reflections coming from the gilded ceiling. Also, an unpublished photo by the iconographer shows the edges of the ceiling as very bright and the dome as relatively dark, placing an unnecessary emphasis on a less significant area and de-emphasising the most significant feature, which is the dome.

5 THIRD CASE STUDY: CHAPEL IN BUCHAREST BY RADU TEACĂ [13]

5.1 Description

This chapel, still under construction, is part of the complex of the parish of St. Nicholas and Pentecost in the Militari neighbourhood of Bucharest. The chapel itself is a very simple volume consisting of a very low sail dome on four arches on a square plan, enveloped in a brickwork shell which includes the walls as well as the roof. This brickwork jewel is placed in a Modernist setting consisting of an L-shaped circulation, including the entrance hall and staircase leading to the underground crypt, but also a box-shaped sanctuary which was added at the priest's request, and of an U-shaped pool surrounding the chapel on two and a half of its sides.

5.2 Strong Points

Professor Teacă's design was intended as an attempt to extract the essence of traditional Romanian architecture; the fact that it has an Early Byzantine appearance can only mean that it was successful. The geometry based on the square and the circle, with the possible exception of the box-like sanctuary, is appropriate for carrying the traditional cosmologic symbolism. Natural lighting is also well controlled, with most of the light coming in through the sanctuary (except not through the east wall) and additional light coming from tall, slit-like windows in the west and north walls. The carefully executed exposed brickwork enriches the severe geometry with the warm texture and materiality characteristic to the material.

5.3 Weak Points

Insofar, the only weak points seem to be of a technical nature. During the students' visit in the spring of 2014, the empty space of the chapel had a very prolonged reverberation, which improved with the entering of more persons. It will be improved as well after plastering, as plaster is more porous and therefore less sound reflective and more sound absorbent than the concrete of the dome.

Also, the melting of an important amount of snow during the winter lead to salt efflorescence on the upper part of the exterior walls, which is surprising as special cement free of water-soluble salts was used for the exposed brickwork. However, a small amount of water may have seeped through the brickwork dome and come in contact with the cement in the concrete dome and/or arches, dissolving the soluble salts in it and migrating through capillarity back to the surface of the brickwork. Traditional roofing, although not as beautiful as the exposed brickwork dome, may have averted the damage.

6 CONCLUSION

The three approaches present us with different lessons to "take home". There are upsides and downsides to both reverent imitation and free thinking. The ideal would be to reach the right balance between the two, so that imitation is invigorated by refreshing refinements and free thinking is not overwhelmed by the necessity to reinvent everything. The "traditional jewel in a Modernist setting" approach may be used to emphasize that the architect's references to historical architecture are not simply a matter of taste, but a conscious option for the expression of a different worldview, allowing a very rich constellation of symbolic meanings. Traditional materials such as brick-and/or-stone masonry or gold foil may be used in their usual, but also in novel ways, in order to carry their traditional meaning and to enrich the appearance of new churches. If used carefully and creatively, modern materials such as concrete may replace traditional ones; for example, carefully designed exposed concrete pillars may replace stone columns. Most importantly, once an architect is familiar with the complexity and depth of meaning in church architecture and with how this meaning has received a distinct architectural expression along the century, he no longer feels constrained about the tight requirements of church architecture and works creatively with them, as opposed to trying to work against them.

REFERENCES

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[2] Mircea Eliade, *The Sacred and the Profane: The Nature of Religion*. New York: Harper Torchbooks, 1961. Romanian version: Mircea Eliade, *Sacrul şi profanul.* Bucharest: Humanitas, 2000;

[3] Martin Heidegger, "The Origin of the Work of Art", in Martin Heidegger, *Poetry, Language, Thought.* New York: Harper & Row, 1971, pp. 15-86. Martin Heidegger, "Building, Dwelling, Thinking", in the same volume, pp. 141-159;

[4] The Patristic references to the meaning and purpose of church architecture (St. Dionysios the Areopagite; St. Maximos the Confessor; St. Germanos, Patriarch of Constantinople; St. Symeon, Archbishop of Constantinople) are to be found in the volume Diac. Ioan I. Ică jr, *De la Dionisie Areopagitul al Simeon al Tesalonicului – Integrala comentariilor liturgice bizantine.* Sibiu: Deisis, 2011. Two commentaries by Fr. Dumitru Stăniloae are Dumitru Stăniloae, „Locaşul bisericesc propriu-zis, cerul pe pământ sau centrul liturgic al creației", in Sf. Maxim Mărturisitorul, *Mystagogia. Cosmosul şi sufletul, chipuri ale bisericii.* Bucharest: Editura Institutului biblic şi de misiune al Bisericii Ortodoxe Române, 2000*,* pp. 49-92; originally in: *Mitropolia Banatului,* No. 4-6/1981, pp. 277-307; Dumitru Stăniloae, „Biserica, în sensul de locaş şi de largă comuniune în Hristos", in the same volume, pp. 93-110; originally in: *Ortodoxia,* No. 3/1982, pp. 336-346;

[5] Unless otherwise noted, this subchapter is based chiefly on the references from note [4]. Also discussed in an ampler form in my master's thesis "Către o nouă arhitectură bisericească" defended at UAUIM in 2003, unpublished, and my doctoral dissertation "Materie şi semnificaţie în arhitectura bisericilor răsăritene" defended at UAUIM in 2012, unpublished. The treatment here is more concise, more systematic and opens up new directions of investigation (for example, ornament);

[6] For the symbolism of light, see: Ana Botez, "Relaţia dintre lumină, material şi formă în arhitectura bisericilor răsăritene", in *Analele Arhitecturii,* year 4, No. 1/2010, pp. 49-62. This paper received minor revisions when becoming a chapter in my doctoral dissertation "Materie şi semnificaţie..." See also *Augustin Ioan, Retrofuturism: Spaţiul sacru astăzi.* Bucharest: Paideia, 2010, subchapter "Spaţiul sacru şi teologia luminii," pp. 88-95;

[7] Horia Bernea's laconic references to "rich materiality" are scattered throughout the book Horia Bernea and Teodor Baconsky, *Roma caput mundi: un ghid subiectiv al Cetăţii Eterne.* Bucharest: Humanitas, 2000. As a comment, see: Ana Botez, "Rich Materiality: A Hermeneutic Approach to Byzantine Architecture". Master of Science in Architecture thesis. University of Cincinnati, Cincinnati, Ohio, 2011. Published online at http://etd.ohiolink.edu/view.cgi?acc_num=ucin1313768425 . See especially subchapter "Why "rich materiality"?" (pp. 39-43) and chapter "Bernea's "Rich Materiality" (pp. 85-112). After minor revisions, this became a chapter in my doctoral dissertation "Materie şi semnificaţie...";

[8] According to Saturday's résumé found online at http://www.arhiforum.ro/arhitecti/serban-sturdza – last accessed on 03/08/2015;

[9] According to http://www.noutati-ortodoxe.ro/vizita-arhiereasca-la-biserica-studentilor-din-timisoara_l14254_p0.html – last accessed on 03/08/2015. The information was confirmed by the architect;

[10] The description is based on the project presentation "Biserica Studenţilor – Timişoara" in *Arhitectura,* No. 1-2/1999, pp. 26-27, and on photos available online in 2012 and in 2015. Some details, such as the construction of the vaults and the purpose of the artificial mound, were explained by the architect in person;

[11] For a more extensive discussion and bibliography, see: Ana Botez, „The Noetic Ark of Alba Iulia: When Innovation Is the Standard Bearer of Tradition", in Augustin Ioan (coordinator), *In Honorem John E. Hancock.* Bucharest: Paideia, 2015;

[12] Augustin Ioan (coordinator), *Concursuri pentru catedrala patriarhală ortodoxă: 1999-2002.* Bucharest: Noi Media Print, 2003, pp. 62-63;

[13] Radu Teacă, *Spaţiu fără timp: arhitectura ortodoxă contemporană / Space without Time: Contemporary Orthodox Architecture.* Bucharest: Igloo, 2013, pp. 12-13 and 86-105. The description is based also on the personal experience of the chapel and on Professor Teacă's discourse for the UAUIM Architecture students who were visiting the construction site in April 2014.

PARTICIPATORY INTERVENTIONS IN POLISH PUBLIC SPACE

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Abstract

Participatory architecture has emerged as a means to criticise actively the contemporary spatial conception of public realm which places the citizen outside the designing process and delivers finite objects. This develops in a post-industrial society; actorship is abolished by default and people are reduced to simple consumers, carried into a vicious circle of infinite production with no other purpose than itself.

The premise of this paper is that public space finds a sort of alter-ego in the eastern part of Europe and the purpose is to question the symmetrical relationship between the architectural (see participatory) project and the public context of its implantation site, given this duality. Is participation carried out by the same principles everywhere? Is it appropriate to analyse public space by the same means everywhere? Do Citizens exist or a further nuancing ought to be expressed in order to identify multiple social entities that may shape interventions differently depending on geo-socio-political factors?

Nowadays, having a global view on public space and how it is perceived collectively comes often before any other reference. Or, starting from the Polish city of Wroclaw, the European cultural capital for 2016 together with Spanish San Sebastian, we have established a duality that cannot be reduced and treated uniquely in what the public space is concerned.

Due to an historical evolution which determined several points of reinventing or reconstructing its identity (including decades under Communism), the Polish public space is today between two main directions that overshadow each other: the overcome of its intrinsic condition and the external process of globalization. It exists as a presence in itself, as a natural proof of urban development, however it lacks the presence of its defining element: the citizen. Therefore any architectural project developed here that supposes involving him as an active part has to redefine its boundaries and instruments.

The paper seeks to show how a participative trajectory that focuses on reference-projects like the ones developed by European architecture collectives(AAA or ETC Collectif both located in France, or Raumlabor, in Berlin, to give just few examples) has to define a specific approach in the polish context: the systemic characteristics identified in Wroclaw show an irreconcilable separation between the individual and the public space, so much so any sense of awareness or process of appropriation become impossible. Moreover this absence is prolonged by the constant interposition of political local authority.

Facing these problems, the project must recalibrate itself by seeking to point directly to this absence. Building the city with the community implies the existence of a community; does its absence annul any intervention or should it give another purpose to the architecture project such as reviving, (re)creating a public conscience? Building is conceived therefore on its anthropological and immaterial basis. It becomes a process of constant questioning. The involvement of community is not the objective anymore. Its place is taken by shaping a civic entity aware of its capabilities and rights or at least by introducing the population with the idea of such an entity.

Keywords: participation, post-socialist city, reinventing the practice.

1 INTRODUCTION

This paper illustrates one semester project in the studio of Architecture and Anthropology at Universite Libre de Bruxelles regarding the Polish city of Wroclaw and its nomination as the 2016's European Capital of Culture together with the Spanish San Sebastian. Starting from these two cities, we recognised two different structures that cannot be reduced and treated uniquely in what public space is concerned, because of geo-historical disparities. As it is known, the assigning process of the Cultural Capital title requires the cities to elaborate cultural programs for the year in question; however reading these documents reveals that there are evident differences in their conception between western and eastern cities. Considering that, from the beginning, our attention shifted towards a potential inequality between western and eastern countries, the project being developed accordingly afterwards. This asymmetry became a focal point from the beginning, and resulted in an investigation drew on some preexistent intuitive guiding lines.

1.1 Historical (dis)continuity as a factor

The first part of the project issued an interest in seeing how this inequality took shape between the two types of cultural capitals, what powers this inequality and if it really has an echo in the manner in which the cultural programs are elaborated. To support it the studio's approach consisted in a series of study cases of former cultural capital pairs. One very resembling pair was indeed formed by the 2012 candidates Guimaraes and Maribor, being once more an east-west couple[1]. This is where an idea that will further influence the project developed: the opposing programs had a different way of positioning the represented city in the European context. A confirmation came when the 2012 pair's programs were confronted with the evaluation made after the completion of the project.[2] It appeared that the western states posed a problematic that concerned an extended European context, dealing with such cultural political issues in order to consolidate their relationship with the rest of Europe[3]. As for the eastern cities, the approach was more towards repositioning themselves on a national scale and reaffirming a national, local identity that was to be aggregated[4]. A possible explanation for the positioning strategy of each capital, intuitively revealed, was the state of socio-cultural progress each city/country was in. If we were to approach this from a historical point of view, the fact of being situated on either sides of the Iron Curtain revealed itself definitively important: while during the Cold War, western states were continuously evolving, the eastern states were facing a process of constant erasure, cultural stagnation and impregnation by ideas of soviet provenience, having to recommence from scratch several times. This results in different stages of development in which western and eastern countries are for the moment. Even if there are exceptions – states that managed to overcome their situation after the changing of the regime, in almost every case a specific inertia can be identified as a socio-politic issue.

1.2 Main ideas to be further developed

With this idea the interest shifted towards this eastern category of cities: the development of the current situation and subsequently the process that made it possible. The case of Wroclaw is somehow atypical given the fact that it was situated indecisively between eastern Germany and western part of Soviet Empire, but, as it is debated in the literature on the subject [2], there are as many traces of similarity between the states from the east of the Curtain as there are characteristics individualizing them. What became a central part of the project was the idea of public space and how it is conceived through the cultural agenda; which are the actors named by it and how are they supposed to interfere in this program? What is the role of architecture, and subsequently the architect's position in this named agenda? With as many doubts as possible about the accent of the cultural program falling on the population's involvement[5], when presented with a potentially segregated society with almost no history of involvement in the evolution of their city, we started to question how this project would turn.

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[1] For information about the application process and overall idea of ECoC, see http://ec.europa.eu/programmes/creative-europe/actions/capitals-culture_en.htm

[2] For an evaluation of the 2012 cultural capitals, see http://ec.europa.eu/programmes/creative-europe/actions/documents/ecoc/2012/first-evaluation_en.pdf

[3] See San Sebastian – Donostia application for ECoC 2016 http://www.donostiasansebastian2016.eu/web/guest/proyecto-cultural/proyecto-final

[4] See Wroclaw's application for the ECoC 2016: http://www.wroclaw.pl/files/ESK/application_revisited_en.pdf

[5] "Through an increased public participation in culture we want to build a stock of public trust necessary to strenghten our social development. The title of European Capital of Culture would create new spaces for people's selfl ess activities and refl ect a refusal to acquiesce in the face of ethical and aesthetic shortcomings of daily life in large modern urban centres." Although having a stated participatory goal, the final application included the construction of a new Opera house as the only architectural objective. Other events like public concerts, exhibitions, theatre representations don't focus on any participatory processes, but merely on gathering a large amount of

This set of coordinates got expanded through a one week visit-study in Wroclaw, seeking an immersion in the city's atmosphere and socio-cultural, architectural characteristics. In parallel, we tried to contact as many people we could to see if a network of potential public actors could be formed; this could also turn into useful information about current situation and inaccessible subjective truths.[6]

2 TERRAIN WORK AND ANALYSIS DEVELOPPEMENT

The next sequence portrays some basic empirical observations made during or after the trip to Poland. Without pretending to be neither a thorough socio-anthropological analysis of the situation of the Polish public space, nor a simple narrative of the voyage, the discourse tries to describe the fil rouge of the project. Keeping in mind that the initial purpose was to reveal an inner collective image of Wroclaw from its inhabitants, the contact turned out to be problematic.

A meeting with Izabela Mironowicz, professor at the Architecture Faculty in Wroclaw, informed us about the urbanistic evolution of the city. This historical process consisted in a constant neighborhood addition to the city's old center which, after the WWII and the shifting towards Polish jurisdiction, became a Polish identity icon (even if an historical inquiry would show its German origin)[7]. This turn of events left the city with a visible history, still identifiable through a patient day-by-day recognition of its districts.

This encounter dictated the development of our visit, as it structured how we added gradually, to a neutral black and white map, the different parts of the city. The idea of a mental map became central, however its meaning shifted from being our instrument when getting to know the city and its population through interviews, to a desired goal of the eventual project that was to be developed after the visit. This reassessment happened while a parallel map of the dynamic of public actors started to develop: it seemed that the population wasn't involved in urban development as we couldn't identify almost any traces of spatial appropriation (with the exception of individually used fragments of some inner public courtyards, enclaves asymmetrically redeemed by inhabitants). In addition to this passivity, there lies another extreme position: municipal urban scale projects which make proof almost every time of a paradoxical, unequal and schizophrenic relationship between public demand and political powered answers.[8]

2.1 An imagined structure of the city

An image started to be shaped, rather a poetic romantic one, based on quasi-anthropological assumptions and intuitions, than on scientific evidence. The city lies as an almost calvinesque entity inscribed in a three layered structure where the central and most prominent one is represented by the political elite imposing its will everywhere in the city (this image is best understood when you pass by Nowy Targ, a public square in the city's historic center, where the balcony doors of the nearby buildings are barred with wooden planks by the municipality in order to prevent the inhabitants' access on the balconies). Under this uniform unbeatable barrier reside the population and its individual powered habits, which get subversive only in certain tradition motivated events.[9] Above all, planes an almost materially perceivable potential, creating a tension so common for an accustomed observer. (For an inhabitant of an eastern country as the author of this paper is, a slip into subjectivity concerns a constant situation between what irremediably is and what the image of a post-communist country could really be if this potential would be put at work). The existence of this potential can be tested in the lack of structural liaisons between different adjacent urban fragments, as well as in the constant encounter of

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population in order to guarantee their economic success. See Wroclaw application for ECoC 2016, http://www.wroclaw.pl/files/ESK/application_revisited_en.pdf

[6] The terrain work couldn't be finalised without the interventions of Izabela Mironowicz, profesor at the Unversity of Architecture in Wroclaw, Michal Duda, curator at the Museum of Architecture, Wroclaw, Roland Zarzycki, former chief specialist for the ECoC 2016 application, and Przemek Filar, urban activist in the Beautification Movement, WroclaW.

[7] The war destruction of the city was an oportunity for a process of reconstruction which served as a politic tool for establishing the new regime. Therefore, nowadays the city center is an architectural finality, an image which preserves a particular historic period as representative for Polish identity. This process is detailed in Faraldo, José M., *Europe, Nationalism, Communism. Essays on Poland,* Series: Europäische Hochschulschriften / European University Studies / Publications Universitaires Européennes - Volume 1051, 2008.

[8] There are some ongoing projects in Wroclaw: one that seeks to develop a new peri-urban neighborhood near the contested new stadium, in order to sustain its until now failed investment; another one seeks to demolish an established meeting point and bus station, in order to build a new shopping mall, near the city centre.

[9] Tradition functions as a unifying element which has been perpetuated through religion – see public religious celebrations, or through forms of political/economic resistance – like the market which was established in an old disaffected train station near the city center. These are reasons for public gathering, but they don't function as structural social aggregator.

deserted spaces (it seems that public space became somehow just a quantitative proof of urban evolution as part of the positive – negative relation in a plan of an urban tissue).

Even if intuitively created, the image got acknowledged through every interview we had in Wroclaw. Moreover, going further with this idea of passivity, when asked about the architect's position in this asymmetrical distribution of power, the subjects of the interviews revealed another asymmetrical involvement of the actors of the discipline. There are only few names that can be put on the list of involved architects, and every time these names are in the service of municipality's development projects. Corroborating this to the idea of participation promoted by the cultural capital agenda, the question of how the architect gets involved in the construction of public space, population and urban synergies got raised.

The conclusion of the visit rests primarily on the defining image of the city, as a theoretical departure point and as a fertile conceptual terrain that has thereafter nourished the development of the project in Wroclaw. More so, the visit reformulated the methodology we developed at the beginning of the semester. As a turning point, it refined our purpose to reveal the image of the city present in the collective imaginary and put it into architectural language to a more volatile purpose: raising questions about the necessity of such collective imaginary.

3 EASTERN EUROPEAN PUBLIC SPACE – POST COMMUNISM AS A SYSTEMIC CONDITION

"…bribery is a two way street between the giver and taker. To stop it, it is not sufficient to eliminate the taker's hand. The hand schooled in giving is still there and will seek for new recipients." Kazimierz Wyca[10]

In the following chapter, the paper focuses on explaining the process undergone in post-socialist public space, both from an architectural and anthropological point of view. In doing so, the three layered structure of Wroclaw and its dynamics may be cleared from being a subjective lament.

3.1 Socialist public space and post-revolution changes

As showed in subject literature, the characteristics of socialist public space are best revealed by juxtaposition with its western counterpart. This shows a difference in qualitative and quantitative aspects of public space. First of all, *in the socialist cities of Eastern Europe, most space was public by default. The majority of the urban parcels – all of the areas covered by commercial, industrial, and institutional uses, all parks and recreational areas, historical districts, and the territories covered by large housing estates – were invariably held in public ownership. Added to this body of public land were the streets, the squares, and the land used for public utilities, thus bringing the share of public land in the socialist city to roughly three quarters of the total urban area. In cities of the capitalist West, the ratio between public and private land is more or less inverse, with a combined share of public space taking about a third of the total urban area.*[3] Moreover the density of public space displayed in socialist countries is considerably different from what happens elsewhere: there are sometimes enormous areas allocated for public use not necessarily sustained by public economic or cultural functions, and therefore there is a diluted repartition of public activities . The conception of the monumental differs in the main square, destined to large gatherings, from what someone would find getting further away from the city center: the aesthetics of the uniform creating dull repetitive streets and squares. This general image was to change dramatically after the fall of socialism in 1991 with the privatization of the public space. Without being exhaustive, there are several issues here which are worth remembering.

First of all, this privatization process came in part in junction with the problematic issue of retrocession which took different paths depending on each country. The reason this kind of management of urban realm is posing problems is the fact that it supposes a series of moral and economic limits which cannot be satisfied simultaneously, thus leading to inequalities, injustice and an even more diminished trust in state's institutions. [3]

Secondly, the passage from public to private ownership was often confronted with some residual issues. If at the beginning the citizen didn't have anything in his city (not having any duty towards it either, its maintenance being provided by the public sector), now part of it remains an object of passing the responsibility between the

[10] The subtitle seeks to emphasise the fact that the processes undergone in socialist Poland are as hard to overcome in the post-revolution period, as Kazimierz Wyca points out in his essay when speaking about inherited habits from the period of the German Occupation that are perpetuated even when this period ended. There are factors which require a specialised approach when it comes to Eastern European states, including architectural interventions. See Kazimiers Wyca, *The Excluded Economy,* in THE UNPLANNED SOCIETY: Poland during and after Communism. Edited by Janine R. Wedel. New York: Columbia University Press, 1992

public and the private sector, being claimed by no one. This seems to be the situation of many inner courtyards found in Wroclaw belonging theoretically to the community living in the adjacent blocks of flats. However, there is no sign of appropriation from their behalf as the residual space isn't historically theirs. They don't appear to have developed a public conscience of belonging or to identify themselves with the place(*there are many possible reasons for that: the temporary desired aspect of habitation, many of them wanting to buy their own lot and build an individual residence, trend associated with the collective "socialist" housing syndrome; their poor financial state that prevents them of being concerned with the appearance of their own environment; or just a cultural inability or availability to take care of something that is likely to be taken from them, to be in the service of an immaterial public identity, which very often worked against them*). This situation exists also regarding the actual buildings: the facades belong to local authorities, while the interior of the building belongs to the inhabitants; therefore renovation with public funds can only address the envelope, and not the real problems of plumbing, heating systems which rest in the locals' hands.

3.2 Convergent processes in the post-socialist city. Urban consequences

All in all, the transformations suffered by the idea of public space here are part of a sensitive field under the influence of two parallel processes [3]. There is an inherent post-1989 desire to rapidly overcome the socialist "condition" and to align to western standards by privatization and commodification of public space. A burst of commercial activities and a fast diversification of public functions try to satisfy the condition of a former spatial and functional imbalance, but also to fill in the blanks of an individual conscience accustomed only to work for the state. Now everybody wants to be his own patron and to provide for himself.

The parallel process becomes hard to distinguish from the first given the convergence of their similar results. With the beginning of the 1980s, the global forces started giving shape to an urban alter ego of the city throughout the world, taking also its toll at the east of the Curtain: extreme commercialization of public space. This resulted in an overall tendency to consider eastern and western cities the same way altogether, trying to apply the same methodology of action and the same tools here, as wherever else, in such a way that socio-cultural dysfunctional aspects inherited from the former regimes are being ignored. The rise of big corporations and big public interventions compete with this heritage creating major discontinuities in the social system. Partnering up with municipal forces, this gives way to extrinsic forces that drive the city towards satisfying a more and more distant agenda.

The fact that nowadays these two trajectories converge with a tendency of dematerialization of the public realm and a restructuration of social network in other terms than the traditional ones, result in a double alienation effect. We can see how everywhere in the world the social sphere becomes digitalized, the issue has been oversaturated with scientific, philosophical, technical, anthropological inquiries. However, when applied to an already alienated post-socialist society, such processes shouldn't be discarded as common.

In Wroclaw, this situation can be exemplified by several situations disseminated in the city. I think that the most interesting element though is the case of a former German airport runway (built during WWII to assure supplies for the German army in an unavailable part of the city) which is known to have been used only once for the departure of army's leaders. After this episode and the soviet annexation of Wroclaw, the area served as a clear surface for urban development. A project for collective habitation and academic district was put in place. The scale of the intervention consisted with what was being found here, the runway serving for a future monumental boulevard. After 1991, the ensemble turned out to be a fertile terrain of a massive commercial development including a super-sized Shopping Mall.

Even though polish cities and especially Wroclaw are a special case, giving their history with soviet and German occupations [4], there can be still identified traces of this double process. This resulted in a general lack of trust in public local or national authorities and an individualistic conscience of the polish citizen. What one sees at the first contact with the city is an image of a potentially rich social activity that could create an invisible social network: typological diversity of the city, urban patchwork mixing green spaces, commercial nodes, university campuses, and historic tissues underlined by a specific topology, etc. Instead, these elements are often separate entities; they form a formal urban unity, however there is a lack of systemic links that could animate this potential.

4 PARTICIPATORY PROJECTS IN EUROPE

The next section seeks to give a general image of the repartition of participative interventions throughout Europe. It is both a schematised quantitative and qualitative overview which tries to depict an objective image in

order to emphasise the interdependence between a socio-politic condition and the type of interventions conducted in this space.

The interest of developing participatory architecture might be equal all over the European territory among practitioners; however, the geo-historical asymmetry still dividing European states after 1991 in terms of socio-cultural aspects of public space (re)draws the line between high and low(or almost inexistent) occurrence of this type of projects. The aim is to reveal an absence of interventions that rely on the participation of the public in order to build collectively the city in the eastern part of Europe, as well as the rather high rate of their development in the western part.

The qualitative aspect draws the difference between the projects identified in the table.[11] While all the projects found in Western Europe have a strong dimension of a developing action put in place with the help of a community (who can also be the one who demands this sort of intervention) all the projects identified in the Eastern countries rely on more passive approaches like discussions with certain members of the community. The following paragraphs offer a series of possible scenarios to which these projects may adhere.

Some of these projects have a common scheme of the intervention: they offer to a certain community a source of entertainment, a subject of gathering which doesn't necessarily guarantee a spatial appropriation or community involvement, but merely a passive acknowledgement. Sometimes, these events focus more on the didactic aspect being open discussions that don't refuse the participation of the population indeed; by doing that, the intervention has strictly an informative goal. Another possible scenario is the one based on an artistic happening – the implantation of an art object in an urban setting, the creation of ready to use artistic installations; these are events that subscribe to a certain underlying theory, trying to promote the idea of resistance or protest, and may raise people's awareness by engaging them with it, but they don't succeed in addressing the inhabitant to the notion of participation, involvement in actually creating their public space.

Name of the collective	Name of the project	City	Country
Collectif ECT	A di Cita		Italy
	Faits divers	Barcelona	Spain
	E11 270 Landscape		Portugal
	Oshtang Project	Frankfurt	Germany
	La plaine Dix 70	Brussels	Belgium
	Ta Tata en Tutu	Paris	France
Atelier d'Architecture	R-URBAN	Colombes	France
Autogeree	Cuisine urbaine	Berlin, Paris	Germany, France
	Le 56 EcoInterstice	Paris	France
Raumlabor	Cantiere Barca	Turin	Italy
	Emma Unter Giesing	Munchen	Germany
	Curo Garden	Bruxelles	Belgium
	Chaise bordelaise	Bordeaux	France
	La ciudad imprevista	Madrid	Spain
Prostoroz	Tabor Ecletis	Ljublijana	Slovenia
Ligna	Trojan Collective	Zagreb	Czech Republic
BLOCK		Zagreb	Czech Republic
Slice 252	Slicing Zagreb	Zagreb	Czech Republic

Fig. 1 Overview of the repartition of participatory projects in Europe

5 PROJECT IN WOCLAW

The following section will focus on the development of the project in Wroclaw and its key aspects according to the theoretical lines drawn in the previous sections[12]. After the analysis stage, having in mind that rather

[11] For more information on the collectives and the projects see http://www.collectifetc.com/carte-des-projets/ , http://www.urbantactics.org/projects/projects.html , http://raumlabor.net/partitatives-bauen/, http://prostoroz.org/eng/index.php?/eclectis/about/ , http://urbanfestival.blok.hr/13/en/ligna-the-first-international-of-shopping-malls/

[12] For more information on the development of the project, visit http://archi-anthropo.wix.com/aa2014-2015#!dmarche-6/c13y5

romantic image of Wroclaw, we felt the necessity to address the identified imbalance and the de-structuration of the city. The lack of public involvement of the citizen gave way to a participation based programme; the a-systemic juxtaposition of urban elements claimed for a structural progression of the project, as a process developing both spatially and temporally. Here the idea of a memory trace emerged as a linking element: an action functions as a spatial fixating element, a suite of actions in time creates links between different places in the city. If there was to be an intervention, we identified an intrinsic disposition towards a spatial inter-neighbourhood trajectory that would be able to address the void between them. An itinerant element would function as a stimulus for urban densification and complexification of an almost inexistent social network – the **dandelion** concept is put in place, as generative and meaningful image of the project. This implied the notion of expectation, of anticipation, but also the idea of hazard, of the unplanned: the movement takes place in time while it gains more and more momentum and "publicity" as being the element of surprise, of the newness in town; however each new step is always determined by continuous interaction with the inhabitant (the interaction seeks to define in the collective imaginary an affective map of the city in which key places-in-crisis get revealed by inhabitants as new intervention steps).

A couple of problems arose as we departed; the main issue focused around the methodology to use in order to identify a starting point on the map, but also how to materialize this moving element. Should it be something that we build with the inhabitants? Should it be a part of a participative construction site based on a clear day-by-day schedule (as we identified in other referential projects, see the section before)? Or should it address a more volatile aspect and be nothing more than a study platform, an open discussion, a manifest in itself? These two hypotheses, as the two extremes in the repartition analysis mentioned earlier, describe an interval of possible attitudes ranging between the desire to impose a foreign model based on the engaging process of building and the restraint from an actual activation by focusing on questioning the population.

The imagined dandelion development works in this sense as a potential exponential crescent function that might give the whole range of results; supposing that the hazardous movement gains momentum, this would enable a gradual complexification of the element (which can be variable, changing itself from step to step, or constant, an entity that accumulates both visual and immaterial traces of its use) and of the function it serves, depending on the site of its implantation. From this moment on, we considered that the project depends on our decisions only in the first stage of the itinerary, and therefore all subsequent work was conducted towards this phase.

By enabling this, the departure point relies on the necessity to make people aware of this undergoing process, of their potential as public actors and of the interchanging materiality of the city (change in which they can be a part of). Therefore the starting point would be Nowy Targ – a public square near the city centre with enough visibility in order to provide an efficient intervention. Its image has been conserved through history, so much so the competition for its renovation valorised a project focusing on its restauration. Even though the square has traditionally been a place for gathering and market and despite its position along important public routes, it seems to have lost its defining atmosphere and nowadays it almost goes unseen by a careless passer-by. The key aspects to be emphasised in this particular spot reveal an architectural/urban paradox.

- The compositional scheme emphases a square open on one side evoking the image of a public scene which would indeed work as such if this structure would still be doubled by its original function. Instead, the new design focuses on creating resting places oriented towards the empty centre of the composition.
- The collective housing blocks limiting the sides of the square reveal a disruption between this public space and the inhabitants which seems to be accepted as it is: there are balcony platforms without protection walls - which therefore lost their function – as well as doors barred by wooden planks to prevent the potentially dangerous access on these platforms. Our terrain work revealed that this situation is the result of a municipal action: instead of a structural reinforcement of the platforms, a simpler solution was put in place which goes against the idea of private property, public access, citizen rights etc.

We saw in this interior-exterior segregation a symbolic resource with powerful historic traces: the image of the *interior*, of home as the only place where someone could be himself, without any censorship of thought or comportment, and therefore a place which becomes guarded, hidden, carefully furnished and cherished. The simple curtain as a common design element is a way to defend one's private space against exterior undesired views; beside its traditional purpose, it acquires new values, it becomes a symbolic element for a fight against intrusion, for one's liberty of self. This might be a reason for which the situation in Nowy Targ is accepted as it is by the community: such segregation is common and even comfortable psychologically. However we felt this issue had to be addressed through the project. Here in Nowy Targ, the public scene would invert the exterior/interior relationship by creating the premises for an interior space with full visibility in the centre of the composition.

How does this **sub/in**version function as a ***project tool*** in this context? Does it resemble a panoptic relationship observer – observed and if this is the case, would it cause any reaction to the people noticing it?

Apart from this rhetoric, how an interaction should be enforced is the next step in our process. Therefore the idea of giving and receiving got raised. This has been an issue for architects for some time, although the means of addressing it is problematic. Here it became the central focus point: how to establish an exchange that could power the project development? So we proceeded with the idea of actually inhabiting the square and the created "interior" - a live demonstration for people to see and question. The way to promote it would be "an opening manifesto day" – a collect of any goods the population is willing to dispose of in order for us to be able to furnish our "home". The key is that this exchange would be taking place under their own eyes in a transparent process where the result is available for them to assess and to influence. Within this operation lies the hope to reveal the next place of intervention and to introduce another possible way of interacting in public space.

This however is a project with no certainty, with no sure result and with no schedule (its duration rests undetermined), but only the fact that it uses immaterial tools, symbols, to "build" an imaginary affective appropriation makes it different from other public interventions. Perhaps new stages of development would focus on other aspects which imply more physical ground work – building neighbourhood "base camps" to be used as platforms for discussion, entertainment, etc., public kitchens, public toolboxes for gardening, urban furniture and so forth, but this depends on how the user of the city perceives it, what he defines as necessary for its development, and more important, IF he becomes aware and available for this to happen.

6 CONCLUSION

The theoretical aspects issued through this project are all relevant for its comprehension. However, this essay focuses on the idea that in eastern public space, any participatory architectural intervention has to reconsider its tools. Do we still speak of architecture when the project doesn't develop an actually physical shape? Maybe the architect could be an interested actor in the process of civic appropriation in eastern cities; in order to do this, a change in the way he approaches a project is inherent: new tools, as seen in this paper, can and have to be invented in order to create the base for a redevelopment of public space. Why should an architect have such purpose for his work? Given the lack in autonomy of the discipline, augmented in this part of Europe by overpowered public authorities, this shift towards low-budget, small scale, "rudimentary" interventions would maybe result in new synergies between other public actors and therefore in new architectural opportunities.

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NON-FORMAL EDUCATION IN ARCHITECTURE - A WORKSHOP STUDY

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Abstract

Romania Communities have many challenges: firstly, they have been disadvantaged by the mind-set of communist ideals; secondly, over the last twenty-five years of democracy, these communities still live under the systemic problems associated with the communist era and thirdly, the socio-economic gulf between the poor and rich grows ever wider.

It seems local and state authorities believe their policies - to build new social dwellings can eradicate poverty and improve people's social status, which in turn will improve living standards - but it seems the reality is, even with new dwellings, community cohesion and living standards remain unchanged.

There are many new social projects destroyed and even abandoned, that were never occupied by intended inhabitants. It remains the case that poor people do not want to leave their familiar and often dilapidated homes to take up residence in new and modern social housing schemes – typically because of the lack of consultation by local communities, meant people were not persuaded to live in these new properties. People preferred to live with sub-standard conditions such as - over crowded spaces; no electric power; no heating; no water; no sewerage system; even sharing with their farm animals! Surely something is wrong and the real challenges associated with improving living standards are misunderstood. Without change, well-meaning local authorities will continue to build and invest time and money without changing anything within our local communities.

The preposition that an individual's social status is influenced the type of house they live in is a well established principle. This is the way society was educated and often people continued to be scared of things we did not understand. In challenging this mind-set of inappropriate social housing development we need to look to how architects can assist. Firstly, the architect should be a good listener to the opinions of people, in the context of their local communities, and be able to communicate using words and ideas that will convey the best results.

In his article "What if you can't prove you had a house?", published by International Herald Tribune/New York Times, on 20th of January 2006, the Peruvian economist Hernando de Soto demonstrated the necessity of creating the initial capital for the eradication of poverty. The reasons being having a house, 'a place to live' and an 'identity card' that can prove your existence, seem to be the acceptable norms of society. But what if in other cultures this is not essential? And what if for other cultures it is very important to prove you have a sheep?

That should be the real role of the community architect - architects should be able to understand the cultural differences and, as architects are creative thinkers, they should be able to make a dwelling space that would be, in the first instance a home, not only a shelter. They should be able to understand each individual's needs. People are not the same, even if they look alike their needs can be very different!

But it is not enough just to build the perfect house for one family, the new communicative architecture should serve to rebuild destroyed communities by reconstructing links. The

broken links can be rebuilt by mapping the community, the roots, the priorities, the habits, the traditions, and taking care of them. And this could be the real humanitarian and educational role of architecture. Architecture should show its democratic face. Architecture should have a 'soul', otherwise it will never work in community situations. This is one of many reasons future community architects should be trained differently – to be aware of what makes a community a cohesive thriving entity.

Arif Hassan stated the fact that if communities are neglected in the decision making process, the project implementation will lose the communities themselves. New architecture should prove respect, and this should be the key aspect in rebuilding communities and lives. We should find a balance between the need for speedy provision of homes and the community needs.

Keywords: Innovation, research projects, Non-formal education in architecture, social architecture, rebuilding communities, social houses, poverty, communicative architecture, research projects.

1 INTRODUCTION

After 25 years from the fall of communism, when we are looking at the Romanian Civil Society I can't say there is a remarkable evolution in democracy practice direction. I can see people wishing for "great party state" as the Communist Party used to be a long time ago, I see people who are afraid to laugh about certain situations because of the fear of destroying their future is stronger, but in the same time I can see people trying to change the world. It is certain that democratic values are not part of genetics, nobody was born knowing already what democracy means. These are values that must be learned and practiced every day, starting from childhood.

Communism and communists had the belief about how to destroy society. In order to make their ideology permanent they sought to destroy the values that would have led to public opposition. Firstly of all they destroyed the education and the learning system. Without education there is no democracy and the communities can be easily shattered. Buildings and places permanently collect history and traditions. As time passes they collect impressive amounts of memory, that is one of their purposes. When the receptacle is destroyed, memories and traditions persist for a while and then disappear.

The architect's mission should regain its dignity and deeply human side, and actions should be taken with much more care. Maybe not all architects will discover they have a calling for rebuilding physically and morally destroyed communities, but they should know what to do in order that their new projects should not further destroy community cohesion. Rebuilding communities must be approached very carefully, and communities should be encouraged to communicate and participate during the design process. To know how to work with and encourage community involvement is the first step to be taken. Community architects must be willing to leave their "ivory tower" and should be open to study the true meaning of 'architecture in the community' and its impact of everyday life.

Using permanent standards and standardized objects, the architect has a tendency to believe that truth is only expressed in the "Architects' Book". This narrow thinking generally leads to a loss of spontaneity that is probably the most important feature in the act of 're-creating the built environment within communities'. Thus what the architect seeks to influence is rarely understood. People in power, the decision makers, take the disastrous decisions, which could have been avoided, if the architect had been effectively heard. The sad truth is that the architect has no way to knowing the diverse range of needs if they are not adequately communicated. In reality community housing standards do not reflect the real needs. A possible common trend is for example, according to the Housing Law 114/1996 Annex 1, there are some minimum requirements: 'open access to individual living space without disturbing the possession and exclusive use of space owned by another person or family, space for recreation, space for preparation food, bathroom, access to electricity and drinking water, wastewater and discharge controlled waste'.

That seem at least hilarious as long as the table 11 "Locuinte conventionale dupa dotarea cu instalatii si dependinte la recensamantul din 2011 - rezultate preliminare Romania, macroregiuni, regiuni de dezvoltare si pe categorii de localitati" shows - 66.7% of homes had running water supply, 65.1% had sewerage in housing,

96.6% had an electrical installation, 44.4% had central heating, 84.6% had a kitchen and 61.9% had a bathroom. Despite the rules, reality on the ground is different. There are families of 5 people who manage to live in 40sqm and families with the same number of members who believe that 200sqm is not enough! These facts reveal that people are diverse and they have different financial resources. Housing Law requires minimum standards for living areas and basic utility functions – which are difficult to achieve in poor housing environments or when municipal infrastructure is underdeveloped or simply non-existent. In addition, each family have their own dynamics which is reflected in the size of the house and how it relates to the street or neighbourhood - communities may have their common trends but also each has its unique characteristics.

These are some of the reasons why community interventions must be done very carefully, based on thoughtful and empathetic conversations. The collaboration between well represented 'community working groups' and effectively trained 'community architects' is essential.

2 METODOLOGY AND RESULTS

In the 'Arhipera International School of Social Participatory Architecture' (SIASPA), students are trained to communicate and work directly with communities living in severe poverty conditions. SIASPA is a project of the 'Arhipera Association' and the 'Foundation for an Open Society'. SIASPA is an interactive non-formal school where teaching activity is voluntary. As described SIASPA, it "is a school where the student is important [...] by how much the student can create. Therefore the theoretical courses take the form of debates and practical workshops considering 'effective construction'."[1] In SIASPA "students do not make just imaginary projects for beneficiaries [...] but they build their own real-time projects, specifically designed for the communities and individuals they are seeking to assist".

The SIASPA Director, who is also the current holder of 'Participatory Social Architecture' (ASP), PhD. Arch. Lorin Constantin Niculae invited me to organize a series of interactive workshops during November 2014 - February 2015. The design of the workshops were planned to inform on various methods of practical activities, communication and participation skills taught on the course of ASP. The workshop was attended by six SIASPA students in alphabetically order: Andra B□ea, Matei Dinu, Cosmina Doncu, Sorin Goşa, Camil Isacov, Diana Stegaru. Arch. Andrei Ardeleanu joined them at the Negotiation Workshop.

The objectives of the four experimental workshops were intended to enable and deepen understanding of the following techniques: role-playing, brainstorming, Focus-Group, Design Charette and Visioning. In the workshops we avoided excessive theorizing, as the method of learning was a non-formal one.

Workshops were planned to run for an average of three hours each. The workshops were evaluated in several ways: by written and/or verbal feedback; the knowledge gained by reviewing the ideas generated by the participants and the level of satisfaction with the information outlined from each workshop (Fig. 4). Regarding the practical relevance of the workshops the participants were involved in dynamic interaction and 'hands on activity'. Students were encouraged to suggest topics for future interactive workshops.

At the end of four interactive workshops students completed sketch ideas and models for various community architecture building forms.

As the format of interactive workshops is innovation within architectural education in Romania, it took many hours of consultation and persuasion to find the optimum formula to be applied. It should be noted these workshops were based on the academic and scientific research models carried out by (Henry Sanoff, Nabeel Hamdi, Lorin Niculae), influenced by various internet searches, discussions and questions, all in search of the optimum formula that can be applied successfully to the SIASPA workshops. Also this paper was proof read and editated by Arch. Sam Thompson and by philologist Alexandra Purnichescu.

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[1] The SIASPA description pp. 6 and 7

2.1 Negotiation Workshop. Role-play. November 2014. Duration 70 minutes

The workshop was structured as a role-play. The objective was to simulate of the negotiation techniques taught by PhD. Arch. Lorin Niculae. I organised a similar workshop in August 2014 Summer School Arhipera from Belciugatele.

This workshop aim was to enable participants to lead useful exchanges with community groups and put the knowledge of 'community architecture' into practice. The workshop was attended by six students and by a junior architect.

For the initial workshop the guide on the debate rules from the 'National Contest' - "Tinerii dezbat" was followed. The guidance notes and format were prepared by Anca Rusu, Architect. There was feed-back from philologist Luiza Nita, which influenced the drafting of the workshop guidance notes for the interactive workshop. The workshop was very much appreciated by the participants.

The workshop is staged in a nameless imaginary community. Any resemblance to reality is random. This community has a mixed demographic made-up two main groups, each with numerous poor families. Representatives of the two main communities with an interested NGO wish to implement a proposed new social project. The community group meet at the headquarters of the local authorities to discuss the terms of setting up a 'community development association'. Each participant at the meeting have their various particular interests, and some have concealed motives. The main outcome was that meeting should be conducted according to the principle of a win-win solution being identified.

Various roles for each character were prepared and designed to display the range of real-life characters that may be found in various communities. An outline of the groups' 'open' and 'under-hand interests were explained to the participants. The various character roles, with other detailed information, were chosen at random by each participant.

After the meeting we then discussed the main findings:

Participants rated the workshop with an overall average of 4.57 out of 5; - considering the information received (4.86 out of 5), applicability (4.71 out of 5), interaction (4.57 out of 5), dynamics (4.43 out of 5), examples / practical exercises (4.29 in 5). All participants felt that the workshop was beneficial.

During the first interactive workshop, spontaneity and confidence was at a low level. In later other workshops the level of activity grew, without however reaching its potential peak

2.2 Focus-group. November 2014. Duration 150 minutes

This workshop aimed to simulate a real situation that a 'Community Architect' must know how to manage. Discussions with communities are different from discussions that an architect can have with a private client or a family, primarily because of the number of participants. Working groups do not have the common knowledge or understanding that exists in an individual or family discussion. Mapping the characteristics, needs and trends of a particular community can be a beneficial outcome of having local community focus groups discussions.

According to Sanoff, focus group is a qualitative research technique, which allows for structured interviews which create new ideas[2]. Focus group involves the participation of 8-10 people where they are encouraged to express their opinion about a given topic, objective or idea in connection with various based community challenges. In a 'Community Architect's' case, the focus group has the role of an interview with the community members and is very useful in identifying perceptions, attitudes, values and expectations, common trends and eccentricities of each community. One of the indisputable advantages of a focus group is that it can help to collect large amounts of information in a relatively short time. Each focus group needs a chairperson whose mission can be quite challenging, as the information to be collected by the process should be free from domination by any particular participant's perspective.

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[2] p. 102, Sanoff, Henry; AIA: Community Participation Methods in Design and Planning, 2009

The chair should encouraged positive discourse and ensure the methodology of the focus group is followed.

During the various workshops each participant assumed the role of the chairperson and others played the role of community members invited to participate in the focus group. The participants initially needed some encouragement to brainstorm, discuss and reach various conclusions. The list of particular problems included:- working with the participants that represented the poor families, discussing the type of suitable housing available and how to deal with the opposition from community members.

Some workshops were less dynamic than others however they did achieve their goals: the participants were able to organise, manage and maintain the debate without undue influence on any one member of the group. The workshop was scored with 4.24 points out of 5. Students appreciated the information received with (4.80 out of 5) and the interactive aspects (4.4 of 5).

2.3 Design Charette. December 2014. Duration 180 minutes

The term "Charette" was used in the nineteenth century in France and talked about the students' effort from the faculty of arts and architecture to deliver their work on time. Their works were collected in a gig and took them to the jury place. Students may continue their work "en charrette" while it is moving. According to Sanoff, the Design Charette is a communicative design process, intensive and interactive[3]. The Design Charette exploits the energies and talents of everyone involved in creating a development plan which must include community development trends. The Design Charette result is similar to multidisciplinary illustrative brainstorming one, runs for at least three days and whose objective is to produce a feasible development plan. The Design Charette increases the potential implementation of community projects as it encourages communication and is based on an approach ensuring support from citizens by finding a common vision with the designer / community architect. It represents an alternative to "top down" and increase the quality of projects through public involvement.

The workshop was organized as a Design Charette (Fig. 1) over three hours, the students were divided into teams of two. Arhipera Association develop, in partnership with the Foundation for an Open Society and Atelere Fara Frontiere an evolving co-housing project in order to find solutions for recycling electoral billboards whose recycling is proving to be very expensive. Participants were asked to analyse a billboard and to propose creative ways to use it as the envelope for Arhipera designed homes.

Fig. 1. SIASPA Students during the Design Charette Workshop

[3] p. 102, Sanoff, Henry; AIA: Community Participation Methods in Design and Planning, 2009

At the beginning of the workshop participants watched a film about an interdisciplinary Design Charette held at the University of Georgia. The workshop required a POINT material analysis (Problems, Opportunities, Insights, Needs, Themes) and have sought solutions for transforming problems previously reported into opportunities. During the workshop some brainstorming was organised and creativity ideas were exchanged. Each participant noted down every idea what thought is valuable, and ideas were translated into sketches and models prepared. The workshop tried to create a prototype replicable on a large scale.

The participants noted down the workshop with 4.87 out of 5, this working formula applicability was highly appreciated (5 of 5), dynamics (5 of 5), examples / practical exercises (4.83 out of 5) interaction (4.83 out of 5), the information received (4.67 out of 5) and they felt that the workshop has brought added value.

It was a true exercise of creativity and teamwork. Students understand it is a technique that can be used with excellent results, everyone can participate, there are no bad ideas and the solutions are elected democratically.

2.4 Visioning. January 2015 Duration 180 minutes

The workshop aimed to use the knowledge gained and previously experienced, and to introduce the community vision as the community working tool. For this purpose, participants watched a film about a visioning session in Lakewood, West Alabama where the community is invited to express their view about the future development of the town.

Visioning is a qualitative work technique in which participants are encouraged to imagine how the community will evolve or how certain aspects will look after passage of a predetermined time (15-20 years).

The workshop focused on the search of feasible solutions for housing in the slums and how to stop their uncontrolled and chaotic evolution, but that does not destroy its spontaneous development.

Students got involved during this workshop activity, have worked very well as a team and the brainstorm revealed very courageous and creative ideas. The final drawings were also impressive and students' satisfaction rate was very high according with incoming feedback (fig. 2; fig. 3). Basically they created two mini-communities who thought together, have stimulated the imagination and creativity of each other, were able to display their ideas and opinions without fear, and they debated many aspects. The best ideas were chosen democratically by noted them down and then some sketches were drawn. At the end of this workshop students have assessed each activity through feed-back and discussed them with each other.

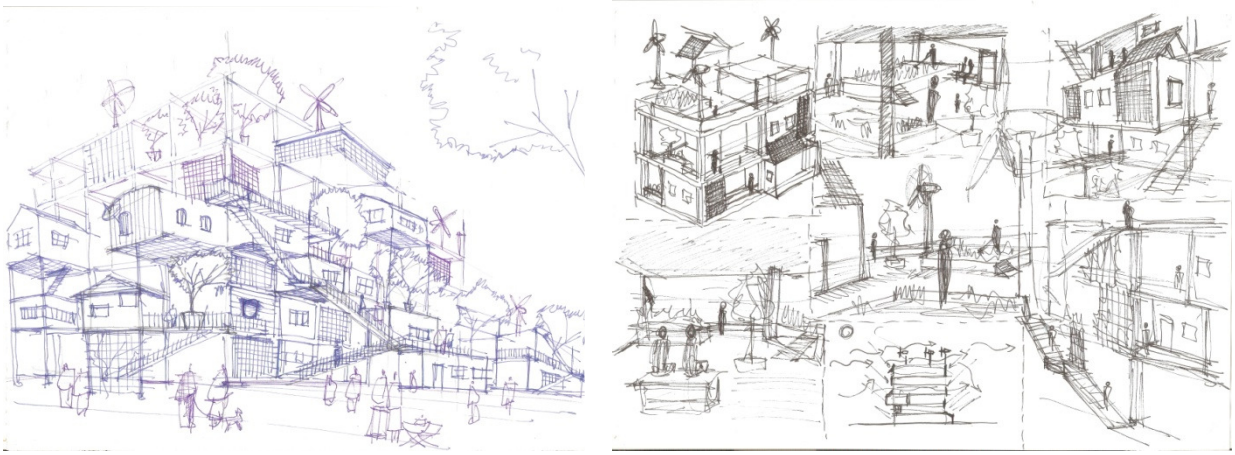
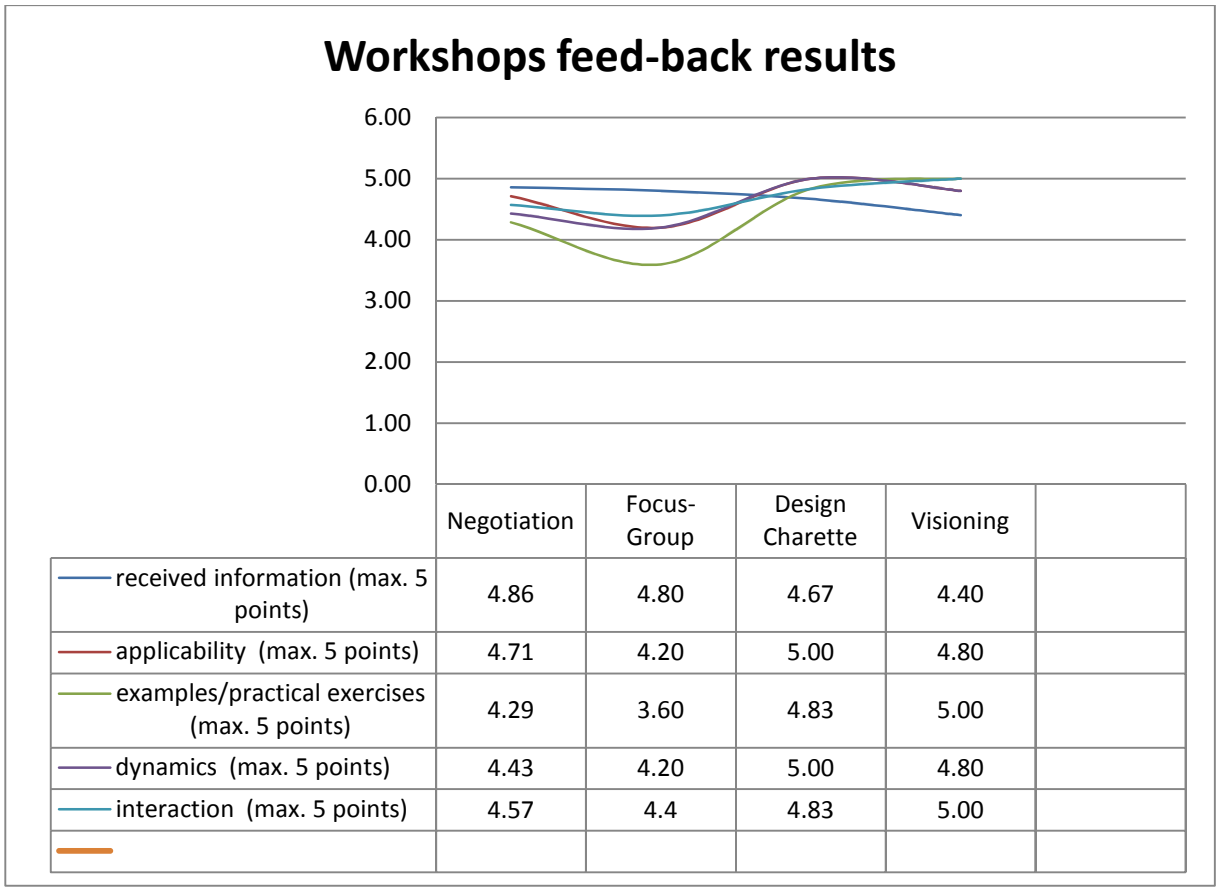


Fig. 2+3 - Visionig workshop final drawings, designed by Sorin Goșa (left) and Camil Isacov (right)

The workshop was noted by participants with an average of 4.80 points out of 5. They appreciated interaction and examples / practical exercises (5 of 5), the applicability and dynamics (4.80 out of 5).



	Negotiation	Focus-Group	Design Charette	Visioning	
received information (max. 5 points)	4.86	4.80	4.67	4.40	
applicability (max. 5 points)	4.71	4.20	5.00	4.80	
examples/practical exercises (max. 5 points)	4.29	3.60	4.83	5.00	
dynamics (max. 5 points)	4.43	4.20	5.00	4.80	
interaction (max. 5 points)	4.57	4.4	4.83	5.00	

Fig. 4 - Workshops feed-backs

3 CONCLUSIONS

The first conclusion based on observations and written feedback provided by participants in interactive workshops is that architecture education should aim for the development of community architects and adapt to the dynamics of society. The architectural education has to be dynamic and help developing architects work in multidisciplinary teams to be attentive to the needs of the community for the kind of project interventions, communicative and creative skills that should be used. These community architects must know how communication can be used in architectural design. Future community architects have to be trained to work in groups, to communicate and manifest an all-inclusive approach to community regeneration and new development. The communication techniques detailed in the SIASPA workshops will help the future community architects identify valuable information in terms of understanding the nature of the community members, to strengthen the group and transform the community by reinforcing the creative and communicative ties.

A second conclusion is:- improved ways of communication increases visible involvement and builds confidence in terms of decision-making and improving the quality of democratic process. Interactive workshops reveal that the group of students could work very effectively together, in terms of communication, teamwork and decision making, and if they are able to have the freedom to do so.

Last but not least, a group who can work in a team, will want to repeat the experience. However, the group trained to work in a non-formal system tend to lose creative spontaneity in a formal setting and in this case projects tend to be ordinary and stereotypical.

If community architects will be empowered to assist with rebuilding communities, we need first to educate them to do this in a creative, empathic and professional way. We have to start to rebuild our architectural learning system in order to face the changes of the communities that make up our society.

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HOUSES OF CULTURE.
CULTURAL CENTER DURING THE COMMUNIST REGIME

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Abstract

In Romania, the idea of leisure has been found in people's lives since the beginning of times. Handicraft evening sitting, followed by various workers' circles, and then the coteries formed amongst intellectual communities - are just few examples that have preceded and actually led to the emergence of these houses of culture.

After the imposition of the Soviet model, `culture` is transformed into `mass culture`. At this moment, the need to increase the spirit of social responsibility is achieved by consciously adopting the ideals of a socialist society. Houses of Culture were under the political protection of Nicu Ceausescu, son of the President and the head of Communist Youth, who appeared to be more liberal. As a response to a social order in which the main investor was the State, the House of Culture becomes a means of expressing the communist ideology.

Another issue under discussion is the typification – The use of type-projects, which were rather rigid, is increasing; cultural buildings thus become important endowments to localities. This is what led to the depersonalization and monotony of current urban centers. Regarding the impact on the community, their current state sometimes denotes a discussion on the program as well as the position within the city – they have often been designed as oversized in relation to the size of the urban context. These errors were probably issued by unrealistic social analysis and a false adaptation of the communist party to the specific demands of the localities.

Because, despite the fact that they were functional - probably because they were the only alternative for cultural and artistic activities, the Houses of Culture represented the means by which those in power could control the masses without the obvious obstruction of their needs.

It is interesting how these constructions remained in the memory of the citizens, and what people’s attitude towards them is today. Control, propaganda, ordering of masses, promoting collective society (rather than the individual) are key words to describe the purpose of these buildings. Perhaps the rejection that today’s population feels towards participating in the activities that are currently held there, comes precisely from this juxtaposition of the concept of culture and that of the ideological tool. That is why, today, the legacy of these cultural buildings, as a network, is being branded as communist ideology.

Although there have been many initiatives, from architects as well as from students regarding the rehabilitation of the former Houses of Culture/ Unions Houses/ Houses of Science and Technology for Youth, only few of them materialized. Many of the Houses are today in the same form - the same architectural language. Therefore we find buildings from that period have been "renovated" hastily, using building materials that express something totally different than the original merely drawn by the desire to sell an innovative image - image that often ends up being insubstantial.

I propose an investigation of the Cultural Centers in Romania, focusing, to the same extent, on the history of the architectural program and its metamorphosis during the communist, as well as post-communist eras.

I am trying to discuss the issue of the abandoned communist cultural programme, especially the Romanian one. How can we refurbish/ reconvert or "heal" these cultural buildings, and how can we envision the results?

With this purpose in mind, the research focuses on the actual state of the unfinished structure of the 'House of Science and Technology for Youth' from Giurgiu, started in 1985 and unfinished after the fall of the communist regime. The case becomes interesting when you know there are proposals to finalise the construction, but the authorities seemed to be sceptical about the need of culture in the city Giurgiu.

Keywords: cultural center, socialist architecture, communism, propaganda, ideology, culture, mass culture.

1 CULTURE PROGRAMME NETWORK IN ROMANIA

Between 1947-1952, under the supervision of USSR, the country's policy is aligned to that of the Soviets. After several series of nationalizations and the disappearance of private clients, the private practice of architecture disappears. Architects are grouped in what used to be the state consultants. Subsequently, they are the only institutions that will handle all aspects of design.

In 1952 they form the C.S.A.C. (S.C.A.C. - State Committee for Architecture and Construction) that belonged to the Council of Ministers who will organize, guide, advise and control the systematization studies and projects, construction and reconstruction of cities and population centers and projects of residential buildings. [1]

In the 60s a cultural relaxation is visible in C.S.A.C. decisions. The architecture completely abandons socialist realism and modernism begins to follow European rules.

The orientation of architecture after 1971 follows the orders of Nicolae Ceausescu, resumes Stalinist features, which gives birth to a "National Socialist realism", which is opponent to the original realism only by ornamentation and construction techniques that still follow modernist lines.

After the Revolution, with the change of the legal system, the practice of architecture came back to what was stopped in the 50s. At the same time, design institutes begin to "degrade".

The study is based on the documentary research journal *Arhitectura R.P.R.* (currently called *Arhitectura*), issued between 1950 and 1992. The publication is the only architectural magazine accessible to the wide public in communist Romania, and represents the main source from which documentary studies and projects carried out communist period are based.

In this search and inventory, one of the problems was to define the terms that best describe the cultural[1] program, in which case houses of culture arte representative. In this regard, I shall chronological list these names for a better understanding.

February 11, 1888, the opening date of the "Romanian Athenaeum" can be considered as a crucial moment in the spread of culture in our country. [...] It was mentioned in the magazine "cultural house" - pg. 405, 1945 - that at the beginning of the Second World War there were over 4,000 cultural centers. Yet, we can not speak of cultural events of this scale, compared to the one of 1888. [2]

1.1 National house. Rural cultural

Public buildings called "National House" appear in the first part of the twentieth century, to meet the social needs of residents in some rural areas They had smaller functions, customized to responded to characteristics of the social life of the inhabitants. Such an example was presented by Cosma Jurov in his book - *Architecture of*

[1] This is part of socio-cultural construction network, including buildings of educational, administrative and sanitary purpose along with those having cultural functions (cinemas, libraries, auditoriums dedicated - theater and opera, etc.).

the multifunctional buildings. In Babsa, Timis County, the House had wider function room where they could arrange a scene having a capacity of 100-120 seats and a smaller room that could be used as a library or rehearsal room.

The sole purpose of this type of building was local; It polarized residents from the suroundings. [...] It served a wider community of people, having been built on their own labour and meeting their own needs. [3]

1.2 Club. Club union. House of culture

In response to the need for mass culture among workers, out comes a new program – the club. In addition to the auditorium, the club hosts a library, along with various activities rooms (chess, art, music, choreography, etc.).

It plays a very important role in the community *and must be closely related to everyday life, the current movement of the inhabitants, and should not be placed in isolation in remote points, accessible only when needed. The realistic position of the designer appears as a manifestation of understanding the living conditions of future residents.* [4]

For this reason, its location should be close to the central area of the settlement, in the most favorable position, surrounded by gardens and parks - as part of joint activities that were also held outdoors (theater performances, bees, festivals and other events).

From an ideological standpoint, they had to express a new content, socialist and to combine popular artistic traditions harmoniously with advanced technical achievements.

In urban areas, it is a noted concern amongst architects to create a relatively open interior spaces, so as the rooms can work together.

From a functional perspective, they were divided into several areas:

- performances sector – organized in multi-functional halls, so as to also host theater, dance shows, music concerts, cinema.

- cultural and educational sector - comprising various technical circles applied for hobbies, exhibition spaces, library, etc.

- recreational sector - for gaming and entertainment meetings.

In fact, these buildings are key features of the civic centers, along with functions such as administrative, commercial and hotels. Nevertheless, they were not places of a culture as first desired, but simple ideological tools. Due to the high demands of such centers the solution of type projects was reached, which over time leads to their monotony and depersonalization.

1.3 House Youth Science and Technology

The program appeared on the initiative of Professor architect Emil Barbu Popescu, initially as a subject in school for designing "Neighborhood equipement and leisure centers" and then as a guide/ regulation for different "Youth facilities"[2] (with the inspiration "Foyer de la Jeunesse"). This was the design theme for "Youth Houses" sent to U.T.C. (CYU - Communist Youth Union) led by Nicu Ceaușescu who coordinated, among other things, these constructions.

The first building of this type is Athenaeum of youth in Reșița.

The freedom that young architects had in the design of the house was a brave start to practice the profession because there is a direct link between designers and users, without passing through advisory committees or other state institutions imposing financial restrictions.

One thing that proves the importance of this liberty is the recognition among co-architects of the qualities these architectural projects had. In *Arhitectura* magazines, almost all Youth Houses are mentioned. Moreover, a part of them were awarded by the Union of Architects of SRR, the most representative being the one in Slatina[3], which received the Special Prize of the City Kardajali, Diploma of Honor and Silver Medal at Interarch '87, Sofia – Bulgaria, as well as the Union of Architects Award in 1986.

[2] They were divided into categories, with or without accommodation , with or without the club.

[3] Designed by the architects Emil Barbu Popescu and Dorin Stefan between 1979 and 1981; built betwen1982 and 1986.

The archive of projects worked by C.U.A.S.C.-C.U.B. (CAUCS-UBC - Council of Architects' Union of Communist Students - University of Bucharest Center) where they made most of these projects, disappeared in 1986. So, at the moment, there is no clear evidence of this type of program.

As that period coincided with the fall of communism, many projects were never to be executed, while others were not completed. For example, the Youth House in Brasov which was begun before the 90s was decided to be demolished because of various disagreements regarding its location and volumetry. Another example is the case of the Giurgiu which I will detail in the last chapter of the book.

2 THE PROBLEM OF TYPE PROJECTS

The main factors that led to the need for type projects were of economic nature, and were imposed by the general policy of the stage of development the socialist society was in. Therefore, the constructions had to be done in a relatively short time and reduce costs. Functional merging came as an answer to the small land surface that was allocated for this kind of centers.

The sizing of the rooms and functional schemes are described in "design norm clubs' prepared by C.S.A.C. (SCAC - State Committee for Architecture and Construction) in 1953. The C.S.A.C. also deals with the coordination guidance and followed the design of typical projects made for social-cultural buildings – job entrusted to I.S.P.O.R. (DIPCR - Design Institute of Cities, Public and Residential buildings) and they also initiated public competitions for projects of cultural type.

The problem is intensely debated among architects, in an attempt to find valid solutions for social-cultural project *type that meets so many qualities that it is good anywhere, anytime, under any conditions, however you place it and having any coverage, being easily adaptable to terrain configuration and, in general, to be perfect in any site conditions, be very inexpensive, etc.* [5]

For example, the number 4 of PRR Architecture magazine 1954 it is presented a study for a project type for an union club with auditorium of 400 seats[4], made by arch. M. Bucur and co-architect. N. Vladescu. This project type includes the show and the club sector[5]. In addition to the acoustic quality of the room, and the coherent location of the functions, the submitted type project met the requirement of being "the most adaptable to any situation"; and due to symmetrical treatment of the volume, it "can successfully maintain an important perspective point".

3 HOUSE OF SCIENCE AND TECHNOLOGY FOR YOUTH IN GIURGIU (FIG. 1) CASE STUDY

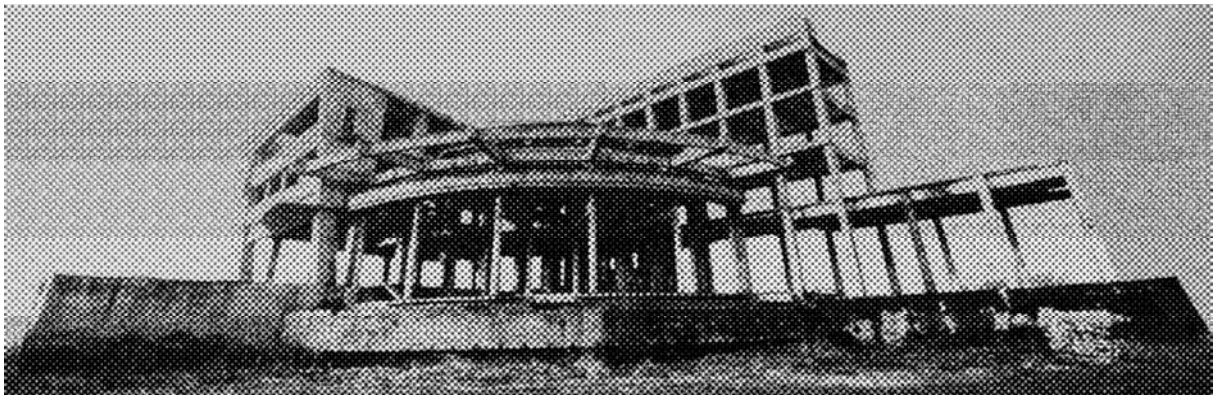

Figure 1. the current state of the House Science and Technology for Youth in Giurgiu 1990

[4] Projects are categorized by type for their owner (union , district) and the number of seats in the auditorium. Typical projects were made for clubs theaters with number of seats from 100 to 800.

[5] The article does not mention it as “sector”, but as important group of rooms.

The desire to study this cultural program came to me in my last year of college when I proposed for my diploma project the finalisation of the structure of Youth Science and Technology House in Giurgiu and its transformation into a cultural center, adapted to current needs. Also called Youth House, the building was designed in the mid 80s, and remained unfinished because of the fall of the regime, having been abandoned after the structure was risen.

I initially started with a sketch in which I wondered what might happen to such a "ruin" (fig. 2) starting from the most critical situation and ending with "worshiping" it, as follows: a. Destroy, b. I leave derelict, c. hide, d. a cover other buildings, e. a fit in another construction, f. recovering the original project, g. picking it up on a pedestal.

Only after a good analysis of the site within the city, the construction program amongst other cultural programs and population needs, I managed to fix some starting points that led to the proposed solution, a solution that combines some of the variants listed below. My searches have not only stopped at an urban, architectural and sociological level, but I tried to find references of contemporary art - projects of Christo and Jean-Claude who were trying to convey the sense of an object by hiding it. [6]

Figure 2. possibilities of handling the existing building

3.1 Where?

The site (fig. 3) I have chosen for the diploma project is near the limit of the old historical center - the area which developed spontaneously after the war (rural population had been brought here during the collectivization).

Even if there were regulations regarding parceling, they were not respected. Only later, when town planning was proposed, it was decided to tear down the workers' district, and to build social collective housing instead. Because of the fall of the Communist Regime, the plan was not carried out successfully.

There is a special situation in Giurgiu - only in 1968, did the town only become the county seat town (keeping in mind that other cities had already been doing massive investions). That means that Giurgiu had a little delay regarding the development of the town, having for a repercussion an unfinished Town Plan.

Between 1950 and 1968, the town of Giurgiu was transformed into a regional city, both titles showing its importance in the hierarchy of cities within the country[7].

As in the rest of the country, the urban plan proposed equality between cities, which meant that every city should have the same urban equipment. The problem becomes larger when these projects, or adaptations of these projects, are being replicated with indifference towards the context.

In the town of Giurgiu, Town Planning primarily meant brutal destruction of the historic center by applying a rectangular grid over the existing texture. Another major change refers to the creation of a cross axis - Boulevard Mihai Viteazu[8], which involved linking the Central Station and Hotel Steaua Dunării, to the Sugar Factory, including the proposal for the Municipal Hospital, the collective dwellings and the Culture House of Science And Technology For Youth – the item of my study.

The plan was not brought to an end[9], so in 1989, the demolition of individual houses were stopped (instead of which collective housing was to be built), and the Culture House was left in the stage of mare structure.

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[6] They participated in several wrappings of buildings so as to get the public attention on their architectural importance, of their adaptability or signification. A well known example is the Reichstag – a construction that was as some extent renegated by the Berlin citizans from political reasons and which, by manifest, managed to gain back its importance by establishing a dialogue between tiomes by the means of architecture. It is now one of the most visited buildings in the city.

[7] Excerpt from the General Memoire for the General Urban Plan GUP Giurgiu (after having had a discussion with historian Paunescu, Emil, I learned the reason why Giurgiu was turned into a regional city is the fact that it did not have a communist history, and, moreover, it was a Social- Democrat town. Another notable fact is the moment when the city changed its status - where ostracism was too obvious and industries could not be managed. as was Călărași, for example)

[8] Axis Boulevard Mihai Viteazu was a railroad before the Planning on which people would make deposit houses and wood processing facilities (which is the main source of solid fuel, not just for the city but also for the county) The railroad also served as a main mean of transport of materials to the Sugar factory.

[9] As a matter of fact, in Giurgiu people also wanted to move the center, build a cinema and set out trolley line.

Before the phase of a feasibility study, I tried to understand why it was decided to build this house of youth, as well as the manner it was supposed to function in and the reason why they have not resumed construction to this date.

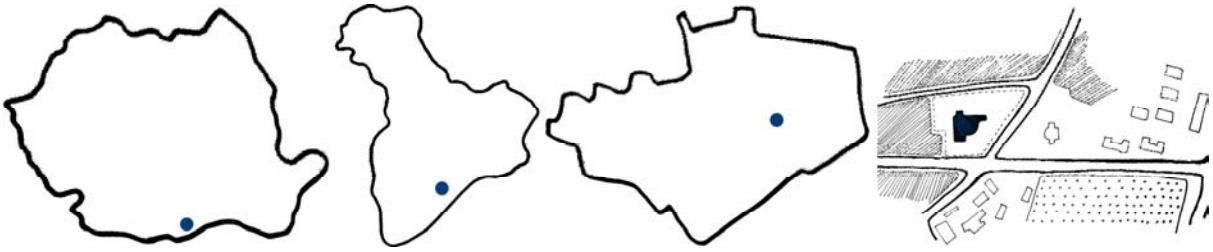

Figure 3. the position of the Youth House in Romania, Giurgiu county, Giurgiu town, on Mihai Viteazu boulevard

3.2 What?

I have to state that this boulevard (boulevard Mihai Viteazu) was not meaningless, even though it was not part of the historic center.

The potential of the area is raised by the means of external traffic links (the roads linking Romania with the Bulgarian border, towards Rousse), sports proximity functions and also leisure development.

Another important statement regarding the town is that the center tends to develop longitudinal - along the main street. By creating areas of cultural and leisure interest in the site studied, cross-links can be valued and developed (taking into account that one of the characteristics of the area highlights the need for urban regeneration).

Moreover, a city-scale study reveals a lack of educational-cultural functions in this area of the city (fig. 4.1). The proposed site is located at the intersection of two major roads, linking residential areas (fig. 4.2). It may constitute a new centre of attraction that will also create the junction between the four main residential areas of the city (fig. 4.3).

The building was designed in 1985 by architects Emil Barbu Popescu and Dorin Ștefan, and engineer Ștefan Crăciun, having for a basic function of an auditorium of 350 seats, 5 technical circles, a gym, a bowling alley and a disco.

Today the Culture House is owned by Giurgiu County Council, but before 1989 it belonged to the Communist Youth Union County Committee. It was supposed to become, just like the other buildings of the type in this country, a place to spend spare time, with the possibility of easy conversion into a tool of communist propaganda, control and standardization of spare time.

In terms of legal status, much of the land originally proposed for the building including the existing structure is owned by Giurgiu County Council and another part is owned by Giurgiu Townhall. Lack of funds is the reason why this building, forgotten as a mare structure, was not completed. Today there are several alternatives, but the situation is unclear[10].

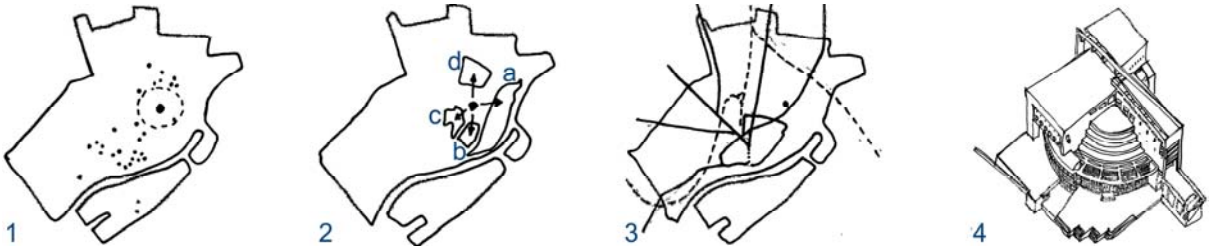

Figure 4.1. the situation of cultural institutions in Giurgiu ; Figure 4.2. the site's links with: a. the developing leisure area, b. the historic area, c. the administrative area, d. the collective housing area; Figure 4.3. main road and rail traffic arteries; Figure 4.4 initial axonometry of the building

3.3 How?

Some of the questions that I've asked myself in the beginning were related to the needs of the city and its residents regarding the proposed function (education and culture), then and now. Therefore, I have conducted a

[10] There is a foreign investor who is willing to finish the construction in exchange for a substantial area of the building.

sociological study[11] among the inhabitants of Giurgiu, structured on age groups. This approach is based on the idea that the proposed operation should take into account, primarily, the real needs of the population, along with urban study.

Taking into account people's needs, the function that emerges from this study is also the culture - leisure, but with the converting of the initial functions into others, belonging to the same area, so that the new functions should meet current requirements.

This study also shows the public opinion upon the current situation in which the the construction is held - the opinions towards the authority's indifference, the sadness they have regarding it and disappointment for an undeveloped potential. Contrary to my expectations, including views of the young suggest the memory of the communist regime.

I have been wanting to mention this because one of the premises I started from was to not address the function of the building to those who were marked in some way by this regime. However, given that a cultural center has a central position in a town (even if the artery that it is placed on is still under development), I decided to address the proposed function to several age groups, not only the young.

Regarding the volume, the reinterpretation of this building, literally a ruin, basically means keeping the existing structure, working with the original design, and having a minimal intervention upon it.

Thus: the existing structure is enclosed in glass; the building envelope is represented by a membrane of perforated metal plates, to create a compact volume, plates which solve the problem of lighting and ventilation within the building; the perforation of the plates form a reproduction of the original version of the proposed facades; at night the facade will be illuminated from within - hereby highlighting the gaps in the contour lines of the initial front: and the existing structures can be seen only going through the building. Thus, I create a relationship between the current situation, the one that should have been, and the new proposal (fig. 5).

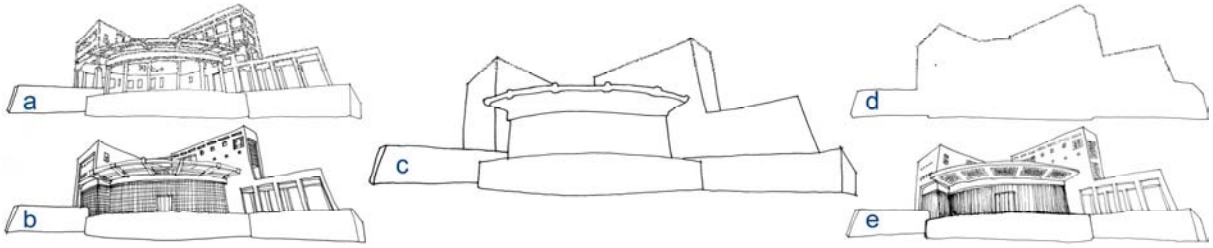

Figure 5. a - initial building project, b – current structure of building, c - entire glazing of the building and covering with a perforated sheet-material membrane, d - at night, one can distinguish the originally proposed façade, e - compact volume, manifest during the day

4 EPILOG

As regards the practice of architecture I am not not in a position to give a verdict, but I use a well known person's opinion regarding projects in the contest Bucharest 2000 (valid opinion in the first years after the Revolution) - *which exposes the sad professional mentality in which Romanian architect remained: the city is for him, a collection of objects floating in an undefined urban space; the city is not formalized in well defined urban spaces. The downside comes clear: Romanian architect were not yet ready to understand the city and no major change in the way of making architecture.* [6]

Without the original designers, Youth Homes suffered interventions in the architectural appearance. Their functions were changed, they sometimes became casinos, nightclubs, shopping centers, etc. Although the imposition typing disappeared, the architect today was faced with the inability to cope with economic and political system.

The problem has become sociological, financial and political; the architectural and urbanistic reasons are hardly being taken into consideration:
- transforming them does not report to a good study of the actual and present needs of the residents.
- the issue of money is invoked when rehabilitation is desired, and the spaces are sold in small amounts, or the function is being compromised- functions that produce short-term money are promoted.

[11] The study was conducted on 100 subjects aged between 16 and 60, who were asked to answer questions about the current needs of the city, the view that they have about the House of Youth and what they wish to transform it into.

- politically - I had the opportunity to encounter this problem when after making a Feasibility Study for Youth House Giurgiu, I learned that the new head of the Giurgiu County Council does not consider that the town needs culture.

The decrepit condition or functional obsoleteness of many public buildings repels any sympathy, while others linger as relics of a past epoch, awaiting (self-) demolation. [1]

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130 YEARS SINCE THE BIRTH OF ARCHITECT DUILIU MARCU

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Abstract

The evolution of the Romanian architecture comprises of a logical succession of different styles, which can also appear simultaneously. These currents are less or more antagonistic, but their usage is mostly a consequence of the evolution of the Romanian society as a whole and the widespread European vision regarding the arts.

The most important phase in the evolution of Romanian architecture is the period between World War I and World War II, which marks its plenitude. It is the époque of Greater Romania, when the Romanian state enjoys, especially in the 1930s, a unique prosperity for our people. Consequently, the Romanian architecture of the period is extremely diversified. In this context, three different orientations coexist: the neo-Romanian style, which became the "official style" of Greater Romania, the late eclectic style and Modernism.

The stylistic cohabitation of the three tendencies was a permanent characteristic of this period. The three trends can also coexist at the construction at the same building. The first trend is that of the architects that continue to promote the neo-Romanian style, which is imposed by some local construction regulations and requested by public authorities for administrative buildings, but also by many common individuals for their own homes.

The second category of architects is that of the eclectic style perpetuators (Nicolae Ghica-Budești, George Matei Cantacuzino or Duiliu Marcu, at the beginning of his career).

The third tendency is that of the new Avant-garde and modernist architecture, whose pioneers are Marcel Iancu as an Avant-garde artist, and Horia Creangă, as a modernist. Vernacular Modernism, "well-tempered" Modernism or Art Déco and the classicist Modernism of the 1930s-1940s are all subdivisions or stages in the evolution of the new architecture. Distinct styles of Modernism are Art Déco and the classicist Modernism, whose subdivision is the "King Charles II style". This style is quickly adopted by illustrious architects, such as Petre Antonescu or Duiliu Marcu, who also is its most important figure.

Marcu demonstrates an unprecedented ability to work with different styles. His career is extremely complex and shows a spectacular capacity to adapt and create valuable buildings in any architectural style. Because he studied in Paris, he was influenced, at the start of his career, by the French academism. He slowly moved on, to the neo-Romanian style, and ended up invented his own style, a modern architecture similar to Art Deco, with classical elements.

He achieves success along with the state architecture of the "King Charles II" style, which includes state orders and participations to international architecture exhibitions. Many of these orders and these exhibition participations, such as those from Barcelona in 1929 and Paris in 1937, are tied to Duiliu Marcu's name. Apparently, he was the favorite architect of King Charles II.

Duiliu Marcu's career is a mirror image of the historical evolution of the architecture, split in three main parts: "The Classic Architecture" (1912-1925), "The Traditional Architecture" (1920-1930) and "The Romanian Modern Architecture" (1930-1945). These are, according the architect's monographs, synonyms for the eclectic style, for the neo-Romanian style and

for Modernism respectively.

Marcu's career reaches its apogee during its final, modernist stage. His modernist creations can be divided into four main areas of interest: public buildings, apartment and office buildings, individual residences and exhibition pavilions.

Nonetheless, the architect was also sporadically active in the field of religious architecture. He designed various burial vaults in the Bellu Cemetery in Bucharest and a chapel for the Blank family, in Băneasa (1927-1929). In 1913 he won a projects competition for the construction of the Madona Dudu Cathedral in Craiova. Marcu also designed the first Romanian crematory, in 1925.

Duiliu Marcu was an overwhelming personality. 100 completed projects and approximately 150 designs made up his vast career.

The architect was born in Calafat, on the 25th of March 1885. His mother was unemployed, while his father was a captain of the Royal Army. He went to primary school in Fălticeni, but started high school in Dorohoi, where he stayed one year. In 1900 he transferred to the sciences department of Charles I High School in Craiova. In 1905, Duiliu Marcu decides to continue his studies at the Architecture School of Bucharest, where he obtains the best score at the entrance examination. After just a year in Bucharest, he heads for Paris, where he studies at the famous Beaux Art School. In 1912, Marcu returns to Romania, after successfully finishing his studies in France.

Marcu was also involved in education, as a professor for almost three decades, between 1929 and 1957, at the Architecture Academy of Bucharest. After 1945, he is mostly active only as a professor. Between 1952 and 1966, Marcu is the president of Romanian Architects' Union. At the same time, he is, from 1955 onwards, a full member of the Romanian Academy. Duiliu Marcu passed away on the 9th of March 1966. He is buried at the Bellu Cemetery, on the Academicians' Walkway, along many other illustrious Romanians.

I firmly believe that Duiliu Marcu can be accurately described as "THE DETAIL ARCHITECT OF THE ROMANIAN MODERNISM", especially for his care for details. Therefore, every single bit of Marcu's construction is studied. The combinations of raw materials, the illumination of the chambers, the furniture and the other decorative elements enrich the interiors and give birth to a new style, which I dare to name "the Duiliu Marcu style".

Actually, Duiliu Marcu's works reflect the personality of the most complex architect of the Romanian Architecture between the two World Wars. After 1950, his performances were equaled by no one. Despite these beliefs, the architect humbly and rhetorically asks himself, while emphasizing the virtues of an original and modern architecture, which guided him throughout his career:

"Have I really succeeded?

I can only say (…) that I am far from being contempt with what I have achieved."

Keywords: architecture, Duiliu Marcu, classical architecture, traditional architecture, modernism, Charles II, neo-Romanian style, public buildings, apartments, offices, exhibitions

Motto: *"My concern for finding true Romanian solutions, to extract from the classical architecture only the clarity, simplicity, weight, eurhythmy, proportions, meticulous studies of detail, accuracy, execution [...] represented for me a line of conduct who served as a guide throughout my work. This are the circumstances in which I have tried to create".* [3]

The most important phase in the evolution of Romanian architecture is the period between World War I and World War II, which marks its plenitude. It is the époque of Greater Romania, when the Romanian state enjoys, especially in the 1930s, a unique prosperity for our people. Consequently, the Romanian architecture of the period is extremely diversified. In this context, three different orientations coexist: the neo-Romanian style, which became the "official style" of Greater Romania, the late eclectic style and Modernism.

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Duiliu Marcu is proving an extraordinary versatility in Romanian architecture, his career being a mirror image of its historical evolution.

His professional activity spans over 50 years (1912-1966), during which the Romanian democratic leadership changes four kings: Charles I (1866-1914), Ferdinand I (1914-1927), Charles II (1930-1940)) and Michael I (1927-1930 and 1940-1947), all followed by the communist regime. More so, the architect`s destiny is linked to the royal family and especially to the personality of Charles II.

Marcu demonstrates an unprecedented ability to work with different styles. His career is extremely complex and shows a spectacular capacity to adapt and create valuable buildings in any architectural style. Because he studied in Paris, he was influenced, at the start of his career, by the French academism. He slowly moved on, to the neo-Romanian style, and ended up invented his own style, a modern architecture similar to Art Deco, with classical elements.

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Marcu's career reaches its apogee during its final, modernist stage. His modernist creations can be divided into four main areas of interest: public buildings, apartment and office buildings, individual residences and exhibition pavilions.

The architect was born in Calafat, on the 25th of March 1885. His mother was unemployed, while his father was a captain of the Royal Army. He went to primary school in Fălticeni, but started high school in Dorohoi, where he stayed one year. In 1900 he transferred to the sciences department of Charles I High School in Craiova. Here he obtains high grades at drawing during each year of study, and wins numerous awards. In 1905 he decides to attend the Architecture School of Bucharest and he gets admitted with the highest grade. In 1905, Duiliu Marcu decides to continue his studies at the Architecture School of Bucharest, where he obtains the best score at the

entrance examination. After just a year in Bucharest, he heads for Paris, where he studies at the famous Beaux Art School. In 1911, Marcu returns to Romania, after successfully finishing his studies in France, as a diplomat architect of the French government.

The history of Duiliu Marcu's professional activity is explained by the architect himself in the two monographs: *"Architecture 1930-1940"* (published in 1946) which comprises 20 works created during that period and *"Architecture 1912-1960"* (published in 1960). In the latter, 50 of the 150 works of Marcu are presented. He divides his career into three periods, which overlap in a lesser or greater extent: the **"classical architectural works"** is the stage of academic architecture and eclectic stretching from 1912 to 1925; **"traditional architectural works"** which consists of Neo-Romanian architecture, conducted between 1920 and 1930, and **"modern Romanian architectural works"** from 1930 to1960, the year of publication.

However, the works of the architect were made almost entirely before 1945. After 1945, he mainly dedicated his time for teaching and also for conducting some urban studies.

1 CLASSICAL ARCHITECTURE (1912-1925)

The first period, that of the French academism, is influenced by the education he received in Paris. In the mentioned monographs, the architect confesses that *"[during] the era 1912-1919, missing the peace of mind given by continuous work, I have tried to study the environment in which we live and produce, using two main architectural drawing styles that were used in that period: the academic style and the traditional architecture style.*

With the first one I was familiar because of the school that I have attended" [3].

The first project of his career is working with Nicolae Ghica Budeşti to expand the building of the University of Bucharest. This took place between 1912 and 1913. Coincidence or not, this building is the oldest structure built by a Romanian architect educated in Berlin, Alexandru Orăscu. Duiliu Marcu had, therefore, the opportunity to make a statement on the first public building made by a Romanian architect. What a happy way to start a successful career!

In fact, the University Of Bucharest is the building that "opens" the age of modern Romanian architecture.

In addition to the work that he accomplished with Nicolae Ghica Budeşti at the extension of Bucharest University, Marcu`s most important buildings from the classical period are the **House of engineer Constantin M. Vasilescu**, located in Bucharest, Lascăr Catargiu Avenue, no 54, and two other houses in Craiova.

2 TRADITIONAL ARCHITECTURE (1920-1930)

During his long career, Duliu Marcu created in nearly all the styles that found in Romanian architecture. However, he does not settle only for composing, but he imposes his own style, a vision that distinguishes him from all other colleagues.

The most valuable initiative of his style is undoubtedly the synthesis of modernism with classical architecture. The most important and most spectacular works of the architect are a result of this synthesis.

However, modernism is not the only style on which Marcu leaves his mark. On the contrary, the same is in the case of the Neo-Romanian style, where Duiliu Marcu proposes an original manner to address the national style: the ”Byzantine style” or the ”traditional Romanian architecture”.

On this occasion, the architect seeks the origins of old Romanian feudal arts, by identifying Byzantine influences, originally interpreted in Wallachia.

However, the architecture of Duiliu Marcu is a purified one, which is best observed in the interpretation of decorative elements. Moreover, his work predicts the development of later styles, which move toward simplicity, rationalism and functionalism, characteristic of the late works of Paul Smărăndescu, for example.

Marcu approaches the national style through intense study of Romanian ancient architecture, during which the architect takes several trips across the country. This research focuses specifically on the brâncovenesc style (Mogoşoaia Palace), the manors and peasant houses of his native region, Oltenia, and the monasteries of Moldavia (Iasi, Baia, Râşca, Văratec, Agapia, Secu, etc.).

This explains the influences of the Byzantine and neo-Romanian styles in Marcu's work. For the same reason, the traditional style used by the architect was named the ”Byzantine ecclesiastical style”. Despite this, the architect is a promoter of a sober style, concise and simplified.

From the architect’s point of view, simplicity is more able than decorative abundance to provide aesthetic pleasure: *”Although I had a great inclination for drawing and a passion for ornamentation and decoration, I later became an adept of simple architecture, without ornaments, which through just proportions and plastic harmony, should give the eyes the best of satisfaction.”* [3]

Despite the fact that this vision justifies the architect’s choice for modernism, it is also relevant for understanding his neo-Romanian works, which announce his later modernist approach.

In the second monograph mentioned, Marcu presents eighteen of his traditional architecture works. The most important are Dr. Dobrovici’s House in Bucharest, situated on the Lascăr Catargiu Avenue, no. 40, built between 1922 and 1925, the Polytechnic School of Timişoara, built between 1922 and 1930, the restoration of the State Theatre in Timişoara (between 1923 and 1927 - the interiors), the Romanian Pavilion at the International Exhibition in Barcelona (1929), the Capitol Cinema of Timişoara (1930) and Constantin Buşilă’s Villa in Sinaia (1926-1930).

To this are added villas made in Reşiţa, Anina, Costineşti, Balcic, Sinaia, and other projects that have not been realized.

All of them announce a simplified national style. The transformations observed are a result of the modernist ideas that were entering the Romanian architectural landscape and are focused on solving the functional part of the building and less on decoration.

After analysing the neo-Romanian creations of Duliu Marcu, the same evolution, from works that are heavier decorated to simple, purified constructions, where solving the functional issues is the most important aspect, can be observed. In this respect, the first two works, the **Dr. Dobrovici House** and the Polytechnic School of Timişoara, are marked by ”exalted” formulas and have a more complex decoration.

Although his first traditional works are characterized by Byzantine accents, the research on peasant houses, undertaken by Marcu in the early 1920s does not remain without visible results in the terms of his creation.

The best example is the Romanian Pavillion at the International Exhibition in Barcelona, built in 1929. The main source of inspiration for this work is the house of craftsman Anthony Mogoş, located at the moment inside the Romanian Peasant Museum in Bucharest.

The Polytechnic School of Timişoara is a building fundamentally different from Dr. Dobrovici House, because of the architectural programme which it represents, that of public buildings used as educational institutions. Also, this is the first large project conducted by Duiliu Marcu.

In the same town, situated on the Bega river, the architect is responsible for restoring the **State Theatre (now the National Theatre and the Romanian Opera of Timişoara),** which had been badly damaged in a fire which occurred in 1920.

Also, Marcu reveals that the administrative authorities asked him *"among others, as far as possible to [...] improve some mistakes made by the authors of the old theatre, the Viennese architects Fellner and Helmer"*[3]. Both interior and exterior changes were not entirely made as the architect intended, because of the lack of funds or because of constraints of a pre-existing building.

In the first stage, Marcu focused on the interior (spaces for shows, public spaces), while in the second stage of transformation he aimed for the transformation of the facades.

This second phase took place between 1934 and 1936. Therefore, the interior has Byzantine influences, while the main façade is modernist-classicizing.

Along with Dr. Dobrovici's House, **Constantin Buşilă's Villa (also known as the "house of dishes") in Sinaia** is another private home designed by Marcu. It is located near the monastery of the city. First of all, the house is not a new building, but a transformation of an old building, which had become too small for Buşilă's family. The building's location gives it an intimate atmosphere. Its ability to complement the environment is the main reason behind the architect's decision to avoid borrowing decorative elements which were specific for places of worship or other older homes.

The Capitol Cinema, constructed in 1930, is an iconic building for the neo-Romanian style. It is one of works that signify, to some extent, the transition to modernism, the third stage of the architect`s career, revealing an expression of Neo-Romanian purged with modernist trends. Here, Marcu gave up the semi-circular arcs, the elliptical arcs and the lodges that were used for his buildings before. Also, the interiors are deeply influenced by the Modernist Art Déco. Marcu considers that *"the facades can be considered a sign of the architect's transition from Romanian traditional style to modern style"*. In their composition, the architect was inspired, as he confesses, by *"the bastions of the old fortifications, which can still be seen in the town castle and the remains of the ancient city of the Hunyads"*[3].

3 THE ROMANIAN MODERN ARCHITECTURE (1930-1945)

The transition to modernism of the architect will eventually take place after 1930, when, despite valuable work and successes that he already enjoyed in his career, Marcu felt the need for a change in approach to architecture which would better fit the needs of the Romanian society between the two World Wars.

In this sense, the architect introduces the modernist style, filtered through a personal vision, unique in our country, sometimes reminiscent of Mussolini's architecture.

As the main personality of this new style, Duiliu Marcu completes his career and becomes one of the greatest architects of the history of architecture in Romania.

In justifying his final option, Marcu confesses, in accordance with those expressed above: *"Based on experience of the work between 1912 and 1930 and after examining my current position on the two styles (classical and traditional), I realized that I was not going on the best way and had to radically change my conception of our architecture."*[3]

[...] The architecture of the past belongs in the past; the present requires something else from architects. [...] For these reasons, since 1930, we sought the way to a modern Romanian architecture that we tried to dress in an original form"[3]. The modernist stage of Duiliu Marcu's career is definitely the most prolific. Marcu addressed many architectural programs; amongst these are public buildings and apartment buildings and offices, exhibition pavilions.

3.1 Public buildings

The most important public buildings made by Duiliu Marcu are: The Palace of the General Directorate of C.F.R. (1936-1944 and 1946); The Autonomous House of State Monopolies (1934-1941); **two royal stations, in Bucharest-Mogoşoaia and Sinaia** respectively (both between 1937 and 1938); The Romanian Academy reading rooms (1936-1938); The Superior School of War (1937-1939); The Ministry of Foreign Affairs (Victoria Palace) (1937-1944 and 1945-1952) and the transformation of the Athénée Palace Hotel (1938-1939).

In general, these constructions are characterized by monumentality, symmetry and their impeccable functional solutions. Some of them are expressions of the Carol II style, such as the royal stations, the Superior School of War or The Victoria Palace, while others show strong influences of the Art Déco, for example the Athénée Palace Hotel.

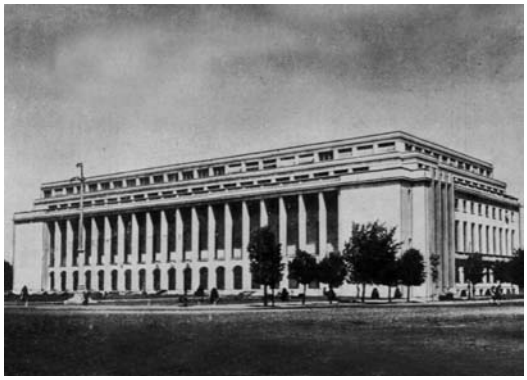
One of the most popular buildings made by Duiliu Marcu is the Superior School of War (now the Charles I National University of Defence), which is characterized by its simplicity, elegance and grandeur.

Its location at the end of a wide avenue gives it visibility from a great distance and boasts its dominance to adjacent buildings, further emphasizing its monumentality. Some decorative elements should have been added, if the constructors would have fully respected the architect wishes: *"according to the initial project, the two fill ups at the ends of the main façade were reserved for two epigraphic panels, crowned with two bronze quadrigas. These works were suppressed and, thus, the work is not completely finished"*[2]. It is worth mentioning that the reinforced concrete skeleton and some of the finishing work were made by the well-known engineer Emil Prager.

Victoria Palace was built to serveas the headquarters of **Ministry of Foreign Affairs**. As classicizing elements, along with symmetry and monumentality, the viewer can identify the arches on the ground floor, which are connected by a 70 m long platform with marble stairs, and *"the replacement of the usual two atriums with indoor gardens, allowing sunlight to penetrate to the ground floor, surrounded by arcades and patios, common in Italian Renaissance palaces"*[2].

However, the simplicity of the façade is striking. Referring to the facade, Marcu concludes that it *"gives the impression that [...] [the architect] sought – and managed – to help find the way to a new architecture which solved the problem of preserving the classic foundation and, at the same time, introducing the idea of modern simplicity in the overall composition and in the study"*[2].

It should be noted that the main facades were severely damaged as a result of Luftwaffe bombings in 1944. During the restoration between 1951 and 1952, made by Duiliu Marcu, pieces of Carrara marble were replaced with white tile of Romanian travertine in the affected areas. However the sculptures executed by Mac Constantinescu were completely destroyed and have not been rebuilt. In 1952, the architect was awarded with the title "Laureate of the State, second class", for his work on the interiors of Victoria Palace.



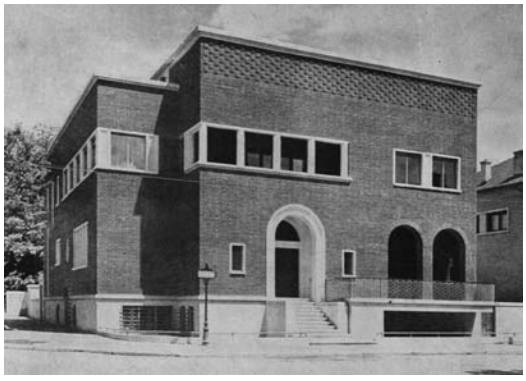
The extension and conversion of the **Athénée Palace Hotel** by Duiliu Marcu prove the virtuosity and the talent of the architect in working on existing buildings. The changes included the recreation of the facades and the repartitioning of the interiors. As Marcu explains, it was *"a total renovation"*[2]. The new facade has an Art Déco appearance, but its simplicity does not contrast with the eclectic buildings located in the area: The Romanian Athenaeum, The University "Carol I" Foundation and the Royal Palace. The decorative patterns were abandoned in favour of simplified concepts that highlight specific Art Déco elements and forms.

3.2 Buildings with apartments and offices

The second category of the modernist works of Duiliu Marcu consists of apartment buildings and offices. They reveal a clean modernism, characterized by repeated horizontal lines and the simplicity of the composition, also encountered in the work of Horia Creangă. Also, in some of the most important buildings of Marcu, Art Déco influences can be more or less identified. The most representative buildings of this type are the Company's Gold Mines "Mica" in which the architect had his design office (1932-1934 and 1937-1939 – the "Nestor" confectionary was located at the ground floor of the building) - which disappeared in the earthquake of 1977, the one located in Dionisie Lupu Street, no. 2 (1934-1935) - owned by N.Tabacovici, the buildings on the Știrbey Vodă Street, no. 17, 18 and 20 (1935-1937), the **House of Credit and Insurance for Magistrates** (1935-1937) and the building in Italian Street, no. 25, which belonged to Mrs. Popovici-Mezin (1936-1938). The latter is distinguished from the other buildings mentioned by the low number of levels on which rises (ground floor and four floors). All these buildings are located in the Romanian capital.

3.3 Individual Housing

Among individual residences designed by Duiliu Marcu, the Constantin Buşilă's Villa in Bucharest is worth mentioning, as well as Olga Ștefănescu's in Sinaia - Cumpătu. The first one is the result of the collaboration of the architect with the famous engineer Constantin Buşilă. This time, Marcu had to design a residence in Bucharest, Modrogan Alley, no. 1. The execution of the work was entrusted to Emil Prager and was made between 1932 and 1933, 3 years after the construction, in the neo-Romanian style, of Buşilă's Villa in Sinaia. Actually, this is one of the first modernist buildings designed by Marcu. As he confesses, *"the project gave rise to discussions, especially among architects who were concerned at that time about the idea of finding a way to addresses the problem of modern Romanian architecture and thought that this achievement was a good start in this direction"*[3]. The Villa of Olga Ștefănescu (nicknamed Bébé) located in Sinaia was built in 1934, one year after the completion of **Constantin Buşilă's Villa in Bucharest**.



It is a small house, but it announces a possible shift of the architect's interest to larger public buildings designed in a modernist way, which would happen in the very same year, with the project of the Autonomous House of State Monopolies.

All individual residences built by Duiliu Marcu were nationalized by the communist regime and were used as protocol villas. After 1990 they were returned to the descendants of former owners, but later suffered significant changes, especially at the interior.

3.4 The Romanian Pavilion and Restaurant of the International Exhibition of Paris, 1937

Like Horia Creangă, but before him, Duiliu Marcu was involved in designing the Romanian pavilions for international exhibitions, which express a modernist classicizing aesthetic.

Thus, in 1936, after two consecutive contests won by the architect, Marcu was responsible to handle, as head architect, the arranging of the Romanian Pavilion of the Paris International Exhibition of 1937, held in the Trocadéro Gardens and themed ”Art and technology applied to modern life”. It was, moreover, a theme that could not be more appropriate to highlight the virtues of modernist architecture in Romania. Duiliu Marcu proved himself up to the task and provided the international public opinion with a relevant sample of this architecture.

The Romanian Pavilion was considered by the specialists of the French press as one of the most successful from the exhibition. In this respect, Duiliu Marcu writes: *”Numerous articles in the Paris press and other publications show tha the Romanian Pavilion designer has succeeded in realizing a Romanian architecture based on modern engineering methods that fit harmoniously into the architectural ensemble of the international exhibition”*[3].

Here are some extracts from an article written in the publication ”Beaux-Arts” in Paris, under the title ”The Romanian pavilion”: *”The Romanian Pavilion seems one of the most successful of the entire exhibition;* [...] *it is perfectly suited to its role; movement is easy. Mr. Duiliu Marcu knew how to use Romanian materials and managed to highlight them through modern processes; he reminded about art traditions of scholarly and popular Romania, through forms and ornaments”*[3]. The Romanian restaurant, also designed by Marcu, was arranged close to the Pavilion. However, it is different from the later, in terms of style. In this respect, the restaurant reflects a vernacular modernism, significantly different from the classic style trough elements and forms that are, to some extent, like the ones promoted by the national style.

Nonetheless, the architect was also sporadically active in the field of religious architecture. He designed various burial vaults in the Bellu Cemetery in Bucharest and a chapel for the Blank family, in Băneasa (1927-1929). In 1913 he won a projects competition for the construction of the Madona Dudu Cathedral in Craiova. Marcu also designed the first Romanian crematory, in 1925.

Duiliu Marcu was an overwhelming personality. 100 completed projects and approximately 150 designs made up his vast career.

Marcu was also involved in education, as a professor for almost three decades, between 1929 and 1957, at the Architecture Academy of Bucharest. After 1945, he is mostly active only as a professor. Between 1952 and 1966, Marcu is the president of Romanian Architects’ Union. At the same time, he is, from 1955 onwards, a full member of the Romanian Academy. Duiliu Marcu passed away on the 9th of March 1966. He is buried at the Bellu Cemetery, on the Academicians’ Walkway, along many other illustrious Romanians.

I firmly believe that Duiliu Marcu can be accurately described as "THE DETAIL ARCHITECT OF THE ROMANIAN MODERNISM", especially for his care for details. Therefore, every single bit of Marcu's construction is studied. The combinations of raw materials, the illumination of the chambers, the furniture and the other decorative elements enrich the interiors and give birth to a new style, which I dare to name "the Duiliu Marcu style".

Actually, Duiliu Marcu’s works reflect the personality of the most complex architect of the Romanian Architecture between the two World Wars. After 1950, his performances were equaled by no one. Despite these beliefs, the architect humbly and rhetorically asks himself, while emphasizing the virtues of an original and modern architecture, which guided him throughout his career:

> *"Have I really succeeded?*
>
> *I can only say (…) that I am far from being contempt with what I have achieved."*[2]

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ARCHITECTURE AS ARCHIVE – THE ETHICS OF ADDING NEW LAYERS

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Abstract

Architecture can be regarded upon as an archive of values, emotions, tradition and change that communities undergo at certain times. It is a reflection of successive steps in evolution, human quests and historic stages, archaeological layers of a communal lifestyle. If we are to surpass the ever-recurrent debate on the issue of keeping the historic "frozen-in-time" versus turning a profit out of it, one can profess that it is a question of ethics to determine how to add new layers onto something that is already complete and coherent without losing or deteriorating its meaning. Adding-on is not solely a matter of architectural language, although this is crucial nonetheless, but also a matter of the ethics of the added value, both in terms of concept and function. Adding new to the old is a difficult endeavor that implies risky choices on the part of the architect, choices that reflect the humbleness, the modesty, in other words tamed ego.

Without setting the goal of coming up with a set of "know-how" rules, this presentation aims to start a debate on the topic of how to set the contemporary architecture next to the historic one. By discussing some examples of up-to-date projects, it intends to identify and categorize different means by which the new relates to the old (horizontal, vertical, inward or outward expansion). The last decades have shown that the ways to add and overlap different gestures in architecture do not comply to a set of rules of composition any longer. Rules that in olden times seemed set in stone, as the need to articulate different volumes now seem obsolete, distorted, irrelevant. The limit between sincerity in architecture and historic dissimulation becomes blurry and confused. In this time of post-Post-Modern unsteady shifts and turns that have not come up with an official name yet, "collage" seems to be the new rule of composition. This paper sets out to make a critical inquiry into these new and diverse attitudes, by discussing examples that are different, even opposing in nature, in order to demonstrate, now more than ever, the absence of any set of rules. All these courses of action and questions raised are part of the debate within the studios at University and useful as teaching tools, since they are reflected into the projects that involve the issue of building in sensitive historical urban contexts.

Contemporary architecture has often been accused of being an architecture "without people", of not catering to the needs of the beneficiary but merely following abstract aesthetic criteria. This becomes more than obvious when we set the contemporary in opposition with the old architecture that has already been embraced by the community. This reaction of rejecting the new architecture of glass and concrete can be regarded as reticence to change as well as alienation in the face of uniformity, constant refrain that stemmed from the beginnings of the Modern Movement. The Post-Modern era seems not to have come up with proper answers on this regard, constantly distilling architecture to the point that it was no longer conceptually recognizable to its users. In other words, architecture did not tell stories that the users could relate to. This presentation aims to show how present valuable projects relate to historical context, as illustrated in three different study-cases (D. Chipperfield, Herzog & De Meuron, P. Zumthor).

The question remaining is what can be seen as a limit of innovation and personal expression that can be considered ethical when juxtaposing new and old architecture. Obviously this limit differs from person to person since any architectural gesture comes with a degree of subjectiveness that varies with the recipient. Taking this into account, questioning the limits remains a didactic endeavor with multiple answers.

Keywords: Archive, memory, add-on, extension, architectural language, old vs. new, historical, contemporary.

1 INTRODUCTION

Architecture in general and historical sites in particular are silent witnesses of human evolution and change. They are proof of the constant process of addition, of the superimposed layers that are formed in time like archaeological strata of communal lifestyle. Any architect that is facing the difficult challenge of intervening into such a site has a great responsibility, one can even say an ethical one, to add-on to something that has passed the test of time and already proven its value, as it is the case of historical artefacts. To what extend the architect needs to be present and personal in its mission and to what extent he or she needs to keep their egos in check and show reverence towards the site is the topic aimed to be discussed within this article, acknowledging the fact that such a topic could never be exhausted.

2 CONVERTED ARCHITECTURE - GENERAL CATHEGORIES

Typologically, extending historical architecture can fall into three main categories (and their multiple subcategories). This is a simplified scheme that makes the process of understanding easier. Within it, there are various and complex ways to intervene, as shown by the examples that are to be discussed in the following chapter and by many others that have not been mentioned but are equally valuable.

2.1 Horizontal expansion (Fig. 1)

The more common, academically correct approach would be to make the transition visible, by means of an intermediary volume that sometimes serves as entrance hall. Still, newer projects show old and new façades seamlessly connected to each other, erasing all rules regarding "the proper way" to do it.

A different approach shows a separate new volume that is connected to the old building through the underground level. This usually translates into an homage paid to the historical building and it is an indicator of the architect's intention to leave the building in its wholeness, at the same time fulfilling the functional need to expand its programme.

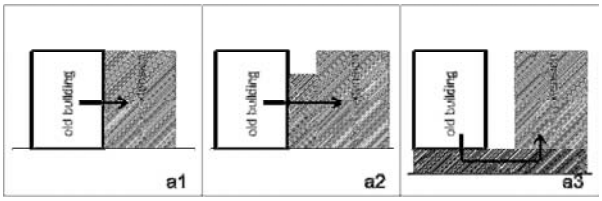

Fig.1- Horizontal expansion (a1- seamlessly articulated volumes; a2 – distinct volumes connected by an intermediary one; a3 – distinct, subterraneanly-linked volumes

2.2 Vertical expansion (Fig. 2)

This category refers to a hollowed – out old building that becomes a recipient for a new programme, in the form of a new building that fills the core but uses the original appearance. As in the previous case, there are several means in which the transition is made. The historical "shell" can be detached from the addition or come into direct contact with the new façade, as in the case of *Caixa Forum* (Herzog & De Meuron) in Madrid. Shades and variations are also possible within this category.

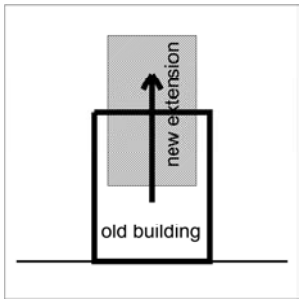

Fig.2 – Vertical expansion scheme

2.3 Inward expansion (Fig. 3)

These types of addition usually involve discrete volumes stacked next to and top of each other to form a loose complex. They form an independent system that does not usually come into direct contact with the old but act as a superimposed new layer. Any new piece of puzzle is clearly marked as such, avoiding any confusion. Mimetic interventions could be considered unethical, since they blur the border between historical and contemporary.

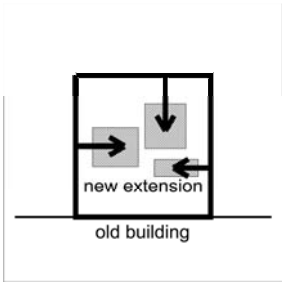

Fig. 1 – Inward expansion scheme

2.4 Outward expansion (Fig. 4)

This category deals with a ruin or an archaeological site that needs to be incorporated into a larger, protective shell. In this case, the project will have to address the complicated matter of superimposing a new structure on top of the old one, a structure that needs not to damage the site it is intended to protect.

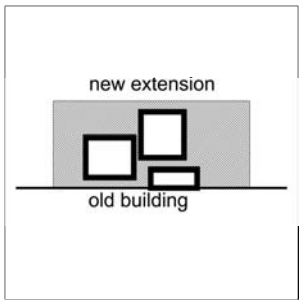

Fig.5 – Outward expansion scheme

Any project can be an exponent of the fore-named categories or a combination of two or several. These schemes are an abstraction of merging the new to the old and say nothing about language in architecture and what happens at the point where the two time frames meet.

3 ATTITUDE TOWARDS HISTORY: THREE CASE-STUDIES

The last decades have shown that the ways to add and overlap different layers in architecture do not comply to a set of rules of composition any longer. Rules that in olden times seemed set in stone, as the need to articulate different volumes now seem obsolete, distorted, irrelevant. The limit between sincerity and dissimulation has become blurry and confused. In this time of post-Post-Modern unsteady shifts and turns that have not come up with an official name yet, *collage* seems to be the new rule of composition.

Out of numerous architecture offices, I have chosen to discuss three very different ones in regard to their attitude towards historical sites. It is not a debate of pros and cons, but rather an attempt to show various, even contradictory sides of this aspect, as they are derived from the architects' own account of the projects and from the critics' opinions on their work as a whole.

3.1 David Chipperfield – "contextual frames" [1]

David Chipperfield is included by Aaron Betsky [2] among the exponents of what he calls "dense minimalism", a larger movement made of architects that believe that architecture can make us aware of where we are already. He describes Chipperfield's buildings as frameworks in which we are invited to carry on with our daily routine, coherent enough to offer a background for our day-to-day life, but not strong enough to distract our attention from what we are doing. Architecture is not the centre of focus, not a means in itself.

A laconic just-rightness runs through all his work, denying any specific relation or reference and aiming to make a place and nothing more, in the sense very close to what Heidegger meant by the concept of place. Betsky traces this attitude something between the German and the French school of Merleau-Ponty and Bachelard, even if he states over again that the British dense minimalists eschew any references by not wanting to impose an abstract philosophy on architecture.

Two main ideas are the under-current of Chipperfield's work. The first one is that architecture needs to provide *frames* in which we should be able to live our lives. The second deals with the idea of *constraints* of all kinds, history being only one of them. The site generates its own response by enforcing these constraints upon the architect.

It is in this general key-note that we must understand his attitude towards history, an attitude that Chipperfield says he was forced to take when faced with the project *Neues Museum (1997-)* in Berlin and that is also evident in other projects dealing with sensitive sites such as the three additions to and next-to the Museum Island in Berlin (*James Simon Galerie(2007-2017)*, *Galeria Hinter dem Gießhaus 1(2007), Forum (2010-)*), *The Access to the Paseo del Ovalo (2003)*, Teruel, Spain or *The Museum of Modern Literature (2006)* in Marbach am Neckar, Germany.

Zaera tells us that Chipperfield sees History as a *contextual frame*. In other words, the historical context is used firstly as a constraint, in the sense that you are building acknowledging there is a whole tradition behind you and as a background, where the essence of the historical architecture must be captured but not mimicked. Chipperfield calls this process *consolidating*: "I like to reinforce things that are already in place" [3].

Speaking about the process of designing *The Neuse Museum* (Fig. 5), the architect says that he was extremely interested in the historic artefact but did not see the point in celebrating the ruin for its own sake. For Chipperfield, it as much about the change, destruction and stabilisation as it is about the present. The historical facts should not be obliterated off the old building, since it would be untrue. Still, the new addition is not to take it as a reference but as a given.

Fig. 2 - Neues Museum, Berlin, Germany, D. Chipperfield, 2009

While Neues Museum was conducted as an on-site approach, generating an immediate response to the challenges that occurred as the research progressed, the projects that followed had a more clearly-defined materiality.

The three projects in Berlin, *James Simon Galery* (Fig. 6) (the new entrance to the Museum Island), *Galeria Hinter dem Gießhaus 1* (Fig. 7) and *Forum Museumsinsel* (Fig. 8) display different attitudes and language but also bear similarities.

Fig. 3,7,8 – (6) James Simon Galerie, Museum Island, Berlin, Germany, D. Chipperfield, 2007- ; (7) Galeria Hinter dem Gieβhaus 1, Berlin, D. Chipperfield, 2007; (8) Forum Museumsinsel, Berlin, D. Chipperfield, 2010

Both *James Simon* and *Forum* relay on typology as source of the language. In the first case, it is Stüler's Kollonadenhof that embraces and encloses the Neues Museum and the Alte Nationalgalerie that inspires the strong vertical rhythm of slender columns. The architectural language of the new building reinterprets in a modern way the language used by the architects involved with the old buildings on the Museum Island, "expressed as a built topography" [4]. The second example draws its motif from the floor-to-ceiling arched windows of the upper floor of the 1880 hospital building that it continues.

Galeria Hinter dem Gieβhaus 1 (Fig. 8) is a more abstract response to the site, as it is defined by its boundary condition, standing in-between the Museum Island and the former Berliner Scloβ. The result is a collection of solids and voids that avoid a too direct relation to the adjacent façades, providing an abstract, clear-cut, solid yet gentle "normality".

The Museum of Modern Literature (Fig. 9) offers at the same time a monumental and subdued response to its surroundings: The German Literature Archive and The National Schiller Museum. The façade is at the same time a "small Acropolis" of classical order, monumental in this sense, and a refined texture that blends into the scenery, much in the sense of its successor, the *James Simon* project.

Fig. 9 – The Museum of Modern Literature, Marbach, Germany, D. Chipperfield, 2006

Altogether, in terms of attitude towards history, the architecture of Chipperfield could be summarized as making a place where all times are coexisting harmoniously, with no sense of hierarchy. The new, the contemporary, far from not having a voice of its own, is unobtrusive yet unapologetical towards the old. There is no reverence, but acceptance of history as accumulation of experience. Aaron Betsky summarizes his attitude as "a version of the vernacular of construction, function or rural context" [5].

3.2 Herzog & De Meuron - landscapes

A different approach, with a totally different result is to be found in the work of Herzog & De Meuron. Like David Chipperfield, they openly state that they were more drawn to the Modernist ideas and that they never found themselves to be part of the Post-Modernists. In his interview of the two [6], Jean Francois Chevrier comments that for them the definition of modern architecture refers to an attitude and no to form, since form can be adapted to suit the circumstances In other words, and similar to Chipperfield on this account, Modernism is understood as the essence, the principle and not language translated into shapes. The interviewer calls the work of Herzog "new brutalism", a materialization of blunt, weighty forms of tectonic heaviness, but challenged by a certain softness, airiness given by the use of materials in particular ways to filter light.

Three main terms are the key to understanding their attitude towards architecture: *programme*, *monument* and *landscape*. The more relevant to our quest to identify their standpoint towards historical sites and architecture is their understanding of the *monument*. Chevrier defines the concept by its "spectacular quality, an impressive dimension, through which an edifice takes the eye by force and, in doing so, imposes an idea, if not the reality, of the programme" [7]. He goes on to further comment that the idea of monument has been replaced by that of iconic effect, also referred to as "the Bilbao effect" that both Chipperfield and Zumthor mention at some point. The works of Herzog and de Meuron achieve this iconic effect, not through signature buildings cut off from their surroundings, but through works that are being embedded into the landscape they become part of and generate at the same time. The two avoid swearing allegiance to any historical norm, preferring an empirical response to a specific situation, much like the layering principle in geology. This stems from their fundamental interest in topography and the semiotic understanding of the relationships, interaction and place. The architects state that the term "landscape" is preferable to "context", because context implies an object that is central and tends to be self-sufficient, whereas landscape is both natural or man-made and permits the building to blend in with nature and become a continuous form. So, architecture, devoid of direct references to anything, including history, stops being an object in itself and becomes scenery. Not a frame, as in the previous case, but a landscape meant to entice and provoque, challenge innovation, an "all-embracing architectural strategy".

Many of the projects that are related to dealing with historical artefacts, *Caixa Forum (2008)* (Fig. 10) in Madrid, *Elbe Philharmonic Hall (2003-)* in Hamburg, *Tate Modern (2005-)* in London) become landmarks that now play to the full their role as urban stimulants. The old buildings are seen as metaphors rather than constraints and incorporated into landmark-projects where everything becomes a whole and hierarchy is obliterated. Do the new buildings overshadow the old ones? Maybe, in the "traditional" sense. But they also change their meaning into something else, a merger of metaphors. It is true that none of the fore-mentioned artefacts are monuments in the true sense, since they are industrial buildings with solely environmental value. In the case of *Elbe* and *Tate* it is scale that sets them apart.

Fig. 10 – Caixa Forum, Madrid, Spain, Herzog & de Meuron, 2008

Speaking of *Elbe Philharmonis Hall* (Fig. 11), Chevrier clearly states their attitude towards history: "The beautiful is relative, fluctuating like the urban landscape. There is no transcendent truth, no stable tradition. Multifunctional complexity has no foundation other than the (multisensorial) capacity of the human body immersed in the world. That is the basis on which the shaping of forms operates, up to and including the production of metaphors" [8].

Fig. 11 - *Elbe Philharmonics Hall,* Hamburg, Germany, Herzog & de Meuron, 2003

A more subdued scale and attitude is visible in other projects that deal with historical contexts. *The Extension of the D'Unterlinden Museum (2009-)* (Fig. 12) in Colmar, France, as well as the extension of *Aargauer Kunsthaus (2003)* (Fig. 13) display a less monumental, more less-is-more approach. In *Kunsthaus Aarau*, the joint between

the old and the new building is not made visible by the architects, so that different eras and the mindsets they express have become inseparable.

Fig. 12- The Extension of the D'Unterlinden Museum, Colmar, France, Herzog & de Meuron, 2009

Fig. 13 **-** Aargauer Kunsthaus, Aarau, Switzerland, Herzog & de Meuron, 2003

Gerhard Mack [9] speaks of Foucault *heterotopias* as reflected in the architects' work, in the sense of the coexistence of several spaces at once. Herzog & De Meuron try to add to the programme a complexity not necessarily in the brief, that gives the building multiple meanings. Mack also identifies traces of Gaston Bachelard's psycho-phenomenology in the way the buildings incorporate movement as a physical means of relating to its topography. Herzog & de Meuron themselves recognize the essay "The Nature of Language" by Heidegger as a formula for understanding the Tate project [10], as the essay explores the relationship between domesticity and landscape and accurately reflect their concepts of emotional and geographical closeness.

To summarize, Herzog & de Meuron do not mean to be contextual, in the sense that they revere the old and become submissive. Quite the contrary, they tend to make strong statements. To them, history becomes topography, just as much as natural traits of a site (as, for instance, the volcano that dominates the island in the case of *Tenerife Espacio de las Artes (2008)*). They tend to avoid any historical norm and set their goal to create their own language that translates each site into its own landmark. To this regard, hierarchy becomes a non-issue.

3.3 Peter Zumthor - atmospheres

Zumthor is an architect whose work is based on feeling. As opposed to Herzog & De Meuron, whose approach is more intellectual, Zumthor's response to the site is pure emotion even if they all derive their projects from taking in the traits of the site and coming up with an empirical response. This is where *atmospheres* [11] come into play, viewed as an aesthetic category that speaks of the "first impression" of the building. Zumthor believes that quality architecture should be able to instantly move the recipient, and this is what the atmosphere captures: our spontaneous immediate response of appreciation or rejection of a building, its atmosphere perceived through our emotional sensibility.

Similar to Chipperfield, Zumthor also talks of architectural *frames*, at the opening of his Serpentine Gallery Pavilion, in 2011. His connection to history bears a similarity to Chipperfield's approach, since in Zumthor's terms, a building completes the landscape and is a completed landscape in itself. This would sound more like Herzog, but Zumthor's buildings "simply are there" and we do not pay any special attention to them. Still, it is virtually impossible to imagine the place without them. These are buildings that, in time, become part of the history of their place, set in a site filled, as Chipperfield would put it, with *constraints*.

The following statement speaks of Zumthor's connection to historical contexts: "Every new work of architecture intervenes in a specific historical situation. It is essential to the quality of the intervention that the new building should embrace qualities that can enter into a meaningful dialogue with the existing situation. For if the intervention is to find its place, it must make us see what already exists in a new light"...."Since our feelings and understanding are routed in the past, our sensuous connections with a building must respect the process of remembering" [12]. At his core, he is a contextualist. One that does not care about language and form, but about the inner spirit of place, understood not as Frampton's *genius loci* but more as a feeling generated by the vibe of the site. As a result, a radial system of approach emerges, one that lets us perceive the result from different angles simultaneously: historically, aesthetically, functionally, personally, passionately. There are no intermediary volumes, no distracting aesthetical devices.

Kolumba Museum (2010) (Fig. 14) is a project that emerges from inside out, growing literally on top of the site. The façade integrates the remnants of the church without visible seems and that goes to show that articulating volumes are not always a means to connect the old and the new.

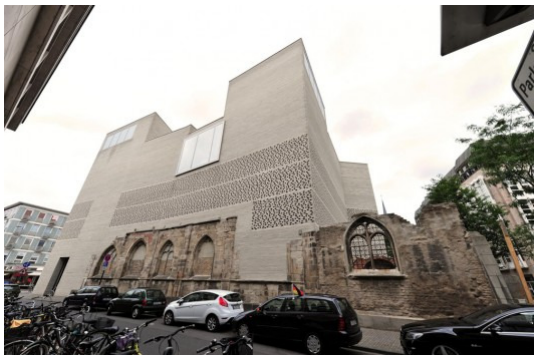

Fig. 14 - Kolumba Museum, Cologne, Germany, Peter Zumthor, 2010

Zumthor pays heed to the repository of knowledge and experience contained in the history of architecture and believes that integrating it into his work gives him a better chance at a genuine contribution. Still, his work is firmly grounded into the present. He states that at the moment of its creation, architecture is bound to the present in a very special way, reflecting the spirit of the inventor and providing an answer to the question of our time. Still, at the moment quality architecture is achieved, meaning it absorbs the traces of human life, aesthetics, practical values, stylistic and historical significance are of secondary importance. This is where we can almost hear Chipperfield. In this sense, the two of them bear similarities in approaching the process of design. Still, the buildings give off a different feel to them: mysterious, provocative, they show no interest in aesthetics, but are obedient to context and materiality. He "makes places" in the same sense as Chipperfield, but his is an architecture of experience, whereas the former is more inclined to logic and order. In a way, Zumthor is the mediator between Chipperfield's and Herzog's attitude towards architecture and history.

4 LANGUAGE AND STYLE

The architectural language that is suited to be used in historical sites is hard to define and categorize. This is mostly because in architecture everything can be done in multiple ways without falling into Right or Wrong categories. Another reason, less generic, would be the one that Herzog states in his interview, saying that period styles are now defunct. The Modernists opposed the eclecticism of the nineteenth century, Post-Modernism expressed itself in neo-eclecticism after the failure of the International Style. So one can use a specific language, let's say, for instance, modern, without the ideology and style behind it. Modern architecture has replaced the idea of great period styles, and on this view, the modern style appeared in the 1920s. It was then that it was able to liberate itself and articulate its own language. Zumthor also comments on style saying it is not related to the language of architecture. Every building is built for a specific use in a special place and for a specific society. Buildings are a mere response to that, as simply but as critically as they can.

The Modern language is still admittedly used by all the fore-mentioned architects, but devoid of its ideological significance and free of references. In this sense, it is not the language of the Modernists anymore, but a means to communicate ideas that stem from empirical and not ideological responses. Architecture is breaking all rules and only obeys its inner logic or solely pure emotion. It seems that do-s and don't-s do not apply any more, although the approach of all of the architects above is thoroughly rigorous. It is just that aesthetics has become

secondary to the statement, and that goes for hierarchy as well. Still, among all of these negations, valuable projects have an inner, meticulous, order and a sense of perfect balance and aesthetics to them. So, even though beauty is not the ultimate goal, it is achieved none-the-less through clear thinking, or even distilled feeling.

Herzog has a very interesting point to make about beauty: "The problem for architecture today is not a lack of freedom but freedom! Traditions and architectural typologies have become obsolete; there are no rules and no directives anymore on how to build a church or a museum or a city. But it's thanks to such rules that cities and architectures of the past from all of the world's traditional civilisations look beautiful to us. Paradoxically, beauty did not become an architectural problem until the freedom of industrial and modern architects and urbanists overshadowed the lack of freedom imposed by tradition" [13].

So, by all accounts, language has become irrelevant, as just means of expression that has nothing to do with style. The variable is the stand that different architects take in their approach of the project. Alvaro Siza, Alberto Campo Baez, Norman Foster, Rafael Moneo, they all relate to context in a very different manner. Frank Gehry or Calatrava are unapologetically disruptive of the context. Parasitic architecture is one that denies affiliation to the context, taking random shapes according to its inner logic. This is one end of the stick, the other one being the mimeticism, an attitude that could be considered untrue to itself, since it denies one of its basic traits, that being its contemporaneity.

5 CONCLUSIONS

There are a few sensitive issues to be addressed when dealing with historical sites: scale, hierarchy, clear distinction between the old and the new, structural independence of new additions.

Since every architect comes up with his own account of the site, whether he chooses to embrace it, ignore it or contradict it, there can really be no "right" or "wrong" when it comes to architecture, given the architect comes up with a set of self-imposed rules and they are discernible in the final result. Still, from the case studies that have been shown above, one general rule is to be drawn: quality architecture derives from a critical approach of the site. When dealing with history, the attitudes towards it vary to a great extent, but it is impossible to ignore the weight that comes with working amidst tradition. Every new addition to a historical landscape is a new layer upon the "geology" of architecture and has its own value in time. Whether the new project comes from assumed modesty or tamed ego, each stratum has its own worth, as a reflection of its own time. Hierarchy between the old and the new, to this account, is a sensitive fine balance.

The question remaining is what can be seen as a limit of innovation and personal expression that can be considered ethical when juxtaposing new and old architecture. Obviously this limit differs from person to person since any architectural gesture comes with a degree of subjectivity that varies with the recipient. Taking this into account, questioning the limits remains a didactic endeavor with multiple answers.

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THE SOCIAL HOUSING DESIGN BETWEEN DREAM AND REALITY

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Abstract

In an age where everything seems possible, in which the real word is confused with virtual one in a mixture without a break, where science and technology come together clashing fiercely with ethics making driest and disillusioned everything surrounds us, is there still place for imagination? In contemporary architectural design, can we still talk about utopia and experimentation?

In a period of severe economic and social crisis, it seems that the architecture, fervent field in which daring studies followed one after the another, restarts to suggest the dream of living according to new lifestyles, offering solutions characterized by a visionary breathe, mainly intended to improve the quality of life. The examples of '60s and '70s were not the last visionary impulses. Nowadays, we can still talk about utopia and experimentation in architecture, maybe.

Utopia in architecture is a clever balancing act between rational and irrational sphere, between feasible and unfeasible, between different and dichotomous elements. In the balance between imagination and foreshadowing of the future, the Avant-garde architecture was representative of different design models in which contemporary design rooted and enriched with new values and meanings even because of changes of the social reality.

Images and icons of a radical alternative of usual way of life, the *Plan Obus* of Le Corbusier, the *Highrice of Homes* of Wine, the *Plug-in City*, the *Spatial City* designed respectively by Archigram and Friedman, are considered precursory examples of the "pigeonholed habitat" and they can be still valid models to build the contemporary city.

It seems that the visionary attitude for housing design developmental course can be necessary and indispensable; because it has opened some lines of research still valid in contemporary design, although they are interpreted in a different new way. The provocative *Domesticated Eco-monster* proposal (2008) presented by Albori Studio for the Venice Biennale, the *MDU Harbour* project (2002) developed by the group Lot-ek are some examples of how these visionary ideas are taken up and reinterpreted to create new settlement opportunities through new forms of urban densification.

The innovative unbuilt examples are complemented by some built or under construction ones in which utopia becomes pragmatic. The design find some points of contact with reality and being able to cross its threshold, it becomes concrete building and substance; capable of hybridizing more forms of living, it combines diversity and density satisfying more needs; it collects approval of a varied multitude of people, opposing homologating intentionality of the Modern ideal.

This trend is adopted and tried by the Danish architects BIG (Bjarke Ingels Group) for example in projects for *Lego Towers* (still in the planning stage), and for *The Mountain*, or by MVRDV recent residential projects such as the *Folie Richter* in Montpellier.

Their ideas become promoters of a kind of utopia that is not dreamt anymore, it is built and the people can live in it. The contemporary architecture proposes new residential buildings, characterized by powerful iconic charge. A new concept of density emerges. It wants to fight urban sprawl making better use of the land and simultaneously it looks for housing identity and for a connection with the city.

Keywords: Utopia, Social Housing, Innovation, Research projects.

Can utopia exist in social housing? Does an optimistic and innovative vision of intensive residential buildings be real? Does the dream of a revolutionary conception in social housing run out in the last visionary impulses of the '60s and '70s or can we still talk about utopia in collective housing? Can concept of utopia be active, instead to be a vain image without foundation?

Extreme solutions for extreme problems, utopias have always existed as a reaction to a social disadvantage and they, ancient or modern, declared or not, have always represented the irrepressible man's tension to a better and different reality and the tools for expanding the boundaries of the reality.

According to Friedman: "Utopia comes from collective dissatisfaction and supposes the existence of an applicable technique or behavior in order to eliminate the cause, revaluing it, to open up a better situation, becoming feasible only when it makes a collective consensus" [1].

As well as in different fields, even in architecture the term utopia was expression of escape and passing of a particular social and/or political unrest. Considering the utopia a visionary impetus, finalized to design innovation, it represents the desperate diligence of designers to answer the problem of social emergency of the moment, thinking bold solutions and concrete realizations aimed at improving living quality. Utopia is a tool that has made the architects most daring in the research design, combining realism and foreshadowing of the future.

Because in the folds of utopia we can often catch solutions for improvement and innovation according to new needs and ways, we can use it to achieve higher goals along some research lines that are still valid in contemporary design. Visionary attitude, in balance between the abstractness of the dream and the reality of the need, is still necessary in the evolution of the housing design. From the Industrial Revolution architects, although discontinuously, have always thought about the housing problem. Their projects, characterized by an extreme and innovative dwelling view, try to give an original and effective response to the need of the people to own a space in which to live and these proposals are a must for carrying out research in this field.

The vision of community life, proposed by Fourier in Phalanstère (1841), and by Godin in Familistère (1859), that instead found implementation in Guise, France, or the later theories of Le Corbusier reflect the will of innovation in the project of housing workers, proposing an integrated system of housing and services.

In the '60s and '70s with the introduction of new technologies, with generalized social and economic development (democracy welfare), with the multiplication of different needs, with increasing the competitive and individualistic character, there was a re-appropriation of spare time which becomes a tool that unites, beyond any ideology, middle and working classes [2]. These are the years of the "techno-utopia", which includes all the functions of a city. During this period architectural housing complexes, made by modular elements and capable of great or unlimited extension, leaves a higher degree of flexibility to the individual units [3]. These organisms are capable of containing an infinite number of individual needs of their consumer society that tries to merge subjectivity and objectivity, order and spontaneity, big and small scale. The imagination produces not only structures that contain many functions, but also a clear sign in the territory, projecting them in a fantastic and visionary dimension. Utopia, technology and biological analogy become, finally, the elements that shape the city and its housing through proposals and solutions that represent the reflection of a new social order caused by the economic miracle of a capitalism increasingly growing.

The alienating visions of Archizoom, Superstudio and Archigram or audacious spatial cities of Metabolists were designed to float in a "liquid" modernity overwhelmed by a radical social transformation that had favored the emergence of new lifestyles based on principles of flexibility and mobility.

The utopia of the second half of the twentieth century is a "radical utopia" [4] that exceeds the "rationalist utopia". The logic of "Fun and Flexibility" [5], that replaces the hard rules of the relationship between form and function, is proposed for example in the *Plug-in City* or in *Walking in the City* (1964) of Archigram, in which dimensional hypertrophy and research of housing unit coexist.

At 22 meters above the ground, the *Spatial City*, designed by the Friedman's lucid imagination, represents a break with the existing world and a new perspective of thought. This project, comparable to a wide urban pile dwelling responds to human needs and designs the future desires. Domestic spaces are designed to fluctuate within a slim 3D-grid supported by hollow pillars. In this structural truss, composed of basic modules of 25-35 square meters, the residents could insert and change the housing unit depending on their needs during the time.

The dream of a habitat dominated by technology becomes the means through which to satisfy the ordinary taste and to offer flexible solutions providing different degrees of customization and consequently favoring the transition from a society of needs to a society of wishes. Some projects, next to visionary proposals, overcome

the dimension of the ideas and become concrete realizations achieving good results from point of view of the image, of the living quality and of the construction technique.

Habitat'67 in Montreal designed by Safdie or the Ginza *Capsule Tower* in Tokyo designed by Kikutake are two concrete examples. In these projects the study of dwellings according to the needs of the user, the fragmentation of the building volume in individual units and the prefabrication merge to return a renewed way of living in the city.

If it is still time for utopia, what do we inherit from the experimentations that have alternated in the field of architectural housing design? Some examples of the architecture of the past offer theories and solutions that appear to be necessary for contemporary experimentation and whose heritage should not be lost to understand the later lines of development.

Today the concept of collective housing, that was often associated with the boldest social utopias, is undermined by a society in which prevails a growing sense of individualism and that it is no longer willing to accept a "living together" through outdated ways and models. When the ideals have fallen, the needs and desires of people are changed, the idea of "living together" has undergone mutations, because of a new vision of sharing that has been recovered and reinterpreted in the light of new needs and renewed lifestyles.

The visions that involve the housing design are several and they can assume various curvatures. Today, the political and reformers ideals of the past era do not animate the concept of house. Housing, using to shape “new man” in the Modern era, nowadays it is being formed around the man. Perhaps this is, today, one of the dreams of living: to be able to adapt to the demands and needs of the people over time, to be variable, and at the same time recognizable and identifiable.

Fig.1 Folie Richter 2014. Montpellier, France, MVRDV. Rendering.

Nowadays the theme of the housing identity is subject of a more specific research and it was already addressed by the historical Avant-garde through solutions that now we seem to have already acquired, but they marked the difference trying to improve the living conditions of intensive housing. Color and/or material diversification and volumetric decomposition, pursued in some intensive residential complexes projects, for example, aim to reduce the impact of scale and make the accommodation unique and recognizable for the users, so the sense of alienation and homogenization, that characterizes contemporary suburbs, is overcome.

The MVRDV group has been working on this issue and in a recent project, *Folie Richter* in Montpellier, promotes colors diversity as well as the volumetric decomposition of building in order to differentiate the typologies designed to meet the needs of a different users. From a distance it looks like a simple piling of colored volumes, through a more careful observation it reveals its design complexity where living spaces, relax areas and green terraces are combined together to give the inhabitant the feeling of being in a quarter developed vertically, in which individual apartments take on the appearance of houses with gardens, “Fig. 1”.

The will to counter the serial repetition in intensive residential buildings has more remote origins. The accommodation possibility of being recognizable by the user was already dreamt and imagined by Le Corbusier in the *Plan Obus* of Algiers (1930) through self-construction. This visionary proposal, pigeonholed habitat precursor and defined by Tafuri in the ‘70s "the highest theoretical hypothesis of the Modern urbanism, still incomparable from the ideological and formal point of view", stands out in the architectural landscape boldly, not only for the charm of the big sign on a territorial scale, but also for having passed this limit. Unique in the era in which it was conceived, never realized, it enable the architecture to be "a pedagogical act and a tool of collective integration" [6]. Eclectic styles houses come in succession in the linear and imposing housing block that is located under a motorway, highlighting the iconic power and strong visionary character of this work. In this idealistic suggestion, the inhabitant becomes the critic and creative protagonist of the design process in constant evolution and the only one able to change his home depending on needs and personal tastes.

In the Albori Studio’s proposal, presented at the Venice Biennale in 2008, the theme of the structural frame and the houses nested inside it, as producing an inorganic budding, is recovered, but with a different value that refers to the techniques of reuse and recycling. The architects group defines its project as an “under control eco-monster” through the residential reuse of the building that was never completed and abandoned for years: it was the skeleton of the railway station, previously designed by Rossi and Braghieri. The supporting structure, intended to be demolished, becomes the frame in which the new homes are introduced. Small volumes of varying sizes fit together, therefore, freely within the impressive reinforced concrete structure creating projections on the facade and empty spaces for social sharing. The idea is to group housing of various types and services such as a small nursery, a bar-restaurant, a hostel, a small theater, selling, renting and repair bicycles points. The principle behind this project reminds us what was anticipated by the SITE group in the '80s with *Highrise of home*. It is the theme of the "house made of houses", enhanced by the diversity, in which the structural frame is support for single-family homes that are positioned freely in the interstitial spaces. The constructive choices are directed towards the use of waste and recovery materials, with the extreme hypothesis to realize cladding façade panels using elements of Tetra Pak. The end result is a rich collage of residential elements where different colors and materials show, once again, the will of standing out in a group, to customize the space in which you live, “Fig. 2”.

Fig. 2 Domestication of an eco-monster 2008. Milano, Italy, Albori Studio. Physical model. (Courtesy of Albori Studio)

This revolutionary idea resound today in the futuristic MDU Harbors of 1999, designed by Lot-ek (group of Italian architects who lives and works in Manhattan): a structural frame metal container houses disused and transformed into living units. The vision by architect John Koh Seng Siew whose physical model has been exposed in the pavilion of Malaysia with the theme from the name Re/Mixed at the XII International Architecture Exhibition of Venice proposes the model of the "skeleton" to complete. Two skyscrapers, with circular floor are projected from a central structural core. Each floor is designed as a plot of land on which gardens with small houses are placed, reproducing the traditional model of the house with a pitched roof.

The attempt to combine plurality and unity, although in a different way, was researched in residential high-rise *Lego Towers*, a complex of towers, designed by BIG (Bjarke Ingels Group) in Copenhagen. This project, still in the planning stage, is characterized by visionary charm, recalling the Gropius's *Baukasten Im Grossen*, and adopts the logic of vertical development of residential volume and it is broken down into blocks, moved away or slipped between them, containing individual or grouped residential units.

The experimental nature of BIG combines the pragmatic as well as the utopian approach, concretized in the proposal of a new model of housing and in the vision of an innovative way of living more in line with contemporary needs. *The Mountain* building in Copenhagen merges reality and radicalism to propose a kind of utopia that combines the pragmatic model of the single-family residence with the example of intensive housing. The intent of designers is to meet the ambition of most of the people to live in a single-house unit giving them simultaneously the benefits of intensive residential complexes. The space of housing units is designed on a human scale and their façade is coated by natural wood with large windows that permit the continuity between interior spaces and the landscape. The designers decompose the residential complex in small units trying to resolve the issue of density related to the size of housing blocks and the dichotomy between singularity and plurality, identity and homogenization.

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THE RELEVANCE OF WORLD EXPOS PROPOSED TOPICS IN RELATION TO ARCHITECTURAL OR URBAN ACHIEVEMENTS

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Abstract

The study of the last two World Expos Shanghai 2010 and Yeosu 2012, done with the help of my PD research grant, as well as visiting other exhibitions already closed (Montreal, Lisbon, Hanover), has opened my perspective on a highly fecund topic that will develop within the next exhibitions in Milan 2015, Astana 2017 and Dubai 2020, which deserve consideration for research.

Historically speaking World Expos have created architectural objects that became landmarks for the cities that hosted the Expos. Atomium is an example like this for Bruxelles and Eiffel Tower in probably the most well known example for Paris. Crystal Palace by Joseph Paxton was the first location of a world fair and rest in our memories as an example of total transparency even if now it does not exist anymore. Those evens also have a component of science and was a place where new technologies were launched and seen by a large number of people. For instance, the World Expo from Paris in 1900 has had about 50 million visitors.

In 1876, in Philadelphia, the first World Expo in the United States remained famous for introducing the public to the telephone and the commercial typewriter. Almost one hundred years later in 1970 in Osaka the first mobile phones were exhibited at this Expo in Japan, but the major attraction was a piece of lunar rock in the American pavilion.

The thematic component appears in time along with scientific innovations but we could say that in 1915 in San Francisco the world Expo celebrated the completion of the Panama Canal, and served as an opportunity for the city to showcase its recovery from the 1906 earthquake - this could be the first intervention in a city for a practical reason.

The theme for Dubai 2020 World Expo is Connecting Minds, Creating the Future and it looks that one of the goal of the organizers is to stream live most of the events.

The shape of the Shanghai 2010 expo pavilions was interpreted by Silvio Carta in his article The image of the Shanghai 2010 Expo, and he discussed the contribution of single pavilions to Shanghai's global image [1]

Following this analysis and also the study of Contemporary ways of enveloping spaces focused on World expos that I succeeded to finish in 2012, I will try to show the link between the architectural form of the pavilions with the relevant topics.

Shanghai 2010 exhibition topic, Better Cities for a Better World, has brought this event closer to the urban issue and I consider that the administrators of Shanghai were able to take advantage of the new strategies exposed here as techniques for the future.

The study aims to involve three components, one analyzing the past, one real time analysis of ongoing phenomena and the last component will set recommendations for what these manifestations could follow in the future.

In 2012, in Yeosu, a small city from South Korean coast was held the World Expo, under the theme 'The Living Ocean and Coast'. This expo attracted over

eight million spectators exploring the need to preserve our marine ecosystem and the impact of climate change.

The Milano World Expo topic is “Feeding the Planet”, and the basic idea was not to rely on the monumentality of many Shanghai 2010 pavilions but on a minimal, green thematic, with minimum impact on all levels. It will be useful for the project that the first objective analyses the ways in which this idea succeeds in this case as well as past expositions.

From their first intentions to the actual pavilion it could be a long road - to further discuss in this article.

Keywords: World expos, Architecture, Pavilions

1 AN EVOLUTIVE PROCESS

Historically speaking World Expos have created architectural objects that became landmarks for the cities that hosted the Expos. Atomium is an example like this for Bruxelles and Eiffel Tower in probably the most well known example for Paris. Crystal Palace by Joseph Paxton was the first location of a world fair and rest in our memories as an example of total transparency even if now it does not exist anymore. Those evens also have a component of science and was a place where new technologies were launched and seen by a large number of people. For instance, the World Expo from Paris in 1900 has had about 50 million visitors.

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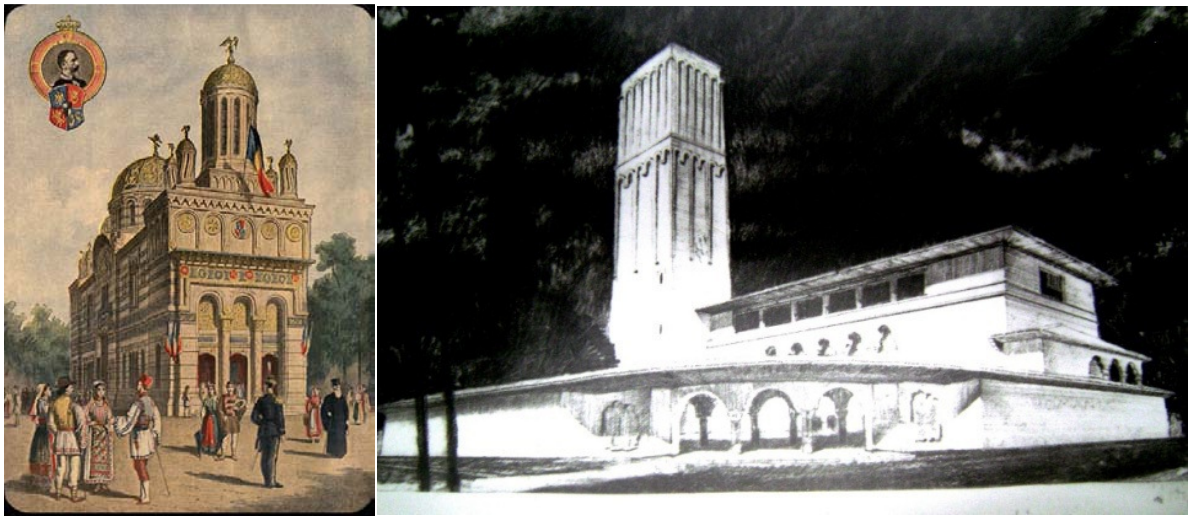
The thematic component appears in time along with scientific innovations but we could say that in 1915 in San Francisco the world Expo celebrated the completion of the Panama Canal, and served as an opportunity for the city to showcase its recovery from the 1906 earthquake - this could be the first intervention in a city for a practical reason.

On the other hand we could talk about two kind of world fairs: technological and inspirational.

The initial purpose of world fair was to show technological achievement in several domains, an meeting where everybody want to impress with something new and with individualities like tradition. All this quick transform everything into a show and music, dance and other performances join this event. Maria Tanase a Romanian folk singer was invited 50 years ago to perform into the restaurant from the Romanian pavilion at New York world fair in 1934.



Romanian Pavilion Expo Paris 1900, -Romanian Pavilion Expo 1939 New York designed by Octav Doicescu,

Even if the first editions in the nineteen century took place in a big space or a big buildings Crystal Palace designed by Joseph Paxton in London 1851 The Industry Palace in Paris in 1855 and 1867, Rotunda designed by J. Scott Russell in Vienna 1873, a big building two time bigger than Crystal Palace or St. Peter's Basilica in Rome Monumental Building were build in Philadelphia 1873, step by step some countries start to build their own pavilion into this expos. The lack of model joined with the desire of bring own architecture to show of made possible that Romanian pavilion designed by Ion Mincu for world expos in Paris 1900 to be a church and in 1934 in New York Octav Doicescu designed a pavilion like a large villa with a tower.

2 WORLD EXPOS RELATION WITH THE DECLARED TOPICS

Talking about the relevance of the topics proposed for expos during time we could found some typologies: celebration, ecological/resources preservation, transition and development

Philadelphia, Pennsylvania, USA in 1876 Celebrated the centennial of the founding of the United States,

Chicago, Illinois, USA in 1893 It celebrated the 400th anniversary of the arrival of Christopher Columbus in North America and in 1933 A Century of Progress

Energy Turns the World Knoxville decided to host a world's fair focused on the theme of energy, an important issue of the late 1970's that ended up not being as urgent by 1982.

The World of Rivers - Fresh Water as a Source of Life 1984 Louisiana

Dwellings and Surroundings - Science and Technology for Man at Home Tsukuba Science City, a planned town outside Tokyo, Expo '85

World in Motion -World in Touch Vancuver 1986

Leisure in the Age of Technology Celebrating Australia's Bicentennial, Expo '88

The Era of Discovery Seville 1992

Ships and the Sea Genova 1992

The Challenge of a New Road of Development Taejon 1993

The Oceans, A Heritage for the Future Lisbon 1998 [2]

One of the first expo that want to aproach the new treaths on ocean level with a problematic that focus on bouth bio diversity and also the importance of ecology. The pavilions are linked with the ocean world and one of them, still remaing is a big aquarium that present marine world in different climate. The Oriente station, an inter modal node designed by Santiago Calatrava is still operational and by its architecture it is linked with the marine world with the concrete structures form inside and also with the metal decorative structures from outside that cover the entire structure creating an underwater effect inside and also in the bus terminal area with wings that protect the access to the buses.

The Portugal Pavilion designed by Alvaro Siza is a concrete mesh that cover/protect an exterior space and suggest a ship vela. The hotel present on the border of the expo site is also inspired by this naval symbols. Other pavilions does not relate with the main thematic.

The initial site area was an abandoned harbor with social problems, and now become an mixed area for business, commercial, mixed with big expositional spaces and partial living area. The expo area now is partial re use for a living with a neighborhood really expensive with costal orientation, a part of expositional spaces, and converted spaces into offices.


Portugal Pavilion designed by Alvaro Siza, Oriente Railway Station designed by Santiago Calatrava (Expo98, Lisbon),

Expo Hannover 2000 have the thematic *Man, Nature, Technology*

Holland Pavilion, projected by MVRDV, was the one that dominated the complex regarding both the height of the construction as well as its non-conventional character. The exterior walks as well as its atypical levels illustrate a new structural concept, whereas the envelope is not important at all, as it rather seems implicit or just assumed, since the closure isn't necessary. The building is in fact just a structure that seems to have the façade freshly stripped.

The initial concept for the Romanian pavilion was the green reticulum and, regarding the envelope, it had accomplished a vibration given by shadowing the interior with perforations from the natural elements. The green façade was one of the first ones thus realized with plants and constitute a good practice that still is ongoing.

The Japanees pavilion is a result of a beautiful collaboration between Japanesse architect Shigheru Ban and the german Architect and engineer Frei Paul Otto, beeing a good example of low-tech. The paper structure made by tubes linked with ropes was spectacular covering 25 meters wide and 73.8 meters lenght. The translucid envelope made by plastic membrane create an wind tunnel effect. [3]


Holland Pavilion, projected by MVRDV, Romanian pavilion designed by architect Andrei Mihăilescu


The Japanese pavilion architect Shigheru Ban and engineer Frei Paul Otto,

World expo Zaragoza 2008 The theme of the exhibition was an urban project. The sustainable development is linked with the energy and water savings and quite similar with the theme from Expo Yeosu 2012. The bridge pavilion projected by Zaha Hadid Architects has managed to be at the same time a passing area and an exhibition area. Its envelope is inspired by shark skin and has some perforations that allow the interior to receive air from the outside but don't let in any water. Region Aragon's pavilion, projected by Olano and Monedo Architects is a structure composed by multiple cores that leave the façade exposed. Thus, it has an envelope made from a braiding between the structure and the body or the glazed parts. After the expo, this building will function as an administrative space for the regional government. The theme pavilions were the most spectacular, while the national ones were put together in a maxi pavilion that allowed areas for interior showcasing. Thus, the Thirst pavilion projected by Enric Ruiz Geli and Cloud 9 has an envelope with plastic transparent bubbles that allow interior glazing. The extreme water pavilion designed by Franc Aleu, Felix Escrig, Jose Sangcez focuses at the envelope level on some sharp triangles, like ice crystals, symbolizing water's destructive side.
The citizens' initiative pavilion: the Lighthouse has a mud envelope that covers a structure similar to a jug. "The walls create a structure with two domes that enclose a central arena and an exterior ring that encapsulate a multi-purpose space" [4] The digital water pavilion, designed by Carlorattiassociati-Walter Nicolino in collaboration with ARUP, Agence Ter and MIT shows a simple prism in front of which there is a porch, and the separation between the porch and the public space is done by a parametric water envelope, that flows sequentially following a pre-established rhythm, allowing messages that are sent by controlling the flow of each drop. Starting with this exhibition the problem of post-expo utility was for the first time seriously stated; thus, the whole infrastructure that was created has developed a part of the city that needed it, the while sit being used for secondary activities and some of the pavilions will have been transformed into offices, museums, expo or multi-purpose spaces or conference centers. Thus, the intention is to attract visitors in the area by keeping the Water Park and the cultural endowments by creating a public space with civic echoes and versatile character that should constitute an example or urban best practice. It has even been taken into consideration the decomposition of some pavilions up to their structure and re-enveloping them, in order to be useful to their new proposed purpose.


The extreme water pavilion designed by Franc Aleu, Felix Escrig, Jose Sangcez Oikos, Water and Energy designed by Roland Olbeter
Thirst pavilion designed by Enric Ruiz and Cloud 9

Shanghai 2010 exhibition topic, Better Cities for a Better World, has brought this event closer to the urban issue and I consider that the administrators of Shanghai were able to take advantage of the new strategies exposed here as techniques for the future.

Denmark's pavilion designed by BIG -Bjarke Ingels Group provide a good example of an interpretation of a city by a trail pavilion developed as a double spiral, that offers perspectives from various points over a central space, where the symbol of Copenhagen city, The Little Mermaid, is placed on sheets of water. Pedestrian and bicycle trails are separated in the armored parts of the pavilion by a rail/ bank, that besides the separating role, enhances the space through a volume game that causes the public to interact direct and visual. On the top side the pavilion exhibits different internal and external perspectives and exposes through a promenade and view at the same time.

Denmark's pavilion designed by BIG -Bjarke Ingels Group (Photo D.C.)

2010 Shanghai Expo UK pavilion, that was awarded and appreciated by most visitors brings the special enveloping to an unprecedented symbolic level. We can discuss the artificial landscape of the entire ensemble that looks distorted by the positioning of the central pavilion, although the shape doesn't express its weight. Even if we talk volumetric about a massive shape, it seems it is dematerializing in its own limits both through transparency on surface and by deepening the elements to central core. The visiting track starts with an exterior inclined plan that covertly bypasses the ensemble, thus managing to access the main pavilion through a less visible zone. Continuing the itinerary after visiting the main pavilion is descendent which increases while advancing on a planted slot, suggesting exotic vegetation.

UK pavilion designed by Thomas Heatherwick (Photo D.C.)

Seed Cathedral- because this is the name of the main piece of the ensemble, has an access masked by the artificial land created specifically that its form appear perfect from open perspective direction. The access is done through a walkway and once inside the shape the visitor is surrounded by twilight transmitted to interior by optical fiber rods. Each element contains a plant life incipient fragment in most diverse forms. The light effect found indoors suggests beginning of the world, effect envisioned by the architect by the exposed seeds here so abundantly that suggest the primordial creation and I dare say it sacred it.

The concept is more related with the theme form this year Expo Milano feed the planet than Better cities. I present the concept of this pavilion because I consider it more accurate than most of the pavilions that are going to be exhibit in 2015.

UK pavilion designed by Thomas Heatherwick (Photo D.C.)

There were regions that built pavilions, most of them grouped; the exposure was possible by separating the inner areas and illustrating a small concept as environmentally friendly as possible. Case Joint Pavilion was the formula to group several cities together.

Small pavilions, like the one of Portugal, similar to an urban elevator manages to be a tenuous presence in this stretch of exhibition spaces. Denmark's city Odense Pavilion where bikes were brought has reduced dimensions and lets the exhibits to be touched or even used.

Odense Pavilion, Portugal Pavilion, (Photo D.C.)

The Living Ocean and Coast - Diversity of Resources and Sustainable Activities was the theme for Expo Yeosu 2012 in South Korea

The ecologically friendly or 'green' theme, very real within the contemporary context, although much less fertile from an architectural and urban point of view, brought to the forefront concerns about keeping the underwater world clean. The use of the ocean as a sustainable resource and the well use of coastal areas or seaside lands was primordial. The theme was a continuation of "The Oceans, A Heritage for the Future" which was the theme of the exhibition held 14 years ago at Expo 98 in Lisbon.

The thematic pavilions, the aquarium and other individual buildings within the development proposed massive building envelopes with perforations but with free forms and with a variable or parametric geometry/design. The perforations were only kept as drawings on the façade as the interior didn't need light. Although the falsity of these forms helped create interesting images on the outside, it didn't help out the inside.

Theme Pavilion-Ocean and coast best practice area- designed by Soma is composed by two joined forms. One is made by concrete and have perforations and the other one has a metal body and a facade with a lamelar system that open like fish gills. This blades have a light system on them that contibute on night time to the Big-O show . The interior spaces uses the perforation in restaurant area, and the parasolar system is used in the entrance area."It is largely known for its fish-like characteristics created by a cutting-edge façade system that is made-up of glass fiber reinforced polymers (GFRP) capable of being morphed into a number of animated patterns." [2]

Theme Pavilion-Ocean and coast best practice area- designed by Soma(Photo D.C.)

Denmark Pavilion designed by COBE Architects with theme Horizon was the extremely fertile theme addressed within the pavilion's concept.
The pavilion had a circular route around a circular core where different panoramic projections were made, which constituted the horizons visible from the coastal areas of Denmark. Although the exterior was a simple plastic shell with small printed perforations which doubled the pressed metal sheet constituting the building's facade, things were much more spectacular inside. Public interaction was expected in most of the installations. Wind turbine models had behind them silhouettes of houses, and if you blew into the turbine, their windows would light up, making visible the energy and also the consumtion.

Water as a resource was presented in the bar area, where it was also the only product sold in some eco-frendly, reusable bottles under the slogan Re-think, Re-tap and to reduce CO2 as well as 1.5 million tons of annual plastic bottle waste.

Another place where human interaction was necessary was at the exit part of the pavilion. Here waves of LEGO elements but also fish or other forms were waiting to be completed with pieces that were left at hand for the visitors, on a wall called "creativity wall". This pavilion seem more related with Shanghai topics of better cities by presenting resources for the cities.

Denmark Pavilion designed by COBE Architects (Photo D.C.)

Tunisian Pavilion have a strong message "Do not touch on my Mediterranean sea" was written on a blue facade underneath a layer of barbed wire that express the main mesage of protection of environment. The coherence of this concept, of apparent interdiction and assuming ocean as a problem, went inside the pavilion too. An aquatic abyss image was evoqued through the traditional rugs of varying textures which allow entering light in a controlled manner in the entrance corridor that is infact the route for this pavilion.

Tunisian Pavilion (Photo D.C.)

3 CONCLUSIONS

Starting with a single pavilion, over time, World Expos began requiring the construction of numerous other secondary buildings such as convention centers or entertainment and multifunctional halls. The Expo park turned into a miniature city with its own subway stations, railway stations, public transport systems, car parks, etc. Nowadays, World Exhibitions turned into a mega-event needing a mega-project [6]

In recent decades, such events have come to be seen primarily as opportunities for economic development. As a result, their consequences are usually considered over a relatively short period of time and the results quantified recently after its completion (economic profit, completed constructions, new works of infrastructure, etc.). It's not often that they are subject to a broader and objective study (that is not controlled or conducted by the organizers) in which to also assess other urban issues such as long term urban or social implications. [7]

On the one hand, economic profitability was only an illusion for cities such as New Orleans, the host of the 1984 World Exhibition, or Vancouver, Expo 86, which was described as an uninspired means to allocate resources to failing strategies [8]

On the other hand, one of the main criticisms is that these events either consume funds at the expense of other projects, activities and much needed investments, or they merely support projects that would have been completed regardless of the event and therefore cannot be considered one of its direct benefits.

The conceptual master plan for the Milan World Exposition 2015 resulted from the teamwork of five architects: Jacques Herzog, Mark Rylander, Ricky Burdett, Stefano Boeri, and William McDonough. Working with the theme "feeding the planet, energy for life", the exposition will be a planetary botanical garden that will "feed Milan literally, spiritually and intellectually." [9] Unfotunately the great promiss made in September 2009 transform itself in another monumental World Fair with big buildings.

Countries pavilions in Milan have its own thematic linked with the main theme. Romania *propose living with nature*, and the pavilion have traditional house on top, Uk has a really nice proposal again designed by Wolfgang Buttress**,**with the thematic *Grown in Britain: Shared Globally* but he most funny theme is from Zambia *Come, Let Us Make Food* [10]

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THE CONSECRATED PLACE

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Abstract

This article is about the link between architecture and spirituality. There are places in our world which have spiritual attributes. One of these is the limit.

In this article I will try to demonstrate why the limits have spiritual attributes. It is both an architectural and a theological approach.

The limits consist, for example, in walls or other types of peripheries. Practically, the limits are charged as vertical plans.

Let us try to explain: although we see with our eyes the thickness of the wall and of the door frame, in our mind there is a virtual, simplified understanding of this place, man being created to understand the virtual geometry of the space, the simplifying of the tridimensional spatial reality being an inherent mental process which facilitates the orientation and the understanding of the surrounding nature; for example, one succeeds to represent itself a building easier by simplifying it and representing it as a superposition of horizontal plans, delimited of other vertical plans, in which the inner walls can be represented simplified also as plans, defined by the axes of the walls and by the verticals.

Meanwhile, when we are inside a building, the representation of the space will be another, meaning that if we are inside of a room, we are tipped to define it using what we see, as a "box" determined by the surfaces of the walls, the ceiling and the floor. But this perception changes when we stay in the threshold, when begins to function the "virtual" view, that makes us "see" this place rather as a bidimensional place, meaning a vertical plan, which separates two adiacent rooms. This perception also dues to the fact that, in most of the cases, we move, entering and exiting from one room to another. In conclusion, by reducing at the bidimensional, we define a limit.

But what happens when we a crossing a limit? This is very interesting. In this moment, our heart is striking.

What is the heart? It is the center of the human being, according to the christian practice. This heart, which does not coincide with the anatomical one, has a specific vitality, meanig that sometimes it can be alive, other times it can petrified.

So, the threshold is perceived both with the mind and the heart.

There are other places which are perceived in the same way, not only the thresholds. There are the gates, the crossroads, the elevator shaft, the boarding lanes. All of these are "passing places". Maybe these are places propitious for a pray, places where we gather ourselves, to realise what happens in our life. These places are favourite for a short, but intense prayer.

In this category of places is included the roman triumphal arch.

Concluding, the intersection between a limit and a direction of movement generates "the place". The places have only one direction, the vertical one. In this places, our heart prays

instinctually. This is why the places are sacred, and in the popular traditions, they are signaled with a cross.

Keywords: theory of perception, limit, heart, spirituality.

This small study proposes to enter in the issue of the perception of the interior space. There are many studies about the psychology of the colour, for example, but less about the perception of the space **when people are moving in and outside a delimited space.**

I would like to present here some of these aspects.

It is known that the primordial act which an architect or a founder does, when founding a city or a building, is to ...delimitate. To found Rome, Romulus and Remus (fig. 1) traced a perimeter (fig. 2). So delimitation is, by excellence, the founding gesture.

In our life, we cross many times these limits, being they urban or of the interior space of a building. The urban limits are less vizible, perceptible, but the limits of the interior space are easier to perceive.

Now I will try to describe the perception mechanism.

The best example of crossing a limit is the entry in a room.

But what happens with us in that moment? What kind of perception do we have?

Although with our eyes we see the width of the wall and of the door-frame, in our mind exists the simplified, virtual understanding of this place, man being created to understand the virtual geometry of the space, simplifying the three-dimensional spatial reality being an inherent mental process which facilitates the orientation and the understanding of the surrounding nature (fig. 3).

For example, man succeeds to represent a building simplifying it and representing it as a superposition of horizontal plans, delimited of other vertical plans, defined by the axes of the walls and by the verticals (fig. 4). Being inside of a building, the representation of the space will be another, meaning that if we are inside a room, we lean to define it by what we see with our eyes, as a ”box” formed by the surfaces of the walls, ceiling and floor, while, if we stay in the threshold, comes in function the ”virtual” view, meaning that we perceive that place rather as a bi-dimensional one, as a vertical plan, which separates the two neighbour rooms. This perception always dues to the fact that, in most of the cases, we move, entering and exiting a room. So, by reducing at the bi-dimensional, we difine a limit in our mind.

Entering a room, we cross a limit, which is automatically defined by our mind. But what happens in the second, in the moment we are in this bi-dimensional? A marvel happens: our heart gathers. But why? I will try to explain, although from this point I enter in the experimental field.

In my opinion, man perceive the limits with his *heart*. But what is the *heart*? According to the Christian tradition, the *heart* is the center of the human being. The center of the human being is neither the brain, nor the anatomical heart.(fig. 5,6) Is the *heart*, understood in the spiritual way: *"Create in me a clean heart, O God, renew a right spirit within me."*[1](fig.7)

This *heart* has his own vitality, meanig that sometimes it can be alive or, sometimes, ...petrified.

The principal activity of the heart is to pray. And it can pray in many ways. One example is in the life of Saint Siluan from Mount Athos:

Once, while this saint lived in Mount Athos, he stayed on the sea-shore, with his apprentice Sofronie and another monk. The three men were looking at the sea, where there was a boat with a few fishermen, struggling with the waves, in the middle of a strong storm. The monk tells to saint Siluan: *"Look at them, how they are struggling! My heart hurts me because of their mercy!"* Then Saint Siluan answers: *"If your heart hurts you, then they will escape!"* In conclusion, the *"hurt of the heart*" is a strong prayer, which God answers imediately.

If not all of us are familiar with the *"hurt of the heart"*, then, maybe, we all know what is the *"gathering of the heart"*. By analogy, this is a prayer, too. What characterizes it is the intensity and the spontaneity.

In my opinion, when people cross a limit, they have a *"gathering of the heart"*, meaning that, involuntary, they pray.

Would it be wrong if we would say that, in this way, man consecrates the place? I don,t know for sure, but it is a hipothesis.

Returning at the threesold and other limits, I will dare to say that they are perceived both with the mind and with the heart.

We could find then other places of the same kind, not only the thresholds and the gates. They are the crossroads (which, in the past, were signalised with crosses, in our popular tradition) or the cage of the lift, or the boarding lanes... All of them are passing places. They are propitious for a strong an involuntary prayer.

Now, I want to give two examples of this limits which became itself architecture: *the roman triumphal arch* and *the veil* of the orthodox churches. (fig.8, 9,10)

Both of them have sanctifying role, because the cultural tradition in which they appeared perceived the importance of the limits. The roman triumphal arch, practically, is a door-frame scaled an taken out of its context, the building. Unlike Bruno Zevi, who believes that the triumpahl arch has not interior space, I believe that the triumphal arch is, by excelence, the symbol of the interior space.

As a result, I consider that the limits are places where *hierophanies*[2] do happen.

This phenomenon could be studied at the limits of the cities, countries and empires.

In conclusion, this study is an invitation to reflect at the spiritual value of some places where we lane to think that ... anything can happen.

1. Holy Bible, Psalm no. 50
2. *Hierophany* – act through the Sacred manifests itself.

Fig. 1. Romulus and Remus

Fig. 2 – The inside of Rome

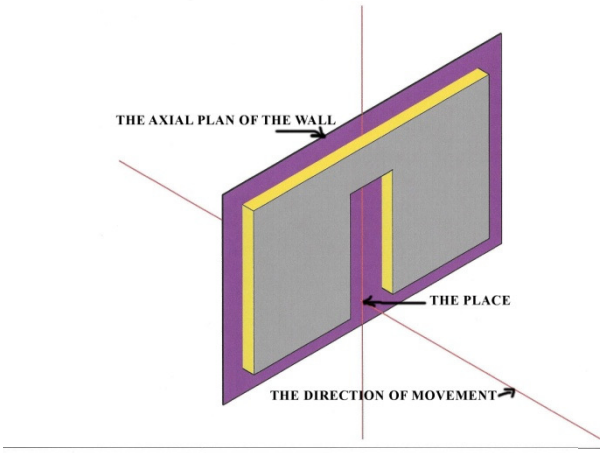

Fig. 3. – The perception of the threshold

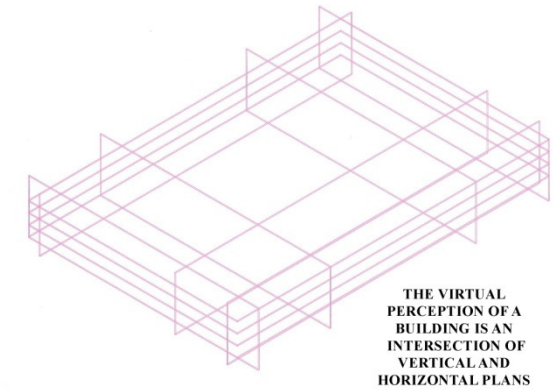

Fig. 4 – The perception of a building

Fig. 5. – The human brain

fig. 6 – The anatomic heart

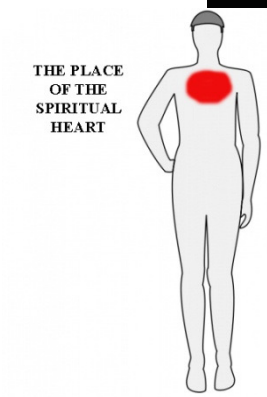

Fig. 7 – The spiritual heart

Fig. 8 – Roman triumphal arch

Fig. 9 – Iconostasis

Fig. 10 – Iconostasis inside St. Elias Church

A BRIEF INTRODUCTION TO COMMUNITY ARCHITECTURE CONCEPT

-FROM BELIEVING TO REALITY

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Abstract

Currently, the architectural discourses generally start from the contemporary society premises. It is about the society that we live in, about the communicational, computerized society and about the architecture that has to meet the society's requests the subject of an architecture for community, of a **COMMUNITY ARCHITECTURE** is approached more seldom, and even when it is approached, there is not yet a solid theoretical base or a well-founded concept. The attitude and also the terminology used are not random and derive from **the actual trends-computerization, virtualization, spectacularization, consumerism, secularization, urbanization, the globalization process, from obeying the ephemeral and delocalization effects.**

The community coagulation seems to be very difficult in the contemporary urban society. The lack of time, the infinite delaying of the direct contact, the reversal of the pyramid of values have led to the late formulation of an actual concept dedicated to the community architecture.

The pessimism of the contemporary philosophers and sometimes the mathematical solutions given by the sociologists or the excessive psychologization of the relations between individuals close the reluctant picture that is soaring over the community.

However, the community germs are present in **the criteria which are able to bring the communities together: place, values, interests, age, spirituality,** even if it is done in a new way.

The present article aims to introduce the **community architecture concept** with references to an interdisciplinary scientific literature, making a step forward towards the **community architecture theory**. Today, the community architecture concept is closely linked to **communication**, so in the documentation it was followed **the communication by culture relationship** under the contemporary aspects. The culture-communication conceptual couple is currently ~~a~~ subject to various approaches, from an arid theorizing to expressive semantic nuances, from almost vigilante utterances to balanced and open approaches. There are mentioned specialists who activate in this field, namely: Miége, Debord, Baudrillard, Georgiu, Ghiu, Mihali. At the same time it is emphasized also relevant bibliography in the community field: Tönnies, Paul-Lévy, Putnam, Weber, Cohen, Ashton, Hutton, Bartle, Mihăilescu, Hatos, Tompea. The actual tendencies of the society, the difference between the society and the community concepts are therefore clarified.

The article insists on the fact that the true values that can bring the communities together are not losing their validity, being only expressed differently. The actual tendencies of the society/communication, the fast circulation of information and the globalization must be seen as resources and not as obstacles. Architecture, in its concreteness, will never lose its value if it is designed for and together with the contemporary people. The article shows that **today, the architect must provide integrative teamwork and interdisciplinary spirit skills, the**

integrative approach being a sine qua non condition for the architecture of the actual communities. This translates into extensive multi-interdisciplinary documentation, because the community issue is approached by specialists from various fields: sociology, anthropology, psychology, philosophy, medicine, gerontology, theology, architecture and urbanism, communication and economy.

The article makes a short radiography of the contemporary society situation, pointing out important elements in terms of architecture, reflecting five years of search and research in the PhD. Along with the theory of the community architecture term, the article aims to open the architect's appetite to go deeper into the community issue, having an obvious interdisciplinary point of view.

Ultimately, I strongly believe that the expression of a contemporary civilized society and the architecture that represents it, found its resources in the life of the communities constitute it, and in the established relations between their members. Undoubtedly, the architecture reflects the welfare state of a society, governing policies, but without the community component it remains unsustainable. The community represents the deep layer of the society, the spirituality, their intrinsic values while architecture is in a permanent interdependency with the community. Today the community architecture is flexible, permeable, open to communication. Architecture and community define each other, potentiating, reviving, integrating their own qualities, in this globalization process while preserving their individual uniqueness.

THE COMMUNITY ARCHITECTURE is an Ontological Architecture.

Keywords: community architecture, globalization, transculturation, communication, ages, interdisciplinarity, community architect.

Fig. 1 Churchill Intergenerational Hub/ Suters Architects, 2009
Source: Archdaily, http://ad009cdnb.archdaily.net/wp-content/uploads/2010/10/1288213397-suters-churchillcommhubb-low-09.jpg

1 INTRODUCTION

Currently, the architectural discourses generally start from the contemporary society premises. It is about the society that we live in, about the communicational, computerized society and about the architecture that has to meet the society's requests the subject of an architecture for community, of a **COMMUNITY ARCHITECTURE** is approached more seldom, and even when it is approached, there is not yet a solid theoretical base or a well-founded concept. The attitude and also the terminology used are not random and derive from **the actual trends-computerization, virtualization, spectacularization, consumerism, secularization, urbanization, the globalization process, from obeying the ephemeral and delocalization effects.**

The community coagulation seems to be very difficult in the contemporary urban society. The lack of time, the infinite delaying of the direct contact, the reversal of the pyramid of values have led to the late formulation of an actual concept dedicated to the community architecture.

The pessimism of the contemporary philosophers and sometimes the mathematical solutions given by the sociologists or the excessive psychologization of the relations between individuals close the reluctant picture that is soaring over the community.

However, the community germs are present in **the criteria which are able to bring the communities together: place, values, interests, age, spirituality,** even if it is done in a new way.

It might seem a paradox that just today, in a globalized society, dominated, would say some specialists, by the spectacle architecture, this paper aims at the conceptualization of the community architecture and more, the formulation of some ideas with applicability for stimulating community spirit in and through architecture. Yet, the true values are not loosing theirs valability, are only differently expressed. The actual tendencies of the society/ communication, the fast circulation of information, globalization have to be seen as resources not as obstacles. Architecture, in its concretness, will not ever lose its value if is designed for and together with the contemporary people. **Today, the architect has to prove only integrative capacity of teamwork and interdisciplinary spirit.**

2 RESEARCH BACKGROUND. SOCIETY'S TRENDS

The research background can be split into three levels: **socio-cultural, professional and personal.**

The socio-cultural background can be described from different points of view. Never perhaps, as in the information age where we live, the relation between culture and communication constituted a more reach resource of analyze, permanently valid and valued by the sciences that investigate human condition. On the other hand, the unprecedent development of the media, in an extremely pace, gave new dimensions to the cultural approaches. **Culture, by it's scientific and artistic values, entered in the social life of the individuals, democratizing itself.**

This state of fact has given rise to well-founded fears or, on the contrary, sometimes exaggerated, about the culture status, about the contemporary society values since the 70's.

Baudrillard[1] anticipates the consumerism that characterized the contemporary society [1] three years after Debord[2] speaks about the downgrade of culture by spectacle and consumption [2]. The architecture was not preserved by consumerism, by spectacular, permanently keeping touch with the society that is responds to.

These omissions are not rules, the new media ultimately proving themselves real cultural tools, efficient, that, used with discernment, brings society to a superior value level. Communication in the virtual environment [3] is shaping communities, relations between people. An architecture for community is an architecture that take into account all these contemporary realities, surpassing the pessimistic tendencies of convictions, irritation, indifference and extracting the innovative trends and the spirit of the place.

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[1] Baudrillard defines the individual of consumer society as *Homo Economicus*.

[2] In 1967, Debord spokes about the contemporary society as a spectacle, a term apparently comfortable, in fact unconfomfortable for this world faced with an excess of communication and information.

Another consequence of the unprecedent development of the media are **intercultural exchanges**, resulted from globalization, conceptualized under the concept of **cultural appropriation**, that is manifested in four forms: **cultural exchange, cultural domination, cultural exploitation** and **transculturation**. [4] Especially draws attention this last form of cultural appropriation, the transculturation, which involves an over-mixing of cultural elements, a change of methods and ideas whose validity is universal, *a process whereby cultural forms literally move through time and space where they interact with other cultural forms and settings*. (Richard Rogers, 2006, *From cultural exchange to transculturation: a review of reconceptualization of cultural appropriation*, apud Lull, 2000, p. 491).

In this context are developing the actual theories about community and society. Sociologists use two terms from German for **community** and **society**: **GEMEINSCHAFT** and **GESELLSCHAFT**[3] [5]**.** *Gemeinschaft* means in German *community* but in sociology is used in order to name the essential characteristics of the community and *Gesellschaft* means *society*, in sociology the nouns turns into adjective, describing coldness, formality. The transformations of the contemporary era, the fast pace of the urban life tend to augment the existing communities, to borrow from *Gesellschaft*. It can be said that, in contemporary key, the term of community poised between Gemeinschaft and Gesselschaft.

Another two majors global trends also reflect over the architecture: **population ageing and urbanization**, determing a **change of perspective** that is **multidimensional**. We can talk about the **demographic, population dimension of the architecture** that results from the population ageing. [6] This view shapes the architecture intended to a population with dynamic and structure influenced by the demographic phenomenon of ageing. On a higher level we can speak about **the age dimension in architecture** that shapes a social perspective, the perspective of social groups and of suitable architecture for every age group. The last level is **the intergenerational dimension** that proposes **the perspective of community architecture as integrative architecture of all ages**. The intergenerational perspective includes the personal dimension of the individual as person and as a member of an intergenerational community. [6]

This context changes once again the premises from the architecture can start.

CULTURE- COMMUNICATION- COMMUNITY- AGES

The professional context refers to the theoretical and practical concerns from the architecture in community field. **Presently it was not conceptualized the term of community architecture** although there is interest in this field from the specialists of various fields: architects, sociologists, psychologists, artists, medical doctors, engineers. These preoccupations from various fields actually give the particular character of community design, that of interdisciplinarity and produces a schift in the definition of the architect's position. Today the architectural profession is defined by an integrative capacity of corroboration of information from various related fields, by a multi-criteria approach, by a teamwork. The community architect gives an increasing importance to the social values.

The personal context evokes my own sphere of interest in this field of community architecture, in promoting its social values. Even if the association may seem somehow unusual, drawing, design, biological sciences and especially anatomy, chemistry, social sciences and finally architecture give sense to my long time concerns.

3 COMMUNITY/SOCIETY SWITCH. CULTURE-COMMUNICATION-COMMUNITY-AGES

The present society means speed, agitation, densification, urbanization. Communities in the old times spirit, at least in the large cities seem to be long gone. In the original sense, community was related to a place, having well-define limits or was generated by ethnic, religious, professional, cultural considerations. [6] But what about today? What are the issues today that can determine a community? How can architecture, in a globalized society, can stimulate specific communities? In this sense, can be architecture a tool?

In order to create tools, first we have to shape a concept that can express both community and society. Our world cannot be defined only by community or by society, it would be artificial divided. Communities are parts of

[3] The two terms were introduced in sociology by Ferdinand Tönnies. In the '80s, Tönnies made a trenchant demarcation in terms of moral, political and sociological between the community and society concepts.

society as well as society is a whole of communities. We are sharing ideas, information, spirit even if in a different way today.

It is true that for architecture the PLACE is essential, from it derives its spirit [7], [8] answering in a specific way, even if is not the only answer. We live in a globalized world, our society has blurry limits and its communities also [9], [10].

The mass-media boom made the access to information, to knowledge to be for all, for all who are interested, of course. In this way, we can speak about mass culture, better known as media culture. [6], [11]

The media system created a new communication univers, but also a culture univers, and the ratio between culture and society has fundamentally changed. (Grigore Georgiu, 2004, *Philosophy o culture. Culture and communication,* ch. VIII, p. 171)

Culture, by its scientific values has entered in the social life of individual. The internet, the summit of the media development, can ofer in a very moment almost any information. Practically, the freedom of choice is total.

The media system produced a new *cultural morphology*[4]. The society oscillates between an established system of values to a new ontological level, difficult to understand and manage, often fragile because it becomes excessively more technical. This ontological crisis is reflected by and through architecture also. Architecture must give an answer to this fragile society and to its communites, extracting its innovative essences from the culture-communication interdependency.

The digital strategy increases the importance of community role. It is emphasis the role of **being connected**. [12]

Being connected is a prerequisite for all other goals of Digital Strategy […] (Hazel Ashton & David Thorns, 2007, apud Digital Strategy, 2004, p.44, *The role of information communications technology in retrieving local community*, p.215)

Eventually being connected is an important part of today's communities and so for community concept.

To give, to receive and to care are some of the most important elements of worthwhile community[…](Ashton, 2002, p.127)

The two major trends identified in the previous chapter, population ageing and urbanization have a significant impact over community, culture and communication. For the first time in the history of mankind, the population over 65 will reach in 2050 one third in the European Countries and a quarter, globally speaking. [13], [14]

The twentieth century saw a revolution in longevity. (United Nations New York, 2002)

The society will be reshaped, and also the communities. The architecture will have to harmonize this new social-community structure and accomodate to a new tempo, yet difficult to define, that of speed and excessive efficiency, this time projected on a much older society and with a different type of energy but with a greater openness to modern communication techniques compared to past generations. The **lifelong learning concept** is the appanage of the present society and especially of the future. The architecture will adress to a society with an aging demographic structure-in this regard, Romania is concerned also[5] [15]-but with a wide openness to information and learning to use new information tools.

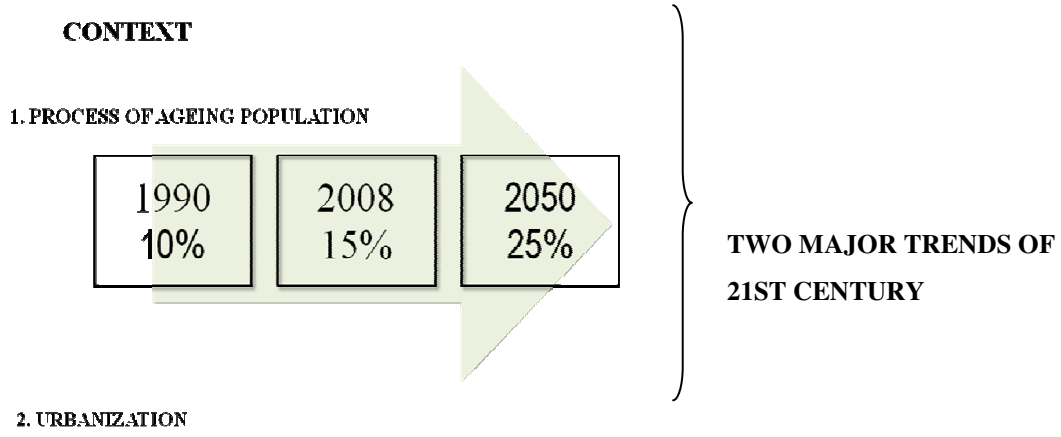

Fig. 2 Ageing and urbanization, the two major trends of 21st century
© Mihaela Zamfir (Grigorescu)

[4] Expression used by George Grigoriu.

[5] In 2000, elderly population in Romania exceeded in terms of numbers and percentages young population. (Source: www.cnpv.ro)

Community architecture is interdisciplinary and transdisciplinary defined. Community architecture must to give an answer to the two tendences: ageing population and urbanization. Community architecture is AGE FRIENDLY. Community architecture is universal, is architecture of all ages. (Zamfir Grigorescu& Zamfir, 2014, *Sustainable communities in the context of an ageing society. Premises for architecture*) [16]

So, architecture-especially of public spaces-must take into account a system consisting of four concepts: **CULTURE-COMMUNICATION- COMMUNITY- AGES.** [6] It takes an interdisciplinary approach, specialists in culture, communication, psychology, sociology, gerontology. The mission of the architect is not easy at all, he must harmonize all these informations and he must to incorporate them in the future community project that adresses to a different reality, as have been described previously and to whom must be defined the concept of **community architecture**.

4 TOWARDS A COMMUNITY ARCHITECTURE. THE NECESSITY OF A CONCEPT

In order to develop a theory of community architecture first is necessary to shape a concept. However, as we previously said, is not a a very simple mission because it takes a very wide, profound interdisciplinary approach.

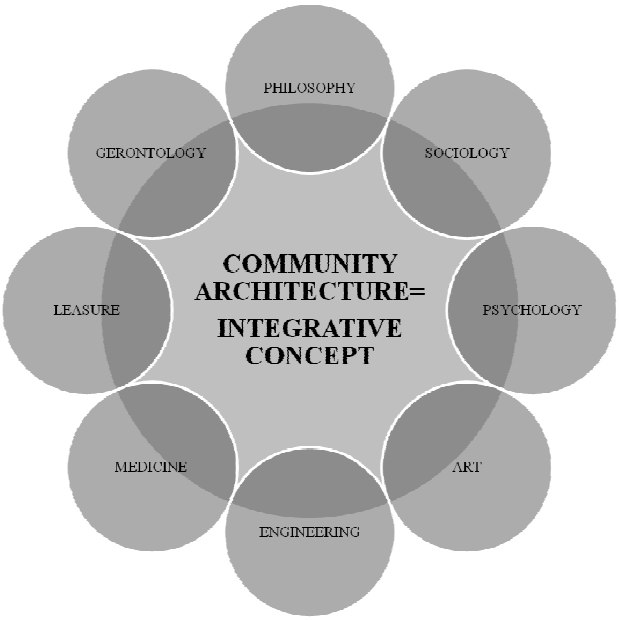

Fig. 3 Community architecture-integrative concept
© Mihaela Zamfir (Grigorescu)

It may be easier to name community architecture instead to conceptualize. Community architecture means the built environment that offers itself for community use or stimulates the community participation, in a profound social, inclusive sense. [6] It means permanent and temporary amenities both at urbanistic level- public spaces, squares, fairs and architecture objects town-halls, libraries, scenes, social establishments, clubs, gyms, after-school facilities, (re)conversion training centers, spa centers, community centers. Any public space has a community valences.

Why we need a community architecture concept?

- To give a proper answer to the contemporary needs;
- To create tools for an architecture dedicated to community;
- To be aware of the need for interdisciplinary approaches in community architecture and to form interdisciplinary teams;
- To generate a community theory in order to shape and build community architecture.

Until now, the community concept has not been theorized. [6] It talks about a community architecture but without a dedicated concept. Just as the concept of community architecture is essential for disciplines such as sociology, psychology, philosophy,social work, communication and IT as well the concept of architecture dedicated to community is necessary in architectural education and practice. The higher education of architecture is the friendly environment for developing such a concept and a dedicated theory. In this respect, a dedicated master would be useful. Given the fact that it requires solid interdisciplinary knowledge, a postgraduate master course will be indicated. This postgraduated training should have the following goals:

- Interdisciplinary training for the architect who designs for community;
- Forming interdisciplinary teams necessary for community projects.

In conclusion, first step is training specialists.

5 RESULTS. CLUES FOR COMMUNITY ARCHITECTURE

I strongly believe that the expression of a contemporary civilized society and the architecture that represents it found its resources in the life of the constituent communities and in the established relations between their members. Undoubtedly, the architecture reflects the welfare state of a society, governing policies, but without community component it remains unsustainable. Community represents the deep layer of society, the spirituality, the intrinsec values of these and architecture is in a permanent interdependency with community. Architecture and community define each other, potenting their own qualities, revivaling, integrating in this globalization process and preserving in the same time their individual uniqueness.

Community architecture is the architecture itself. Then why we talk about a **COMMUNITY ARCHITECTURE**? Why we should theorize a concept that should be actually simply the preserve of the architecture? The discussion embraces two aspects, on the one hand is the community with all transformations of the contemporary era, suspected of liquefaction or even inexistence, on the other hand is the architecture that not always manages to create that harmonious tandem with the community, remaining somewhat inconsistent and slightly artificial.

The present society is subject to the consumerism and spectacle, shaking the intrinsic values of the communites that constitute it. It is cultivated the own interest, individualism, accumulation of material goods, the fierce competion to the detriment of community spirit. On the other hand, spare time is almost inexistent and if actually somehow exists, it is always streamlined. [17] The meetings are often reduced to the virtual ones and not few are the opinions according to which public space is threatened by these alternative to concrete reality.

Architecture is subject to these trends, becoming commercial. Malls successfully invade public life, especially in young democracies. Comprehensive, they offer to the people all that they need, but only FOR CONSUMPTION. Cosumerism and spectacle, [1], [2] harshness, opulence become the preserve of current society (Romania is not an exception), eroding values that animate community ones.

The necesity of shaping a community concept in order to develope a community architecture theory was proved of the informations provided by the related fields.

6 CONCLUSIONS

The purpose of this paper was not to give answers to what community architecture means, it was to introduce the concept of community architecture in the attention of contemporary research and to give the proper place in the present society. The concept of community architecture and a community architecture theory were developed in the PhD thesis, finished last year, in 2014.

However, briefly, what is community architecture? Community architecture means the built environment that offers itself for community, use or stimulates the community participation, in a profound social, inclusive sense. It means permanent and temporary amenities both at urbanistic level- public spaces, squares, fairs and architecture objects **town-halls, libraries, scenes, social establishments, clubs, gyms, after-school facilities, (re)conversion training centers, spa centers, community centers.** A space with community valences can be that between blocks where children play and parents and grandparents are meeting and chating. Such a space can

be considered with community value only when is properly arranged, when community approaches it, assumes it, and there fore take care of it. Otherwise, remains only a space of greagarious manifestations. Community architecture manifests not only in independent architecture objects, also can take the shape of an embedded space whose primarily aim is another. For exemple, can be a space at the ground-floors of collective buildings that can be used in different ways by the neighbours that live in: birthdays, event, discussion that concern the proper functioning of block community. The most representive architectural program in the most complex form is **community center**.

The perspective change brought to architecture by the two tendencies of the XXI century-the population ageing and urbanization-is multidimensional. Community architecture is an architecture of ages.

Architecture is not only the response of the community problems as community does not fully reflect architecture. We can speak of a **dynamic, interdependence relation between architecture and community** where active and passive roles are shared. Especially this relationship is the research subject of my PhD thesis.

Thus, is argued **the necessity of formulation of a current theory for the community architecture and the formulation of a dedicate concept** in order to constitute a suport for integrated community strategies formulation. Community is a concept of social sciences and therefore the developing of a theory for the architecture that represents it could be done only by a **interdisciplinary approach.**

Fig.4 Gehua Youth and Cultural Center / Open Architecture, 2012
Source: Archdaily, http://ad009cdnb.archdaily.net/wp-content/uploads/2012/09/5063c10228ba0d080700021a_gehua-youth-and-cultural-center-open-architecture_14.jpg

Fig.5 Ellesmere Nursing Home / HLM Architects, 2010
Source: e-architect, http://www.e-architect.co.uk/images/jpgs/london/ellesemere_nursing_home_071110_4.jpg

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THE PLACE, THE COMMUNITY AND THE ARCHITECTURAL HIGHER EDUCATION

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Abstract

In 1864, Prince Alexandru Ioan Cuza signed the decree which stated the establishing of the Superior School for Bridges, Roads, Mines and Architecture in Bucharest. Therefore, this year, 2014, our university – Ion Mincu University of Architecture and Urbanism Ion Mincu (IMUAU) – celebrated 150 years of architectural superior studies in Romania. A major step in this institution's history and a good opportunity for looking back while projecting a meaningful future.

My presentation will evolve around this pretense, but just as a starting point and not as a pathetic remembrance of this significant history, a way of seeing the architecture and the architectural superior studies within an university and in direct connection with the surrounding context, may it be real or abstract, active or passive. Meanwhile, this insight will not have a center-to-edge orientation, but will have a rather opposite one since IMUAU may have its center located in Bucharest but a special type of architectural studies programme it is located in Sibiu. This Bachelor degree, 3 years programme, having as main axis the architectural conservation and restoration, was established in its actual form in 2007. It has a particular way of teaching architecture and connecting the future specialist in architectural conservation and restoration.

As former Director of Studies of this Sibiu located section of IMUAU, my presentation will use this particular example and the teaching experience there for connecting some major and extremely up to date subjects, subjects revisited today in many other superior schools of architecture worldwide. As a matter of fact, the today architectural studies, both teaching and learning, find themselves facing a globalised practice while training future specialists that will have to be ready to work with local communities as well. The practice range becoming more vast and complex, teaching architecture might be put to the test.

The main subjects of my presentation, resulting, as mentioned before, from my own practice within the Sibiu Architectural Conservation and Restoration Bachelor Programme (ACRBP), will be structured around the following:

/ the importance of creating and locating a specific university-related programme within a specific built context;

/ the importance or the lack of for combining a theoretical learning of architecture with the practical experience in the field;

/ the importance of the architectural practice (especially the one focused around restoration and conservation of old buildings and sites) and the specialist in (re)creating and (re)bounding local communities;

/ the various gains, from an efficient architectural higher education point of view, of ″repositioning″, from time to time, the school outside its classrooms and exterior walls.

The Sibiu programme is merely a minor section of the larger Bucharest-based University of Architecture and Urbanism but might be a needful appendix, having its degree of autonomy and thus being able to practice a different kind of architectural teaching-and-learning curricula. Meanwhile, the fact that some of its present activities and concerns might be found among those sustained within some major architectural superior schools worldwide, but without having a direct link or derivation, may be a sign that this particular type of programme, yet minor, has the right potential for a future development.

Keywords: architecture, higher education, conservation, restoration, community, local.

1 HEIDEGGER. SPACE. PLACE.

For the opening part of the present paper I will outline three points that I consider to be significant in Martin Heidegger's *Building Dwelling Thinking* [1]:

FIRST. Defining *Space – Raum*. The etymological investigation that Heidegger proposed reveals the ancient meaning of the word, meaning that can be perceived as being essential for defining the concept of *space* from an architectural point of view. Hereby, initially, the word *Raum/Rum* stood for the particular piece of land vacated for setting a camp or a new colony. There were two major aspects involved within this type of action: setting a border, a physical limit, and, on the inside, deciding for a precise set of rules. Space cannot exist in the absence of limits. From these limits inward, things are about to take place and, still from these limits inwards, the prior chaos turns into order.

SECOND. In ancient Old High German, the word *bauen*, that can be translated as *to build*, had the form *buan* and meant *to dwell*. But this is just one of the initial meanings, meanings that may update long lost truths, according to Heiddeger. Additionally, the same *bauen/buan* was a version of *ich bin, du bist* (I am, you are). Thus, the connection involving the dwelling and the way *mortals are on earth* becomes essential. Thus, when building, the dwelling must be also taken into account because it is one of the things separating men from other creatures. Thus, the way *mortals are on earth* is being argued by the way mortals build. By this, one must understand both rising new constructions and protecting the old, inherited ones.

THIRD. Heidegger, arguing the connections involving both dwelling and building, describes the image of a bridge spanning a river. The object itself doesn't just stand there, but generates a set of side links. The bridge is not important just for its functional aim concerning the pedestrian or the road transport. By its presence, the bridge turns the river banks into being significant. Furthermore, the way it brings together roads and other major circulation axis, granting a safe way past various borders and natural obstacles, the very same bridge, being precisely placed within a precise spot, singularizes that particular context with the referential suite it must take into account. By the technique of building, by form, by destination and use, by dimension and span, the bridge singularizes a particular sequence extracted from the almost infinite series of similar sequences along the river banks. By doing this, it generates *a place*. This way of arguing *the place*, by generating multiple connections with various elements and existences but also by triggering actual references, becomes significant for the present paper. *The place* does not exist simply by chance. It relies on the act of building, but this act of building must take into account the specific context and the local references thus becoming a meaningful way to build.

If there must be a partial conclusion for this opening part of the present paper, it would be as follows: the living space is defined by boundaries and rules; the space contains various places, places generated by building activities and by triggering references regarding the immediate context or the extended one; by building activities one must understand both creating new structures and taking care of the old ones, the latter being directly connected to the place and possibly embodying some of the aforementioned references; living and dwelling depend on the act of building.

2 THE ARCHITECTURE SCHOOL AND ITS *PLACE*

The Architectural Conservation and Restauration Bachelor Programme (ACRBP) in Sibiu is part of the Ion Mincu University of Architecture and Urbansim (IMUAU). It is not the purpose of the present paper to explain and present the history of this programme and the way it functions within a larger university structure. It is not the purpose of the present paper to present the arguments for this programme and why it was located in Sibiu and not in Bucharest, together with the rest of IMUAU branches, thus becoming the only one to activate almost completely separated from the main headquarters.

The period I had the opportunity to activate within the ACRBP, both as an architectural design studio teacher and as Director of Studies, allowed me the opportunity to understand several aspects regarding the university activity here, aspects that may become interesting when discussing the connection between the place, its monuments and its inhabitants, the local community and an architectural school and its students. The way in which a school, the ACRBP in this case, using its own specific profile and activity, could, at some point in time, mark and set a direction for the local community and its relation with the local monuments, as well as the way in which, by doing this, the very same architectural-related school could trigger the clotting of a local community, these are aspects I consider to be significant.

The decision to start a university, a faculty or just a local branch of the two stands, especially nowadays, for more than just a rational, cold, administrative and/or institutional decision. The decision itself, one-sighted as it may seem, produces effects for and within a larger area. One may say that this type of initial decision – founding a new university-related branch – represents, above all, *a proclamation*. A proclamation regarding a special type of vision for the local context. Thus, choosing Sibiu for establishing a branch of IMUAU, a branch having at its focal point the architectural conservation and restoration, represents the acknowledgement that this particular city, its built heritage and the local policies protecting and (re)activating the old structures and areas represent a living, ready-to-use, laboratory for the future restoration and conservation architects.

The fact that a restoration and conservation student gets to school everyday passing by the grey blocks of the average city of Romania is one thing; the fact that the same restoration and conservation student gets to school everyday passing by the old buildings of a historical city such as Sibiu, becoming part of a community living in such old buildings, passing by active restauration worksites, represents a completely different situation and a significant one. This way, the student understands the presence of the monument better than reading some theoretically explained facts. He understands the complex links involving the monument, understands the way it functions within the present urban fabric, the way it is affected by the various changes within the very same urban fabric. He understands that a monument is more than just a structure standing alone, occupying a specific perimeter; the monument defines *a place* and ways of perception. This is why I think it is important to connect the school with the larger context. The moment the school starts to function within this type of defined landscape is the moment the school gets involved. It might become a vector for the local community, vector able to activate beyond the classrom walls.

This type of perspective regarding the connection with the city was embraced by the local administration as well and the potential was quickly understood. The proof? The availability of the Sibiu City Hall for hosting the first two annual student exhibitions, in June 2013 and June 2014, exhibitions focused on student projects approaching specific locations in Sibiu, defined by the vicinity of important tourist objectives and historical monuments. The reason was the belief that, even for minor projects such as those during the 1st or 2nd year of study, the architecture student following ACRBP should have access to a real context that would eventually ″host″ his proposal. The imaginative part should resume to the designing process, a process having a set of real references within a built context. The aim of organising these exhibitions in the main hall of the Sibiu City Hall had multiple reasons and echoes: the student understands that his practice, starting with the university years, comprises a larger area of interest; the student understands that his project addresses the larger public, not just his colleagues and professors and so, finding himself outside a ″safe″ perimeter, he has to be ready to present and argue as well as to understand the incoming opinions and critics. Meanwhile, the local authorities understand that a specialist doesn't become such overnight; he is trained, prepared and exposed to a certain type of context, both educational and institutional, he needs attention and involvement from the community he will later serve, he needs to see that his expertise will be needed in the future, respected and well received by those making the decisions; his success or lack of is a result of these factors and much more.

The architectural practice may be seen as a mirror of a certain cultural level and interest of the society and/or the local communities. The university-community connection may be seen as an important interaction. Sadly, in Romania this type of connection has a long way to go until becoming a partnership. I think that, especially when talking about an architectural university or its minor programmes, such a partnership may represent a valuable resource that would be able, eventually, to revigorate even the traditional academic lines. This type of partnership represents an important issue for universities abroad as well [2]. The contribution to the local community often resumes to the university's publication programme or the various impacts the results and conclusions of the research departments might have.

The actual design projects intended for students have their coverage within the school's premises and represent imaginated architectural functions, needs and programs within a real or imagined context. Fortunately, IMUAU has imposed for almost all of its project exercises real contexts which is the better way for simulating a future architectural practice for the student to get accustomed with. Real local project, both proposed and needed by the local authorities or by the local initiative groups, might represent an interesting basin for generating new architectural exercises. Finally, exhibiting these student projects and visions for a larger audience coming from

outside the university walls as well, members of the local community, investors, local authority representatives, will have at least a double oriented result: the student understands the importance and the impact his/hers future project might have and the way it is perceived and understood by those not accustomed with the architectural specific language, understands that his/hers project command comes from outside and has to respect certain exigencies and requests, understands that a community has to see a solution for at least some of its problems in what the architect proposes, even when the architectural solution is a spectacular one; secondly, the local community, its vectors and officials understand the importance an architectural specialist may have and the fact that this specialist may become, in most cases, a dialogue partner and even more – their well needed advocate, able to represent and protect their values, projects, visions and needs.

3 THE LOCAL COMMUNITY AND ITS PLACE

3.1 The local-identity value

A short definition of the *local community* would state that it represents a group of people interacting with each other and sharing the same space. This common space involves a common background that may comprise projects, beliefs, resources, preferences, needs, risks but also exigencies or constraints of all sorts.

It is my opinion that the above definition may get an extra element. And this has to do with forming and affirming the identity of the local community, but also with the act of building, seen together with its double meaning: building the new and protecting the old. This extra element refers to the architectural monument. The latter can be seen as possessing multiple types of values. Alois Riegl, in his *The Modern Cult of Monuments: Its Essence and Its Development*, mentions some of these values that sustain the uniqueness of the monument:

THE HISTORICAL VALUE. ″The historical value of a monument arises from the particular, individual stage it represents in the development of human activity in a certain field (...) The more faithfully a monument's original state is preserved, the greater its historical value: disfiguration and decay detract from it (...) The objective of historical value is (...) to maintain as genuine as possible a document for future art-historical research.″[3]

THE AGE VALUE. ″It is probably fair to say that ruins appear more picturesque the more advanced their state of decay: as decay progresses, age-value becomes less extensive, that is to say, evoked less and less by fewer and fewer remains, but is therefore all the more intensive in its impact on the beholder (...) Age-value manifests itself immediately through visual perception and appeals directly to our emotions.″[4]

THE USE VALUE. "Use-value is indifferent to the treatment of a monument so long as the monument's existence is not affected and no concessions whatsoever are made to age-value."[5]

Adding to these three types of value, especially within this paper's context, is the value a monument receives from the community point of view. When referring to monuments bearing national or international recognition and fame or just locally significant ones, the impact of this type of valorization is sensed mainly within a local register. If regarding the aesthetics or the historical positioning the matter may face less or more subjectivism, economic studies show in which way the local economy is directly influenced by the existence, rehabilitation and conservation or even classification of the local monuments [6]. The way in which monuments come to define a local identity was outlined by Riegl himself when defining the so-called "non-intentional monument". It was not erected in remembrance, but for a more practical, precise, purpose. In time, it acquires values and significance for the community.

3.2 From community to monument

The restoration of the princely Saint Nicholas Church in Curtea de Argeş, the ancient capital of Wallachia during the Early Middle Ages, may represent such an example.

In 1911, given the advanced state of degradation this monument presented, the state decides to take it down. Subsequently, a reconstruction was possible, as the French architect and restorer André Lecomte du Noüy, follower of Viollet le Duc, had proposed. The local community's reaction was swift: a large sum was raised, donations mainly, and pressure was put on the local and central authorities (the Historical Monuments Commission, the national highest authority at the time) so that the church was kept as it stood. Major restoration and conservation works were done using the already raised funds. Although, from many historians and restorers point of view, following a rational, technical, analysis, the structure presented minor arguments for avoiding demolition, the local community took over the responsibility and added an extra value. Beyond the reasons regarding the advantages or the disadvantages concerning the rational technical decision and the historical-aesthetical aspects of the building, there was this value that proved to play a decisive part: the identitary value this structure possessed for the local community.

The monument is not just a sum of architectural-historical-technical-aesthetical aspects, all kept together in brick and mortar under an elaborated form and roof. Through its simple presence, it defines *a place*, just like the bridge described as crossing over the river in Heidegger's text. Even more, this type of defining *a place* by the presence of the monument doesn't just bring together the *mortals*, the inhabitants living their lives around it but shortcuts times as well. A built expression of a past generation's beliefs, sensibilities and values is being adopted and saved by a present one so that the time gap fades. One may see a larger picture: the community and the identity comprises more than just the present stance — the nowadays *mortals* and the yesterday *immortals*.

3.3 From monument to community

A similar episode, although at a different scale, involved the ACRBP activity in Sibiu. In the summer of 2013, the Town Hall of Copşa Mică in collaboration with the Cultural District Authority initiated a study for the rehabilitation of the old built environment of Târnăvioara. Mentioned for the first time in 1358, Târnăvioara presents a typical structure found in most of the Transylvanian Saxons' settlements: the Evangelic fortified church at its center, the radial disposition of the main circulation axes, continuous, opaque street fronts, brick solid houses with gable roofs and pediments facing the street.

Following the departure of the Saxon families, especially after 1989, this built heritage begun to deteriorate and the entire settlement sunk into a grey episode of its existence. Lacking major monuments of at least regional importance or interesting, particular, elements other than the typical Saxon ones, Tânăvioara didn't seem to offer any kind of interest or reason for bypassing its current state. Meanwhile, the local community, facing this degraded, desolated landscape, didn't feel any connection with their own village, streets or houses, many of the present day inhabitants being just newcomers taking over the deserted Saxon households. Thus, seeing the town as just a temporary stop, an available shelter, waiting for the first opportunity to relocate was just a matter of time.

Unlike the situation regarding the princely church from Curtea de Argeş, the impulse able to form a local identity started the opposite way. It was not the case of a local community aware of its heritage and thus entitled to take a stand when one of its symbols is placed at risk but a feeble community, unaware and indifferent of its *place*. The reference for change was coming from the outside: Mihai Eminescu Trust, founded under the patronage of HRH the Prince of Wales, and the way it succeeded in reactivating and protecting old Transylvanian villages, mainly by involving the local community, represented a well-needed example. The local authorities of Târnăvioara saw this as the proper way to reclaim an endangered local history together with the built heritage.

The ACRBP in Sibiu was seen as part of a local institutional system that could help this type of endeavour, at least during its early stage. Part of the students following the ACRBP were involved. During a week in the summer of 2013, they were located in Târnăvioara and helped identify the valuable elements of the local architecture, measuring the old houses and annexes and drawing proposals for the village center – the main intersection in front of the Evangelian church. All that work (projects, proposals and drawings of old buildings) was, later that year, part of an itinerant exhibition organized for drawing attention to the local heritage of Târnăvioara.

Architecture students walking around the village streets, interacting with the inhabitants, inhabitants becoming curious about what was happening and why this kind of interest for their old and "poor" houses, as well as the aforementioned exhibition produced the expected effect: the inhabitants, even if not academically trained or architecturally interested, understood that there is still a significant local potential and this potential is not in any way helped by demolishing the old and building the new but by taking care of the first. The interest an architectural school showed towards their village, especially towards the old, "poor", almost collapsed buildings, together with the exhibited proposals, represented a guarantee and a valorization the locals needed.

The moment the inhabitants understand their belonging to a valuable built environment is the moment a *real* local community arises, a community beyond statistics, an active community that is able to become *a partner* and not just *a receiver*.

Târnăvioara episode, short and early as it may seem, showed that an architectural school, even a small one as the ACRBP, through its image and expertise may represent a notable vector when identifying a built potential for a specific area. It makes little difference that this potential will remain just a regional one. It makes little difference that the works involved might need years and years and the final result is still unclear. The starting stone was placed and *the place* has, finally, its most needed references and stories. In his *The Architecture of the City*, Aldo Rossi explains the concept of *locus*. It has two sides: a concrete one comprising the location, the topography, the form, and a second side referring to a strong connection with the memory and the succession of past events in order for the singularity to emerge [7]. Rossi linked the *locus* to the collective memory. In other words, it is a ″story″ defining a certain limited area and generating a local specific.

From an architectural school point of view, the effects are also important. The today student, the tomorrow specialist, understands a new side of his future occupation, other than designing. The way in which the architect is able to influence the understanding of a built context, even for the untrained ones, the connection between the inhabitants and their houses, through expertise, through authority or just by his simple presence represents a major responsibility the student has to comprehend. Getting involved or not, making the right decision or not, listening to the voices of all those involved or choosing when or whom to listen to, all these influence not just the construction parts, wood, brick, concrete or stone, but do have a major impact on the local community, reinforcing or diluting the communal values.

On the other hand, involving the practice in the teaching/learning process regarding the conservation and restoration becomes important. Just a theoretical approach within the course classrooms may prove too little. Understanding the way the monument is ″screwed″ into the immediate context is equally significant. And this part includes the way the local community relates to it, if it is considered significant or not, if taking care of is even considered.

4 LOCAL AND/OR NATIONAL

Another aspect is the way in which the local authorities are able and willing to intervene, given the fact that the processes involved may require not just an important budget but also a long period of time. And this adds the problem of who may take better action: the national authorities or the local/regional ones?

Both the aforementioned examples, Curtea de Argeş and Târnăvioara, more than a century apart, had to do with monuments placed under state administration. This status didn't cover a safe trajectory in time given their deplorable state. Even more, the local community, more or less present, didn't feel any advantages for a designated monument in the proximity. Along with this designation comes a new set of restrictions and obligations, hard to follow for a small community. Meanwhile, the needed work for the monument's repairs is often done with outside specialised handwork. In the end, is the monument still part of the local context or there is just its location and impossibility to transport elsewhere that is still keeping him here?

But the locals can be involved. A combined action involving an outside needed specialists and a local workforce might prove to be a gain all-around. In fact, the locals are the first to feel the benefits of having a monument in the vicinity. And by sensing this, by seeing the monument as a mean to construct their own identity, they will become willing to get involved, even learning lost crafts, becoming local guides, adjusting their habits so to complement the larger picture their local monument is seen by the incoming tourists. During the old times these monuments were erected, the works were, in most cases, a collective effort. Even for building a house, the effort didn't concern just a particular family. Building a church was an even clearer example of what a community meant and how it did work. So it would not be too bold to say that a large part of these monuments represented the local community expression carved in stone and brick.

Seen from a national level, the monument is a touristic and/or cultural attraction.

Seen from a regional/local level, the monument is an identitary argument.

Seen from an architecture school level, the monument is a practical knowledge archive ready to be deconstructed, analysed and learned by means of the project.

5 CONCLUSIONS

Architecture in all its forms has always been connected to the concept of *space*. Even the never built projects or the futuristic ones approached, one way or the other, this concept. A more sensitive aspect involving the architect and his architectural vision is the connection with *the place*. If there are architectural exercises, often purely theoretical, centered on the building, its form, its materiality, its function, its freshness, and *the space*, then a practical approach of the same theoretical vision would have no choice but to take into account *the place* as well. And this connection with *the place* would bring into discussion a series of new references and subjects, one of these being *the local community* and *the local identity*.

(1) *Space*, from the architectural point of view, is not just a presence or a physically explained concept. Heidegger's essays regarding this concept as well as the concept of *place* offer some elements that prove to be essential to the act of building, especially when it comes to building within an existing context. *The space* is defined by limits and rules applying within. *The place* is defined by the act of building in connection with the local needs, priorities and references.

(2) The act of building is strongly connected with the living (or ″dwelling″). Even the architectural structures that are not intended for housing are part of a *place*, represent references for the *mortals* thus becoming part of the dwelling register.

(3) The act of building does not resume to creating new structures but also taking care of the old ones.

(4) Establishing an architecture school is not just an institutional/functional decision, but also a proclamation, a recognition of a particular type of place and its identity. Following this initial moment, the school may become an integrated part of the referential system articulating the *place*.

(5) Because of its educational profile, an architectural conservation and restoration school may become also an active vector for outlining valuable elements belonging to the architectural heritage of a particular *space* and, by doing this, helping the local community in defining its identity.

(6) The local monuments, the local community and the local identity are strongly connected and interdependent concepts. Even if not fully active, often it proves to be sufficient for only one of them to exist so that the other two start being visible. An outside, professionally recognized, vector, such as an architecture school, may be a well needed conductor, connecting the three elements.

(7) Placing the student outside the ″safe″ confinement of the classrooms and within a real context will help him understand that his future practice will not resume to designing forms and functions, but taking into account the existence of *the place* together with all its references and implications.

(8) A meaningful architectural gesture affects the local community in ways of outlining elements that might become part of a local identity and thus transforming the inhabitants from *receivers* to *active citizens*, aware of their heritage, both built and unbuilt.

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[2] See Angie Hart, Simon Northmore, Chloe Gerhardt, Polly Rodriguez *Developing Access beetween Universities and Local Community Groups: A University Helpdesk in Action* in *Journal of Higher Education and Engagement*, Volume 13, Number 3, p.45, 2009;

[3] Alois Riegl, *The Modern Cult of Monuments: Its Character and Its Origin*, transl. Forster and Ghirardo, Oppositions 25, 1982, p.34;

[4] Op.cit., p.32-33;

[5] Op.cit., p.39;

[6] ″(…) all of the regional economies adjacent to the studied national monuments experienced growth following a monument's designation. Nearby national monuments help communities to diversify economically while increasing quality of life and recreational opportunities that assist communities to become more attractive for new residents, business and investment.″ (*Summary: The Economic Importance of National Monuments to Local Communities. Update and Overview of National Monuments Series* in *Headwaters Economics*, Spring 2014) ;

[7] ″(…) the *locus* itself as a singular artifact determined by its space and time, by its topographical dimensions and its form, by its being seat of a succesion of ancient and recent events, by its memory.″ (Aldo Rossi, *The Architecture of the City*, The MIT Press, Cambridge, Massachusetts, and London, England, 1982, p.107).

TIMBER-MADE TALL BUILDINGS - ARE THEY AN UTOPIA, OR DO THEY HAVE A FUTURE?

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Abstract

The geographical conditions of each country led to the development of a material used in construction, whether it was earth, stone, wood or brick. Therefore, the natural environment caused the local specificities, regional similarities, norms that have contributed to the development of a certain way of building.

The forests that characterizes most of northern and eastern European topography of the area, are defining the structure of the places, actually an infinity of landscapes which induce different perceptions and sensations.

They can be an important element of the global strategy to limit CO2 concentrations in the atmosphere, contributing to the climate changes. As part of the global carbon circuit, the forests removes CO2 from the atmosphere as they grow and accumulate carbon in the biomass of the trees.

The current degree of deforestation is contributing over 20% to emissions of greenhouse gases, making from the global deforestation a major cause of climate changes due to the human actions. By deforestation, all the carbon dioxide is coming back into the atmosphere, contributing to the increase of greenhouse gas emissions. In addition, the deforestations have led to soil erosion, winds intensification, aggravating the drought, reducing the water flows, the formation of the dust storms, the pollution of the air, of the water and of the soil and the catastrophic floods.

The forest maintains the ecological and climate balance and it is the ecosystem that is recovering with a rate of 3-5 times faster than any other natural ecosystem. By completed deforestation, all this balance is suddenly altered and the nature takes revenge by irremediable consequences of climate changes.

The wooden architecture in the Nordic countries is a response to their way of living, of the climate that supports in an existential space with many vicissitudes. In other words, that space offered a type of architecture that belongs to those places, or rather the place created architecture suitable for the people of those areas.

In the early 1990s, within the global ecological crisis, there were rediscovered qualities and concepts of the wood – the last projects developed worldwide, highlighting its intrinsic characteristics and its cultural and aesthetic contribution, without neglecting technical and economic advantages. This radical revolution of the image of the wood in construction was favored by the developing of the new technologies and assembly systems, the merging and reinterpretation of the wood which can be made especially by industry. It is about the prefabricated elements (columns, beams, panels, plates), which are produced by the specialized companies, with modern equipment, where human intervention is quite limited.

What many thought a few decades ago that was a utopia, now, the high building construction with more than 4 levels caused the changing of conceptions for many specialists, architects and engineers, in terms of the future high wooden construction. Thus, their processing at large openings allows the creation of beams or pillars with atypical forms and their beauty and

spectacular result precisely because they are made of wood. The curve and dynamic forms became dominated for the aesthetics of present buildings, thanks to the imagination of the architects, who made an impossible thing 50 years ago, due to an advanced technology, a new way of conceiving wooden architecture.

Michael Green is the architect who became an emblem in Canada, willing to be heard and understood in his way of approaching and understanding the promotion of the wood as the main material for future construction. He holds the supremacy in people education in order to promote this renewable and ecologic material, so healthy for the human life. He foresees the future of wood constructions with buildings that 20 years ago seemed impossible, but maybe in another 20 years it will become a common thing in other countries. The wood constructions could be the vein of people who are guided by other values, for economic purpose of the countries that promote the researches in advanced wooden structures, or due to inherited traditions.

Expressiveness that can have a wooden contemporary architecture today, I hope to open, through us - architects, new structural forms, more creative, more efficient, new structures of21st century. The wood as a building material can be considered a material of the future, permitting to the structural engineers to discover new ways to build.

Keywords: The forests, climate changes, emissions of greenhouse gases, the wooden architecture, prefabricated elements, tall wooden buildings

1 CLIMATIC CHANGES AND THE ROLE OF WOODS IN GLOBAL CARBON CIRCUIT

The geographical conditions of each country led to the development of a material used in construction, whether it was earth, stone, wood or brick. Therefore, the natural environment caused the local specificities, regional similarities, norms that have contributed to the development of a certain way of building.

The forests that characterizes most of northern and eastern European topography of the area, are defining the structure of the places, actually an infinity of landscapes which induce different perceptions and sensations.[1]

They can be an important element of the global strategy to limit CO2 concentrations in the atmosphere, contributing to the climate changes. As part of the global carbon circuit, the forests removes CO2 from the atmosphere as they grow and accumulate carbon in the biomass of the trees. Using products made of timber harvested from the sustainable maintained woods, the net CO2 emission can be reduced, by substituting fuels and energy intensive materials. "The ability of the forests to absorb carbon dioxide is related to a number of factors: the age of the trees, how the forests are managed, the local climate, the nutrient content of the soil and the level of precipitation."[1]

Within the framework of an European program called "Nature 2000", a strategical planning guide for woods durable management was created, which is needed to promote a strategical planning and a management to provide woods preservation as a critical element for the ecological balance and a conscious usage of the resources and assets. [2]

Migration from the woods harvesting as a mean of living, valid from the dawn of humanity until present time, to an irrational form, having just the motivation of making profit, of deforestation of wide areas without afforestation, has already produced tremendous consequences in the areas where fields remained naked and strong floods led to earth movements with bad impact upon buildings.

The atmosphere of our planet is 100% gas, containing mainly ~78% nitrogen, ~20.9% oxygen and ~0.93% argon, and has a narrow interraction with solar radiation and no interraction with infrared radiation released by Earth. The carbon dioxide, methane, nitrogen oxyde and ozone sink and radiate infrared rays and they are called

[1] Internet source:http://www.holmen.com/en/Sustainability/Climate/Forests-products-and-work-on-climate-change/The-forests-absorption-of-carbon-dioxide/

greenhouse gases. The phenomenon by which gases within our atmosphere allow solar radiation to reach Earth but block the heat radiated by Earth surface to spread throughout space, is called greenhouse effect.

Greenhouse gases provide a natural ballance between the heat coming in through atmosphere and the heat going out to space, thus creating a life-favorable environment and temperature. Life on Earth is possible due to greenhouse effect, which heats up the Earth crust to about 33°C. Because of them, the average Earth temperature is 15°C, and without them, this would be -18°C. This natural source warming is a prerequisite of having liquid state water on Earth. [3]

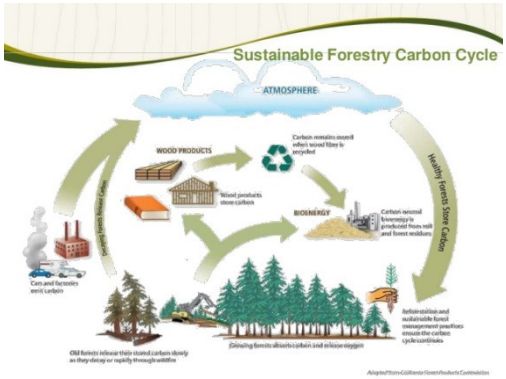


Fig. 1–Carbon global cycle
internet source: http://maps.grida.no/go/graphic/atmospheric-concentrations-of-carbon-dioxide-co2-mauna-loa-or-keeling-curve

Unfortunatelly, this ballance is jeopardized because of the greenhouse gas emission generated by human activity (burning of fossil fuels, resulting in generation of carbon dioxyde, massive deforestations), which has contributed to the Earth averrage temperature increase and the climatic changes that we all feel today. From the beginning of industrial revolution, greenhouse gas emissions have made this layer denser and denser, causing big changes in the atmosphere structure in the past 650 000 years.

1.1 Deforestation, one of the main contributors to the increase of greenhouse gasses emissions

The current rate of deforestation contributes in excess of 20% to greenhouse gasses emissions, making the global scale deforestation one of the main causes for the climate changes due to human activity. By deforestation, the whole amount of carbon dioxyde comes back into atmosphere, increasing the greenhouse gasses emissions. Moreover, deforestations led to soil errosion, wind strenghtening, drought worsening, watter flows reduction, dust storm occurence, air, water and soil polution and catastrophic flods. This way, the soil gets excessively soaked with water, being no vegetation to absobe it. The European statistical records (The big European bothanical atlas) show a tremendous decrease of forest areas in the last four centuries. If forests were covering over 80% of the Europe's teritorry in the XVI century, by the end of XX century, the forests had reached to nearly 30% and most of them were in the northern areas and around Alps and Carpathians.

The forest maintains the ecological and climate balance and is the ecosystem that regenerates 3 to 5 times faster than any other natural ecosystem. The rainfalls are taken over by the soil, reaching the vegetation, supplying the springs, providing a mild flow of the running waters. By complete deforestations, all this balance is suddenly broken and the nature strikes back through consequences shown above. The forests play an important part in regulating water flows, providing a good water quality and protecting important water sources for the local communities, sometimes without any alternate water source.

Similarly, the forest represents a complex ecological system, housing numerous plants and animal species. By deforestation, the flora and the wildlife is ruined and this leads to some plant and animal species dissapearing.

1.2 Architects promoting wood as a building material, to reduce greenhouse gasses effect

Timber architecture from northern European countries is an answer about their lifestyle, about the climate they must bear in a living space with lots of difficulties. In other words, this space led to a type of architecture which belongs to it, or better said the space created and architecture suitable for the people living within.

The Norway government has developed within the past 10 years an awareness campaign to draw attention to climate changes and to the need of increasing the afforestation, playing a vital part both economically and environmentally. In the last 100 years, the annual forest growth was more than double. In the construction field,

especially that dedicated to housing, both individual or group, to schools and kindergartens, the custom of using timber as the main building material drives the research, development and innovation of new technical solutions to became an area of national interest for the future. Starting from the fact that timber has a large resource basis, due to vast forest areas, forestry and wood industry are important fields for supporting the Norway economy. Renewable source, trapping carbon throughout its whole life cycle, the timber has clear advantages in reducing the carbon dioxide emissions and having a less polluted environment.

Marius Nygaard, researcher and professor architect at Oslo Design and Architecture University, militate in his published articles for a more intense usage of timber in housing and even in multiple storey buildings, claiming timber usage all the way from structure to partitioning walls. [4] He also indicates that very few tall buildings in big cities are using timber as a building material, partly because the architects and builders do not yet have expertise in erecting timber-made tall structures. How can one replace a concrete façade with a wooden one, what would be its behavior in a humid environment and with temperature changes? These are questions for which answers are still being searched for.

Michael Green, a Canadian architect, is the most sounding voice that militates for building entirely out of timber. Here are some of his ideas, expressed in a February 2013 conference called „Why should we build wodden made skyscrapers ?":

"We make buildings with different sizes, styles and materials, based on where we are. […] Just as snowflake, there are no 2 similar chunks of wood on Earth. I like to think of the wood as the nature footprint in our buildings. Nature footprints help our buildings connect to nature within the building space. The cities and the urban human density will keep buildings large in size and I believe timber can become important for cities. […]The grate challenge for architects is to find a solution to house these people. However, as we move into cities, they are build out of steel and concrete, wonderful materials. They are the materials of the last century. However, they require a large amount of energy and greenhouse gasses released in atmosphere during fabrication process. Steel represents 3% of the greenhouse gas emissions, while concrete over 5%. […] Nearly half of these gasses are related to the building industry. The same story holds true for the energy. One will notice that transportations are second on the list, but this is the story we hear over and over again. Although is about energy, is actually about carbon. The problem, as I see it, is that eventually, the conflict between solving the 3 billion homeless people's issue and the climatic changes is a disaster that is about to unleash or is already happening. This means we have to think differently and I think timber will be part of the solution. When a tree grows in a wood it releases oxygen and sinks carbon dioxide, when it dies and falls off the ground it releases carbon dioxide back into atmosphere or in the soil. Same happens if it burns into a fire. However, if you take the timber and make a building out of it, or a furniture, or a toy, it has the tremendous potential of storing and lock down the carbon."[2]

The researches conducted in Canada in the timber structure filed, will probably lead to doable sollutions within years, although architects world is still dominated by lot of schepticism when timber is proposed as a building material, especially in tall buildings.

In the early 1990s, within the global ecological crisis, there were rediscovered qualities and concepts of the wood – the last projects developed worldwide, highlighting its intrinsic characteristics and its cultural and aesthetic contribution, without neglecting technical and economic advantages. This radical revolution of the image of the wood in construction was favored by the developing of the new technologies and assembly systems, the merging and reinterpretation of the wood which can be made especially by industry. It is about the prefabricated elements (columns, beams, panels, plates), which are produced by the specialized companies, with modern equipment, where human intervention is quite limited.

What many thought a few decades ago that was a utopia, now, the high building construction with more than 4 levels caused the changing of conceptions for, a new way of conceiving wooden architecture. many specialists, architects and engineers, in terms dynamic forms became dominated for the aesthetics of present buildings, thanks to the imagination of the of the future high wooden construction. Thus, their processing at large openings allows the creation of beams or pillars with atypical forms and their beauty and spectacular result precisely because they are made of wood. The curve and architects, who made an impossible thing 50 years ago, due to an advanced technology.

[2] Michael Green-internet source : https://www.ted.com/talks/michael_green_why_we_should_build_wooden_skyscrapers?language=ro

Fig. 2,3- exterior and interior of the City Hall,Vancouver, Canada, arh. Michael Green (internet source- http://www.mg-architecture.ca/work/)

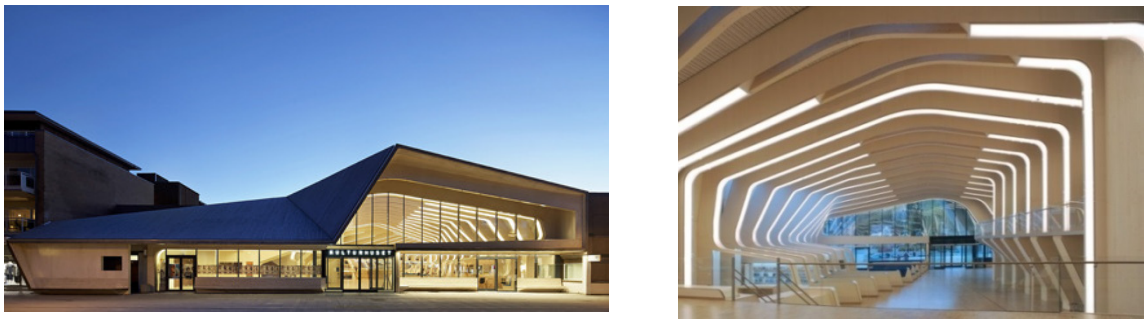


Fig. 4,5-Outside and interioir view of the Vennesla Library,Norway,arh.Helen &Hard
(fig.4-internet source- http://www.dezeen.com/2012/08/01/vennesla-library-and-cultural-centre-by-helen-hard-architects/
fig.5- http://www.helenhard.no/projects/vennesla_library)

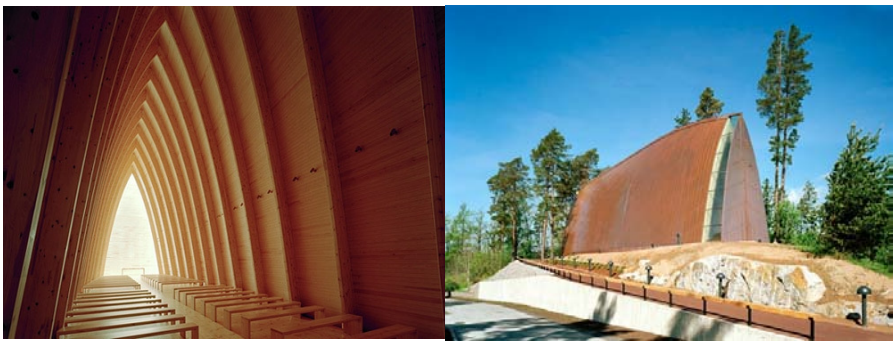


Fig. 6,7 – Interior and exterior view of the Chapel Saint Henry,Finland,arh.Matti and Pirjo Sanaksenaho (internet source-http://www.architonic.com/aisht/st-henrys-ecumenical-art-chapel-sanaksenaho-architects/5100059)

2 BUILDING CONSTRUCTION SOLUTIONS APPLIED TO 3 IN EUROPE

2.1 Intoduction: Short history of the tall wooden buildings

In an unveil of the oldest wodden buildings, the 32.25 meters hight Japanese Horyu pagoda is considered to be the tallest oldest wooden building. A comparison to the newest 22 meters hight woden buildings shows that even if the studies are more advanced, the engineering expertise hasn't reached their limits yet in submitting plans for wodden buildings that would exceed the height of the oldest pagoda.

In an article published by Koji NAKAHARA , Toshiharu HISATOKU, Tadashi NAGASE, and Yoshinori TAKAHASHI**,** named: *Earthquake response of ancient five-story pagoda structure of Horyu-Ji Temple in Japan,* several structural characteristics of the oldest wooden building are enumerated:
1. A framework in which each story is independent and no column ties them together.
2. The center column supports the ornamental structure on the top independently of the main structure.
3. The columns in the first story are not tied down to the foundation.[3]

[3] http://www.iitk.ac.in/nicee/wcee/article/1229.pdf

The church from Urnes, built in 1150, it is considered the oldest wooden church in Norway. It is famous for the carved models on the northern facade, made in Urn style. The structure (the pillars, the panelling, the roof components) is made of bulky pine wood. In Norway, the pine wood was used especially for churches because of its abundance in that area of Europe. The oldest wooden churches that have been preserved up to this day are from that area. The Norwegians developed a ship manufacturing technique, supporting the northern people in trade, culture and transportation development. [5] The knowhow of those who built such ships drove the discovery of some secrets about working with wood structure and details. A great attention was payed in drying methods and only the hard core of the timber was used in the construction of their churches. Likewise, the way in which the fundation was built went through several stages, where the model in which the pillars rested on a stiff wooden beam frame, seated on a rock base, saved 25 out of the 750 existing churches, over time.

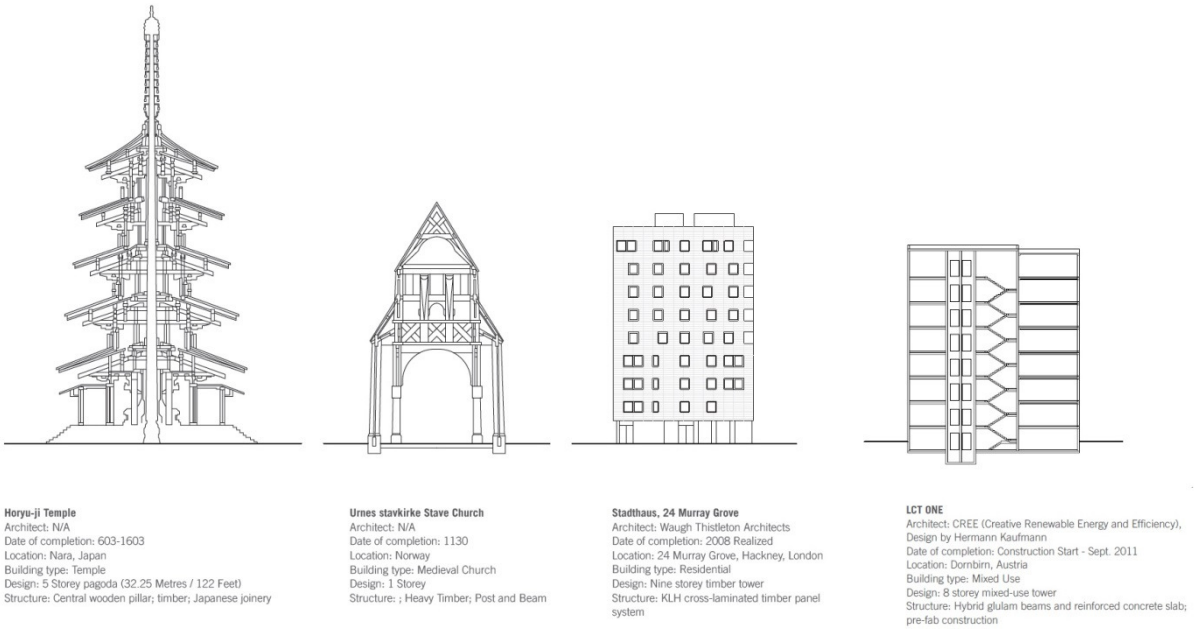


Fig. 8 -the tallest and oldest wooden building elevations,as well as for newest woden buildings (internet source- http://cwc.ca/wp-content/uploads/publications-Tall-Wood.pdf)

The old wood architecture of the northen Russian and Romanian orthodox churches, shows similarities with respect to the structural system, of Blockbau type, lots of buildings surviving over centuries.

Over the centuries, tall wooden buildings, as is the church „Schimbarea la fata" on the island of Kiji, built in 1714, was erected thanks to the work of the local carpenters (without using any nail, bolt or other metal parts at joints). As the time passed, it became the most representative construction of the northern Russian wood architecture, with a wealth of shapes, a symbolystic image of the 17th century folk culture, the ensemble on the island of Kiji being part of the Unesco patrimony.

It has to be mentioned the churches from Maramures, whose value resides in their wonderful proportion of volumes, and the bell towers, wonderfully developed over height, under gothic architecture influence, embraced various proportions and decorations. Eight of the most representative ones are listed in the Unesco patrimony register, „representing hundreds of such istorical monuments, scattered troughout all regions of Romania, being a remarcable romanian contribution to the cultural treasure of humanity."[4]

Our old worship places remain great assets over time, many of them being valued by foreigners more than us, the romanians. In a study published by the American magazin "The Arhitectura Review", issue 935 by 1975, the English researcher David Buxton does the following observation: „Of all the countries from the eastern Europe, Romania is the place where the wooden churches are the most closely connected to the place where they emerged and where the building systems are probably the most exquisite"[5].

4 Porumb,Marius-The timber churches of Maramures, ed.Academiei Romane, 2005, pag.11

5 Buxton, David-Wooden churches of eastern Europe, The Arhitectura Review nr.935/1975, pag.48

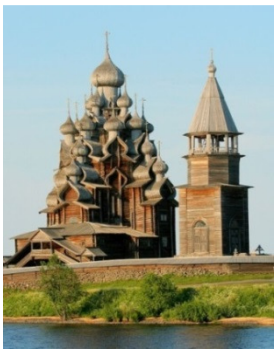


Fig. 9-Exterior view of. Ensemble on the Kiji island Fig.10-Exterior view of Surdesti church, Maramures
(internet source-fig. 9: http://en.wikipedia.org/wiki/File:Kizhi_church_1.jpg;
fig. 10-internet source- http://tudorphotoblog.blogspot.ro/2013/02/maramuresromania-biserica-de-lemn-din_2491.html)

2.2 New perspectives for the tall wooden buildings' architecture

Nowadays, each country has a regulation for the maximum allowable hight in wooden buildings, as depicted below. This chart shows reflect the maximum of a wooden building, which is likely to suffer changes over the years.

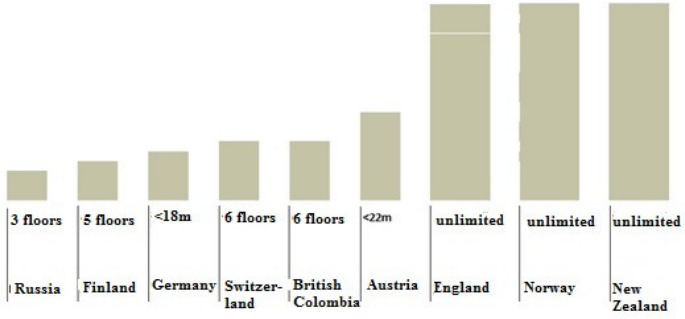


Fig. 11- Height diagram of the few countries in Europe
(http://www.cwc.ca/documents/Industry/Tall%20Wood%20Buildings%20-%20Final%20Report.pdf)

For years, tall building structures are being made of either reinforced concrete or steel, being without doubt the most successfull materials when it comes about the strength to earthquakes or the action of the elements, fire, persistence over time, etc. In the mid 90es, several countries, Norway being one of them, restricted the errection of wodden buildings higher than four storeys, mainly because of the fire hazard. Moreover, the impulse propagation and vibrations in the skeleton of the multiple storey buildings have created valid reasons to the structureal enginners to invest in research with respect to behaviour of the tall wooden structure buildings.

In the last years, the concern about environmental impact has increased and as a consequence, the awareness of those directly involved, engineers and builders, in developing a stronger and stronger care for making tall wooden buildings. All this makes sense because environment-wise, timber is a much better choice versus concrete and steel, being a carbon dioxyde trapping material rather than poluting the environment during fabrication process. [6]

Below are three examples of buildings executed in the last years, in which the new technology of wooden structure tall buildings was used for residential buildings.

First example - Stadthaus, in Hoxton, London - arh.Waugh Thistleton, errected în 2008

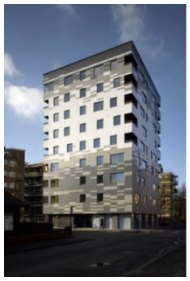


fig. 12-Exterior view(internet source-http://www.waughthistleton.com/project.php?name=murray)

It was considered the highest wooden structure building at its time. Its structure is made of cross laminated-timber prefabricated wood pannels used for walls and floors, without using beams. This type of pannel, developed in years of research, was manufactured by KLH company, in mass production in Austria and UK. The physical realization of this pannel means orthogonally overlayed layers of dry spruce, having a humidity not more than 12% and sticked together with poliurethane based glue, having no emission of toxic gasses.

The advantages of this building style are:

1. Fast building – the speed of putting together the CLT panels to form the given structure reduces the building time and costs. The building time was 22 weeks shorter as opposed to a concrete-based structure, while the building rate was 3 days/week/floor.

2. Building precision – being premade panels, the building allowance is halved as opposed to concrete-made buildings. This translates to less losses during finishing and outfits execution.

3. Flexible design – structural performance allows more freedom in design, making possible to change or resize the inhabited space without any quality loss.

Sustenability requirements:

Using this building style has the advantage of a durable building and contributes substantially in reducing the carbon footprint on environment. Concrete and steel production releases tones of carbon dioxide in the atmosphere. By contrast, the timber sinks carbon as it grows, acting as a heat sink. (1m3 (480-500kg / m3) of CLT panels releases about 0.8 tones of CO2 in the atmosphere.) Moreover, the panel manufacturing process is quick and very clean, creating a healthier working and living environment in general.

Innovative structure – a follow-up model for other buildings

The tower, working as a collective dwelling, is comprised of a gofer-like structure of cells, surrounding an inner core. The civil engineers, a design team from *The Institution of Structural Engineers,* in UK, opted for a reinforced concrete structure for the foundation and the ground floor, while the rest of the 8 floors are made of these weight-bearing. CLT panels and CLT floors Prefabricated panels, having 3 layers of 128 mm orthogonal strips, had the doors and windows openings made during manufacturing and they took only 8 weeks to be assembled at the construction site.

One of the performance requirements which had to be met was the rooms' acoustics, timber having worse acoustic properties than concrete or masonry. The advantage of this panel resides in that it is manufactured with a higher density than the average timber, and the successive laminated layers glued together cancels out the sound propagation issue. In addition, the 146 mm floor structure, being made also from 3 layers of laminated timber glued together, combined with a suspended plaster ceiling, a 50 mm sound-proof insulation and a layer of air, results in a sound barrier that exceeds the requirements set in UK.

The façade design:

It is made using Eternit-type panels or various modular sizes, having 70% of wood wastes within its structure. The designer created a pixel-like image using black, white and shades of grey, creating a pattern of light and dark areas.

The second example - LifeCycle One", Dornbirn, Austria, by architect Hermann Kaufmann, finished in 2011

The maximum height regulating legislation for a timber-based structure building is highly different in Europe. The architect H. Kaufmann conceived an experimental project, constructed by the Austrian company CREE (Creative Renewable Energy Efficiency), consisting of an 8 floors building. Its destination can be either dwellings or offices, having a flexible layout which & allows any kind of inner partitioning. The building was designed according to passive dwelling standards and uses a pre-made modular system made of laminated wooden planks glued together, concrete slabs and dual laminated wooden planks pillars. [7]

Fig. 13 – main view(internet source-www.baublatt.ch)

Fig. 14 – side view(internet source- www.cecobois.com)

Innovative structural system-The foundation and the ground level has a reinforced concrete structure and the core of the traffic knot, having further attached to it the 7 floors, which have a panel-based pre-made structure.

The pre-made wooden panels (8,1m x 2,7m) are built of double beams of laminated wooden planks, joined together by a 80 mm thick concrete layer. The double beams lean on double pillars, also made of laminated wooden planks, being reinforced with metallic joining clips.

Fig. 15-on site assembling phases

Fig. 16-floor and pillars joining

Fig. 17-floor and walls joining

(fig.15,16,17-internet source- http://www.bdonline.co.uk/lct-one-administration-building-by-hermann-kaufmann/5050504.article)

The advantages of this structural system:

-Assembling time was very short, meaning lower overall costs; After casting the foundation, the construction time for erecting the upper levels was 8 days.

- A much cleaner urban environment was achieved, with highly reduction of phonic and dust pollution during construction time (due to factory pre-made panels).

- Minimal errors during construction, also due to using pre-made components and assembling style.

- The inner walls have no chemical treatment.

- Partitioning flexibility, having no inner structural walls

Passive dwelling norms refer to:

- triple glass sheet windows (very good thermal insulation)

- up to 400 mm thermal insulation for the outer walls

- heating is based on solid fuel (wood chips) central heating

- photovoltaic panels

- full lightning control based on LED technology

- building control inteligent system: automatic operated blinds, proximity and artificial light controlling sensors

Carbon footprint and life cycle refer to:

- By combining wood and concrete for the structural system, the overall amount of concrete is reduced, resulting a lighter building, with a smaller fundation and with a 90% less CO_2 release.

- At the end of its lifecycle, the construction materials can be efficiently reused by recycling them or transforming them in fuel sources.

The third example- “The Tree”- by Norway company Artec, Bergen, Norway – schedulled for release in 2015

Fig. 18-exterior view (internet source- http://wood-works.ca/wp-content/uploads/5-rune-abrahamsen-bergen-in-a-wood-construction-fever.pdf)

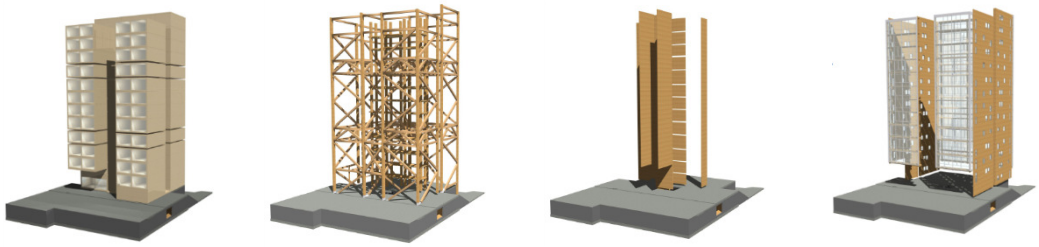
In 2014, in the city of Bergen, Norway, the highest dwelling building construction has begun, having 14 floors and a total height of 51 m. Called „The tree”, it is an experimental project meant to show that is possible to build

a modern, future-proof city, with respect to sustainability. As long as the timber is alive or it is used in the structural part of the buildings, it can be proved that making high buildings by using new solutions of modern timber-based structures is feasible.

The structure, made by Sweco As Company, is meant to be made of several structural types of timber, as follows: reinforced concrete foundation, frame-based structure and pre-made walls of glued laminated wooden planks and bracings.

Therefore, the structure is a combination of CLT walls, used for traffic knots and some inner walls, pre-made modules with walls of glued laminated wooden planks, glued laminated wooden planks structure on the perimeter and 2 concrete floors at the 5^{th} and 10^{th} levels.

The blueprint of the structural system is made of the following components(fig.19)



1.Pre-made modules 2. Pre-made glulam frames and bracings 3. CLT walls 4. Glass facade and outer wooden walls

Fig. 19-internet source- http://wood-works.ca/wp-content/uploads/5-rune-abrahamsen-bergen-in-a-wood-construction-fever.pdf

In conclusion we can say that "Tall wood buildings are not only possible, but the design and build concepts are being proven around the world. They offer tremendous environmental advantages, along with economic efficiencies that make them cost competitive with comparable steel and concrete structures." [6] Expressiveness that can have a wooden contemporary architecture today, I hope to open, through us - architects, new structural forms, more creative, more efficient, new structures of 21st century. The wood as a building material can be considered a material of the future, permitting to the structural engineers to discover new ways to build.

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UTOPIA: PROJECT FOR A PERFECT WORLD – INSIGHT AND INSPIRATION FOR ARCHITECTS

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Abstract

Motto 1: *‚A map of the world that does not include Utopia is not worth even glancing at, for it leaves out the one country at which Humanity is always landing' (Oscar Wilde)*

Motto 2: *‚Beware of what you wish for, because it will become true...'*

Utopia – a way to dream about the perfect world, be it in the past or the future…

But it is much more than that, it is a project, fully structured, a complete model of a possible, alternative world. Understanding such models is especially valuable in a time of accelerated change, such as the times we are living today. We will take into analysis some examples of Utopia and try to extract certain useful elements for the future, some ideas that could inspire an architect in conceiving architecture for tomorrow.

Plato's Atlantis: is it about an ideal image of the Golden Age or rather a program for reforming society? Thomas Morus: Utopia – the city structured for the perfect society.

The concept of 'utopia' started life in this work, one of the best attempts to think, with imagination and logic, from general principles to pragmatic details, a whole system, a city and the social life within it. Thomas Morus defines problems and offers solutions like a designer, structures the city like an urban planner, his descriptions express a vision close to architectural thinking. Francis Bacon 'New Atlantis' – another well rounded system, with a lot of interesting suggestions for today's architects.

This direction of thinking is present throughout our history, up until today. The following chapters were written by authors like: Jules Verne, Isaac Asimov, Arthur C Clarke, George Orwell, or Ray Bradbury. Science fiction is a very prolific and offers both an encoded critic of the current realities and a scenario for possible future ones.

Science fiction express radical ideas also through other means, 'comics' or films – this way, it becomes possible to reach an even larger audience, to increase the public awareness.

Globalization brings us all together in our quest for defining and building a better world. The science fiction stories, positive or negative scenarios, express our common and specific needs and worries. They have true value as models, to be tested virtually, that would eventually lead to possible solutions for our real problems. Architects are very much part of this adventure of questioning and discovery: smaller scale projects or large scale interventions express a more or less utopian conviction: through architecture we can influence significantly the way society works and people live.

Architectural versions for utopian ideas – from the 'Eden project' to landscape forming, a new type of relation between the natural and man-made environment is now being defined.

A program to reform our civilization, an utopian but surprisingly well structured and motivated attempt: the 'Venus Project' had a ripple effect in the 'Zeitgeist' movement and

exerts fascination and influence upon people all over the world, including urban planners, architects and designers.

We should also pay attention to the dystopias that materialize our worst fears – always too close to reality, they express a healthy critic attitude. Sometimes, they offer useful, early warnings that help us avoid 'dérapage' and excess; most of the time, they are overlooked and forgotten, until the time has come for them to be proven right...

Even well intended, well planned utopias can go wrong, when applied and verified into practice: some examples would be the Godin Familister, or Ricardo Bofill's Antigone architectural ensemble in Montpellier – in both cases, the inhabitants, the direct beneficiaries, were/are not at all happy in their 'Versailles built for the people'. We have here a very useful lesson for architects: to better understand the values and the motivations of the people that would live in their utopian architecture.

How can we, then, find the right balance, the right solutions? By using both common sense and critical thinking, by trying to verify in models before applying to real life, by letting enough space for natural developments and adjustments, by allowing the users to participate in planning and managing the projects and their application... In short, to change the attitude from ,*I am an architect, I know better'* to: *,I am a responsible architect, I create for others, so I'd better bring them into the process, make them partners in this adventure'* Responsibility and cooperation might be the keys for succeeding in building viable utopias, new ways to live on this planet or elsewhere.

However, there is always a risk in dreaming and proposing something for the future: *,Beware of what you wish for, because it will become true'* ...It would be irresponsible not to think or prepare for the future – but nowadays, the problem is that the future is approaching so fast that we do not really have the time to thoroughly think or prepare for it.

We prepare for expanding our world: living underwater, in space or on another planet: 'new frontiers…' – if we want to succeed in this new adventure, we should prepare well, share a common vision, and work together to achieve our goals. Utopian thinkers, artists, scientists, architects can help us define the structure of our common future – they could be the leaders in this process – this is a daunting task and involves a high degree of responsibility.

Therefore, we should also insert this topic into the educational process: theory courses, case studies and debates, studio applications that would prepare future architects for the challenges of the 'brave new world'.

Keywords: Utopia, dystopia, model, project, research, innovation, technology, futuristic.

Fig. 1 The Venus Project (Jaques Fresco)

Fig. 2 Paris Smart City 2050 (Vincent Callebaut)

1 UTOPIA – AN INTRODUCTION

Utopia – a way to dream about the perfect world, be it in the past or the future…but it is much more than that, it is a project, fully structured, a complete model of a possible, alternative world. Understanding such models is especially valuable in a time of accelerated change, such as the times we are living today.

This paper will take into analysis some examples of Utopia and try to extract certain useful elements for the future, some ideas that could inspire an architect in conceiving architecture for tomorrow.

We will use the concepts of 'utopia', 'dystopia', 'project', 'model' [1]. We will not focus upon the definitions, but rather discuss the relations between them, their relevance for architectural thinking and their influence upon architectural practice. We will comment upon motivation and attitude – the driving forces behind utopian thinking and projects, applied or not in real life.

We will present some of the landmarks of utopian thinking and point out some of the risks and benefits of the proposed utopian systems. We will comment upon the contemporary implications and possible applications of utopic thinking: inter-disciplinary or even trans-disciplinary research groups, think-tanks, futurist models, possible applications in architecture education. We chose 2 futuristic/utopic projects as case-studies: the Venus Project and Vincent Callebaut's propositions. Finally, we will present some Conclusions.

2 UTOPIA - LANDMARKS

2.1 Plato, Thomas Morus, Francis Bacon – the 'Classics'

To start with the beginning, a few comments on Plato's Atlantis: the myth of Atlantis seems to have been generated by Plato's work, and develop later into a long lasting fascination for a perfect society. In Plato's dialogues, Timaeus and Critias [2], we find a description of a very large island, situated into the ocean beyond the Pillars of Hercules; the reign of Atlantis became the most powerful in the region, and started conquering territories around the Mediterranean Sea. They were stopped by the warriors from ancient Athens – a society described as the perfect Republic. Ancient Athens becomes, in Plato's account, the reference for a perfect society.

The idea of building a system for the perfect society became a subject to other thinkers, writers, politicians, businessmen, artists and architects in the centuries to come.

Thomas Morus's Utopia [3] is the next landmark in our quest for utopian ideas useful for architects. It is this famous work that launched the concept of 'utopia': the invented word, 'utopia', derives from two Greek roots – 'eu-topo' = 'good place' and 'ou-topo'= 'no place'.

It is the name of an imaginary island in which Morus places an ideal society: *De Optimo Republicae Statu deque Nova Insula Utopia*. It proposes an up-dated, Christian version of Plato's Republic – a remarkable work of profound thinking and applied practicality which greatly influenced posterity. Published in 1516, it still is one of the best attempts to think, with imagination and logic, from general principles to pragmatic details, a whole system, a city and the social life within it. Thomas Morus defines problems and offers solutions like a designer, structures the city like an urban planner, his descriptions express a vision close to architectural thinking. The social system has a direct expression in its built environment: centralized urban planning, well structured, orderly cities, standard houses with gardens, balanced use of natural resources like water – all these ideas are still valid for today's architects and planners. Amaurote, the capital city, is the 'most valuable and dignified' is placed in the center of the territory and well connected to everything, by land or water; transportation is varied and safe, the water needed for agriculture and the cities is provided by the rivers, wells or even stored rain water – sustainability seems to be one of the planning criteria…

Some of these ideas, though, may now seem strange: slavery is a natural part of the system, there is no private property, people are rotated in the houses and places of work, no individual divergent opinion or action is allowed – the social system is rigid, even totalitarian by our standards.

Francis Bacon, the founder of the modern scientific method, based on orderly experimentation, presents in his New Atlantis [4] (published in 1627) his version of a perfect society. This story demonstrates how developing science could enable humanity to control nature and thus to help provide for the needs of all people. The city of Bensalem brings together the spiritual quality of Jerusalem and the living commodities, comfort and pleasures of Babylon.

Analyzing these first utopias we can already see some of the benefits and risks involved in the attempt to define a system for a perfect society: underlying every such model, there is a critical assessment of the problems in the real society in which the author lives and following this diagnosis treatment can be prescribed, solutions for actual reform can be found; still, as complexity is hard to understand and manage, the proposed reform systems are often too rigid or superficial.

We should also pay attention to the dystopias that materialize our worst fears – always too close to reality, they express a healthy critic attitude. Sometimes, they offer useful, early warnings that help us avoid 'dérapage' and excess; most of the time, they are overlooked and forgotten, until the time has come for them to be proven right...

Even well intended, well planned utopias can go wrong, when applied and verified into practice: some examples would be the Godin Familistere [5], or Ricardo Bofill's Antigone [6] architectural ensemble in Montpellier – in both cases, the inhabitants, the direct beneficiaries, were/are not at all happy in their 'Versailles built for the people'. We have here a very useful lesson for architects: to better understand the values and the motivations of the people that would live in their utopian architecture.

2.2 Jules Verne, Arthur C Clarke - 'science-fiction' literature, film and comics

This direction of thinking, the effort to imagine how to build a better world, is present throughout our history, up until today. The following chapters were written by authors like: Jules Verne, Isaac Asimov, Arthur C Clarke, George Orwell, or Ray Bradbury. Science fiction literature and film are very prolific and offer both an encoded critic of the current realities and a scenario for possible future ones.

Jules Verne (1828-1905) is a writer who based his writings on thorough documentation on the latest scientific discoveries [7]: in his novels, reality and imagination are woven into compelling stories, fascinating for people of all ages and cultures. We are still amazed by his ideas, so much ahead of his time, such as the submarine, hologram, flying islands, solutions to the water crisis in the Sahara desert, by his insights that reflect sustainability principles – reading his books is an endless source of inspiration for researchers and innovators.

Isaac Asimov and Arthur C. Clarke are two sci-fi writers that have solid scientific education – their work is based upon the rational, scientific frame of mind, enriched by spectacular flights of imagination and remarkable intuitions and 'prophecies' (A.C.Clarke 'predicted' man's landing on the moon, satellite communication and the intricacies of the relation between humans and artificial intelligence [8]). Their stories include more or less explicit references to architecture and the city, the implications of building human settlements on other planets etcetera.

In order to reach even larger audiences, to raise public awareness, science fiction extends the expression of radical ideas and visions of the future to film, comics and other media [9]. Films such as 'Minority Report', 'Gattaca' or Star Wars, Matrix, Fahrenheit 451, The Fifth Element, Inception, the Black Mirror TV series, animation film Wall E, Batman comics with the famous Gotham City etcetera, display surprising, extremely detailed and convincing cities and architecture.

The connections and reciprocal influences between architecture and film are subject to many interesting researches and events, such as the Arquiteturas Film Festival Lisboa [10] – its 2015 edition has the theme *'Welcome to the Future'* (another indication of today's need to imagine ourselves into the future and prepare for it).

Globalization brings us all together in our quest for defining and building a better world. The science fiction stories, positive or negative scenarios, express our common and specific needs and worries. They have true value as models, to be tested virtually, that would eventually lead to possible solutions for our real problems.

2.3 Virtual worlds: Second Life, SimCity

Game development and new technologies allow us to have novel experiences: we can build our own versions of urban structures in SimCity [11], from urban scale to the architectural detail, we can create alter-egos and share with others one or more Second Life(s) [12]. We can apply personal ideas on how to build an ideal city, a business or a circle of friends, or on optimum strategies and management. These applications offer us a giant playground/test laboratory where we can explore and develop our ideas. All this is but a glimpse of what virtual reality could bring into our real existence, in the near future. Making models, testing them, is actually the safest way to accelerate the understanding and learning processes – it is therefore very useful for decision makers, innovators, researchers and educators.

Furthermore, using new technological means such as computer aided design or 3D printing allow the architects and designers to better define, test and refine their proposals; the use of animated films could also help architects to better present their ideas and the conception process, enhance their communication skills.

3 IMPLICATIONS AND APPLICATIONS

Imagining alternative worlds is a very useful exercise for the human mind: it allows us to disguise criticism of our own realities, to structure and virtually test different models, to develop ideas and push to their ultimate implications, to question and propose, to define needs and offer solutions. This is extremely valuable not only for thinkers and writers, but also for decision-makers and problem solvers, for people that make and apply projects. We are living interesting times: there is a real pressure that pushes us to innovate, to change things on a massive scale – and we have to do it responsibly, we have to assume the role of co-creators of our future society and environment

Architects are very much part of this adventure of questioning and discovery: smaller scale projects or large scale interventions express a more or less utopian conviction: through architecture we can influence significantly the way society works and people live. But we have to remember that this is a collective work, which we conceive and build architecture for others, and we should do it together with our beneficiaries. We have to mention some interesting examples:

The Transcendent City: an animated film made by Bartlett School of Architecture graduate Richard Hardy [13]: he imagined an autonomous, artificially intelligent, sustainable city. *'The film produced for my final year Masters in Architecture questions whether the conception of artificial intelligence has been a necessity in human evolution and if we therefore should embrace emergent technologies to engage with problems of sustainability and the city.'* Good effort to reflect upon real problems, surprising conclusion, interesting presentation.

Under Tomorrow's Sky [14] (2012): *'Under Tomorrows Sky is a fictional, future city. Speculative architect Liam Young of the London based Tomorrows Thoughts Today has assembled a think tank of scientists, technologists, futurists, illustrators, science-fiction authors and special effects artists to collectively develop this imaginary place, the landscapes that surround it and the stories it contains. Across the course of the exhibition invited guests will work with the city as a stage set to develop a collection of narratives, films and illustrations. Wander through this near future world and explore the possibilities and consequences of today's emerging biological and technological research.'* Eclectic teams, novel think-tanks, provocative and inspirational rather than rational and effective.

Blogger Geoff Manaugh has more or less the same approach when he discusses the benefits Science - fiction and the City Film Festival encounters would bring to architects [15]: *'I have said many times before on this blog that contemporary architecture could learn quite a lot from the spatial and material imaginations on display in both film and science fiction' … what do those people who tell stories through and with space actually want from architecture? How do they use space? Rather than set out to discover, yet again, what architects think about cinema – or about science fiction, or about stage set design – why not turn the question around? Why not see what architects can learn from spaces, buildings, and cities produced by other fields? 'Or, to ask another question (…): if Architectural Record bills itself as a magazine about architecture, then why doesn't it ever cover, say, the apartment complex from Minority Report, or the office lobbies featured in The Matrix? That's architecture, too.'* Interesting proposition of reverse psychology, it could be a very useful exercise for the self-centered or self-sufficient architect.

4 CASE STUDIES

Architectural versions for utopian ideas – from the "Eden project" to landscape forming [16], a new type of relation between the natural and man-made environment is now being defined.

A program to reform our civilization, an utopian but surprisingly well structured and motivated attempt: the 'Venus project' had a ripple effect in the 'Zeitgeist' movement and exerts fascination and influence upon people all over the world, including urban planners, architects and designers.

4.1 The Venus Project [17]

'Very briefly, The Venus Project is an organization that proposes a feasible plan of action for social change, a holistic global socio-economic system called a Resource Based Economy; that works toward a peaceful and sustainable global civilization. It outlines an alternative to strive toward where human rights are not only paper proclamations but also a way of life. The Venus Project presents an alternative vision for a sustainable world civilization unlike any political, economic or social system that has gone before. It envisions a time in the near

future when money, politics, self and national-interest have been phased out. Although this vision may seem idealistic, it is based upon years of study and experimental research. It spans the gamut from education, transportation, clean sources of energy to total city systems. …With the intelligent and humane application of science and technology, the people of the earth can guide and shape the future together while protecting the environment. We don't have enough money to accomplish these ends but we do have more than enough resources.' (Fig. 1)

This is, in our opinion, one of the best examples of contemporary Utopia – even better, it is the work of a self taught industrial designer/architect Jaques Fresco, who likes to call himself a 'social engineer'. Born in 1916, he grew up in Brooklyn, NY, during the Great Depression – this experience seems to have ignited in him the need to formulate a radical reform system.

The Venus Project is one man's vision of a better future for mankind, based on revolutionary ideas about government and property; it proclaims that we all face the same problems that should be solved by applying global strategies. While his ideas of social reform are judged to be too idealistic, the concept of resource-based economy has potential, as an advanced way to apply sustainability principles. Also, the urban and architectural solutions are quite interesting: varied and adaptable, orderly and simple, geometric in shape, they offer possible responses to real needs. *'Synergetic's theorist, Arthur Coulter, calls Fresco's city designs "organic" and "evolutionary" (rather than revolutionary). Coulter posits such cities as the answer to Walter B. Cannon's idea of achieving homeostasis for society.'* [18].

'Hans-Ulrich Obrist notes, "Fresco's future may, of course, seem outmoded and his writings have been subject to critique for their fascistic undertones of order and similitude, but his contributions are etched in the popular psyche and his eco-friendly concepts continue to influence our present generation of progressive architects, city planners and designers." …' [18].

From our point of view, Fresco's vision has a lot of qualities and some fundamental flaws: it is novel and synthetic, a commendable effort to encompass all the complexity of our contemporary world; it is, on the other hand, a non-collaborative endeavor, a somewhat rigid and simplistic way of solving complex and evolving problems, it is based upon an exaggerated faith in technology.

4.2 Vincent Callebaut Architectures

Here are some quotes from an interview made in 2008 and our related comments:

'The Next Prototype Exclusive interview with a visionary architect: Vincent Callebaut [19]
'1 Could you sum up your studio's attitude to architectural design?
The global attitude of my architectural design is the "Prospective Sampling". It is a new way of creation which consists in mixing a scientifical and cultural survey with a computer programmatic approach in order to transcribe in architecture landscape distortions or ecosystem abstractions. Each architectural project at any scale, wants to anticipate through this digital hybridization, the future lifestyles by inventing new imaginary worlds. More poetic worlds. More equitable worlds. More natural worlds. More sustainable worlds. Actually, more humanistic worlds!'. We have here a clear 'mission statement': a utopian program to reform the world and the method to be applied: mixing and hybridization between nature and technology.
'The architecture becomes a biotechnological remedy to the global ecologic crisis, a living interface connecting the man and the nature. Our architectural projects study thus organic systems for the development of non organic or organically modified systems able to have technologic applications.'
This is a proposition to apply in architecture the Bionics principles – learning from living organisms - and to find ways to enable better interactions between the organic and the non-organic.
'5 Is your work an individual statement or a team solution?
Each project is based on the knowledge of a multidisciplinary and international team that is the assembling of the specialties that creates the force of our concepts. By interdisciplinary, the architects of my team, interconnected to the electronic World Wilde Web work very close together with biologists, chemists, ecologists, engineers in structure and computer, but also with artists from everywhere in the world! Thus, from the confrontation of the ideas of diverse disciplines, I enable the appearance of innovative ideas!'
This is a description of multi and inter-disciplinary team work, developed on an international scale, in order to define and develop innovative concepts.
'12 In your opinion, where is architecture today, and what is the good architecture for the future world?
Result of an unrestrained capitalism lost in the productivity and the benefit, the world of today lacks utopia, dreams and brains that crackle! I am not nostalgic and I find the current time very extraordinary! We are at a

turning point of the humanity! The inhabitants of this Earth realise finally their ecological print. In a world of the immediacy, I speak very often of the future simply because my projects dare to invent long term and sustainable!'
He criticizes short sighted strategies built upon the principles of unrestricted capitalism, and proposes to oppose to these realities a healthy mix of visionary enthusiasm and responsibility.

'My Archibiotics act as synergetic capacitors between the biotic factors (action of the living on the living: parasitism, symbiosis, mutualism, etc.) and abiotic factors (action of the not living on the living: ground, climate, chemistry, etc.). '
These 'archibiotics' are forms of self managed, interactive forms of architecture, enabling natural and artificial environments to co-exist and collaborate - the idea of architecture as an interface between men and nature is risen here at a much more ambitious level.

'The strategic ambitions of this "interactive" architecture, that means in total interaction with its environment for a sustainable development, are the self management, the recycling of organic, industrial and domestic material, the configuration in real time, the eco-morphing, the biological and genetical diversity, everything leading to artificial geographies and dynamical ecosystems beginning new life cycles.'
'*The new technology that will revolutionize the architecture is the parametrizing in real time such as the Open Source or the Smart Mobs. It will enable to draw interactive cities equipped with invisible numeric infrastructures and to manage at best the complexity of our contemporary cities.'*
It is a vision of a giant effort to re-define the world in its entirety, first with implemented projects and strategies and later with self-managed, self-adjusted responses.
'24 Finally, what is the commitment of Vincent Callebaut's office?
To anticipate. To prospect. To touch. This is the great challenge to reinvent and to implement day by day the life of the worldwide citizen!' Anticipation, exploration, testing, the challenge to innovate at an unprecedented scale.
'As architect of the urban and human horizons, I invite you and us to be the pioneers of the « Ecopolis », challenge that is in the heart of the current (r)evolution of the contemporary world. Because the interest raised by the problems of the sustainable development is neither a mode, not a temporary epiphenomenon. I recognise its true dimension, of a transformation in power, in phase and in depth of today's society. I tell us, tell you: build a city more and better in harmony with the world.'
Ecopolis – the city of a harmonious and sustainable future! and an invitation to participate to this great adventure of in-depth transformation of our society.
Callebaut's strategies for this new Ecopolis are illustrated in his proposal for Smart City Paris 2050 (Fig. 2). At first glance, the most striking feature of this project is the rather invasive hybridization of classical Paris with bio-morphed and natural structures. Although the premise of bringing much more natural elements into the city is very plausible, the proposed solutions seem aggressive, eclectic, and even aleatory. The cultural identity and inherent elegance of Paris as we know it is almost wiped out, as it is suffocated by monster-like hybrid structures. It is yet another grand architectural gesture, disrespectful of the past, sacrificing harmony for contrast. We will have to see if this type of fracture between different stages of development of human civilization can be avoided… Maybe we will not have the luxury of slowly, naturally adapt to new developments, but rather we will be forced into abrupt change – let us hope that in the process, we will not lose essential aspects of our humanity to the profit of overwhelming autonomous technology.

5 CONCLUSIONS

Even well intended, well planned utopias can go wrong, when applied and verified into practice - how can we, then, find the right balance, the right solutions? By using both common sense and critical thinking, by trying to verify in models before applying to real life, by letting enough space for natural developments and adjustments, by allowing the users to participate in planning and managing the projects and their application... In short, to change the attitude from ,I am an architect, I know better' to ,I am a responsible architect, I create for others, so I'd better bring them into the process, make them partners in this adventure' Responsibility and cooperation might be the keys for succeeding in building viable utopias, new ways to live on this planet or elsewhere.

However, there is always a risk in dreaming and proposing something for the future: ,Beware of what you wish for, because it will become true' ...It would be irresponsible not to think or prepare for the future – but nowadays, the problem is that the future is approaching so fast that we do not really have the time to thoroughly think or prepare for it.

We prepare for expanding our world: living underwater, in space or on another planet: "new frontiers…" – if we want to succeed in this new adventure, we should prepare well, share a common vision, and work together to

achieve our goals. Utopian thinkers, artists, scientists, architects can help us define the structure of our common future – they could be the leaders in this process – this is a daunting task and involves a high degree of responsibility.

Therefore, we should also insert this topic into the educational process: theory courses, case studies and debates, studio applications that would prepare future architects for the challenges of the "brave new world".

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MONASTRIES PILGRIM ROUTES –

SIGNIFICANCE AND OPPORTUNITIES

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Abstract

This research refers to the significances and opportunities that monasteries pilgrim routes offer for the enrichment of the touristic potential of the surrounding areas, trying to recreate and to enhance the old route existing in the previous centuries.

Enhancing cultural routes means reconsidering the relational mobility, reconsidering some old originate routes. The concept of relational mobility implies the mobility that has not as result the movement of a person from a destination (place) to another destination (place), but that offers alternative routes, meetings, involving the concept of rhythm and living mobility, forming a certain sensitivity in the perception of landscape as a life frame, within a cycled structure of networks.

It is about that relational mobility which connects space and time, persons and ideas, produces and significances, when the travel is more important than the means of transport, in which the richness of experiences gained in the travel becomes more important than its price and its duration.

In the wider framework of understanding the dynamic dimension of the heritage, reflecting the transdisciplinary research methods, the attention switches from the individual objects to the history of the processes that have generated the objects, from the historical inventory to the dynamic evaluation of the transformings generated phenomena: in the natural as well in the antropic sphere.

The perspective starting from the historical processuality, encouraged by The European Landscape Convention from Florence, enhancing the conscience of the historical dynamics, being them still alive, latent or dissapeared, is essential for the study, for innovative strategic proposals.

Keywords: relational mobility, integrated sustainability, transdisciplinary research, eco-place.

1 INTRODUCTION

The meaning of a religious pilgrim route becomes enhanced in that expression of the territory where the history traced a hidden dimension and the monastery, as a spiritual sign in the landscape, as well as an architectural sign, keeps the role as a pole attraction.

When it comes about route, the process implies not only what has to be seen, but also passing further and going through, relating the reality with sacred beliefs and imagination, living the place as a complex synthesis.

The relational mobility in the contemporary rurality regards slow processes, continuously evolved, whose dynamics and innovations reflects new creative achievements. In this strategy, the programs, projects and management are in continuous interrelation, structured within an evolutional, ecological and participative planning, the Slow Planning process.

2 METHODOLOGY

2.1 Concept definition

In the last decennia the concept of "cultural goods" received a wider significance, from "tangible" to "intangible", achieving more inclusive and complex meanings. In this context, the concept of monasteries pilgrim routes appears as a particular side within the framework of a new concept of "cultural route", part of the program of cultural route of the Council of Europe, created from 1984 till 1987, to encourage Europeans to discover a certain sense of "collective memory" that remains to be reinvented. [1]

In the same time, Pierre Nora elaborated the definition of "lieux de memoire": "an object becomes a place of memory when it escapes oblivion, for example with the display of commemorative plaques, and when a community reinvests on it its love and its emotions.

2.2 Transdisciplinary approach method

Basarab Nicolescu, in *Transdisciplinary Manifest*[2] , searched the Reality looking at what does it belong between the disciplines, passing through and existing further than any discipline.

Trying to understand the actual world, regarded from the perspective of science and sacrum, in the sistemic and cuantic vision, and considering the scientific knowledge as an imperfect sphera including also small spheres representing the unknown Basarab Nicolescu defines sacrum as „something that is continiusly present and irreductibil at the mental operations" (Basarab Nicolescu, 2007).

Disciplinary Knowing	Transdisciplinary Knowing
IN VITRO	IN VIVO
External world	Corespondance between external world and internal world
Knowing	Understanding
Analitical intelligence	Intelligence as an equilibrum between body, feelings and mind
Power and possesion orientated	Wondering orientated
Binar logic	Including the third logic
Excluding values	Including values

Table 1

Disciplinary Knowing şi Transdisciplinary Knowing

In the transdisciplinary landscape analysis, the atention switches from the individual objects to the history of the processes have generated the objects, from the historical inventory to the dynamic evaluation of the transformings generated phenomena: in the natural as well in the anthropic sphere.
The perspective starting from the historical procesuality, encouraged by The European Landscape Convention from Florence, 2010, enhancing the conscience of the historical dynamics, being them still alive, latent or dissapeard, is essential for the study, for innovative strategic proposals.

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[1] Catherin Withol de Wenden, European Citizenship, 1997

[2] Concept introduced in the *Transdisciplinary Carta* adopted at the first International Congres of Transdisciplinarity, Portugal, 1994, by the phiscian Basarab Nicolescu, president of International Center of the Reflection Group for Transdisciplinarity (CIRET)

3 RESULTS

3.1 Pilgrim routes as main switches in the tourism management

In the transdisciplinary approach, monastries pilgrim routes as part of the cultural routes are integrated in the main switches in the tourism management:

3.1.1 Transdisciplinary research programs, including the participative research

The landscape perception should be analyzed from historical perspective, but also considering the recently significances; the reasearch must includ an analysis of main quality landscape indicators as aesthetical and cultural landscape value, biodiversity, flood and erosion control, potential multifunctionality, recreation activity, timber and ceramic crafts, risks and fragilities.

3.1.2 Enhancing the interest for architecture values reusing existing buildings

Including archetype, identity and diversity, the study is focused not only on the historical center, but on the historical structure of the whole settlement, with all the natural and anthropic resources. Landscape conservation has material or immaterial advantages like: visitors attraction, encouraging pedestrian routes and the slow mobility; maintaining of the authenticity and character of a place; human scale.

3.1.3 Education and involving of the citizens

3.1.4 Implementing of natural parks, to preserve pure the non- anthropic ecosystems;

These “eco-places” become structures to skill technical, aesthetic and significance aspects in the art to inhabit the landscape. Overcoming the limits of the concept of open-air park of open-air museum, the visitors can be organic involved as possible inhabitants, even for a short period, deepening the cultural experiences and actively participating to the maintenance of these “eco-places”.

3.1.5 Development of the oenogastronomy and ecological gastronomy,

including the enhancing of the interest for the local small scale economy; enhancing the recreative and therapeutic services;

3.1.6 Developing of the ornithological tourism in the natural protected areas as part of biodiversity;

3.1.7 Enrichment of the touristic potential through enhancing new relational meanings

In this way, monasteries pilgrim routes can be considered as integrated part of mythical and cultural routes, linguistic geography, transhumance routes, relational trade, rediscovering of old transport routes and old routes of the persons, ideas, traditions.

Enhancing monasteries pilgrim routes means reconsidering the relational mobility, reconsidering some old originate routes. The concept of relational mobility, part of the slow mobility concept, implies the mobility that doesn't has as result the movement of a person from a destination (place) to another destination (place), but that offers alternative routes, meetings, involving the concept of rhythm and living mobility, forming a certain sensitivity in the perception of landscape as a life frame, within a cycled structure of networks.

It is about that relational mobility which connects space and time, persons and ideas, produces and significances, when the travel is more important than the means of transport, in which the richness of experiences gained in the travel becomes more important than its price and its duration.

3.2 Strategies to enhance the monasteries pilgrim routes

Related to other types of cultural heritage, monastries pilgrim routes can be geografically wider, including nature diversity and intangible elements.

In the related decision making process, many actors are involved, specially in case that these routes includes more countries. It becomes unavoidable to create an epistemological cordination between the scientific research and the local representants of the community. From this point of view, it is important to integrate monastries pilgrim routes as a resourse for local development and to connect them in the strategies for resilient landscape development. Considering the complexity of routes as dynamic cultural goods it will be necessary to consider

the potential of each route (Berti, 2012), by creating a continuity in percieving landscapes, activating innovative processes for highlighting historic landscapes, giving space to dissappeared landscape's fragments or hidden resources, that have lost their coherence due policies and changes that couldn't read the deep signs in the territory. The route is not only a path, a single monument or a portion of territory, but it means a complex composition of still existing or even forgotten interrrelations, both territorial, mental, phisical, religios, between the different human and natural factors involved in the route. The religious routes must be seen integrated in the cultural routes, as an instrument to configure a system of the place identity reconsidering the followings:

- rediscovering the old routes from Romanesque, Gothic or Byzantine period that connected Europe in the Middle Age;
- relational trade, offering conditions for the exchange of goods, but also for exchange of ideas, values, forms, traditions, feelings, sensitivities
- reconsidering old railroads in the mountains in the context of a micro local transport completed by a minibus. This type of transport still exists in some places and must not be destroyed;
- reconsidering old transhumance routes (old routes of shepherds) and analyzing in this context the linguistic geography. Etymology of a word means not only the history of the word itself, but also of the entire natural words group to whom it belongs, of all words which form its family words, originating or adopted, the history of significances, of the things are represented, of civilization facts, of ideas and feeling they represents. Is is a lesson of wisdom and knowledge, to understand the relations and contact between different cultures, of different ideas and sensitivities.

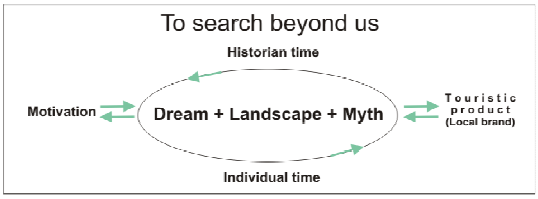

Fig.1 - Interactions within pilgrim routes

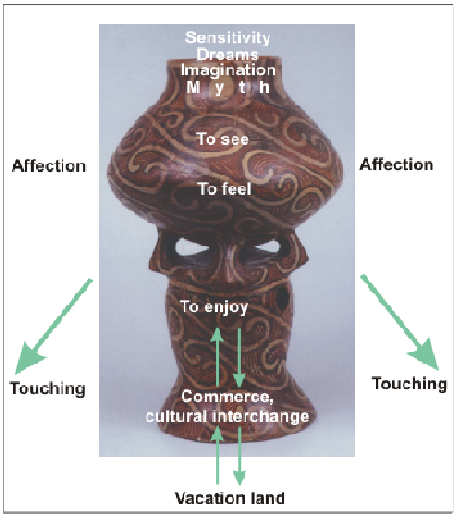

Fig.2-The tourism amphora

3.3 The Monastery Pilgrim Route to the Prislop Monastery, Hateg County

Studying the reflection of the multiple layers related to the particulary topos: on Hateg County, on Prislop monastery landscape related to the nearby surroundings Silvasu de Jos and Silvasu de Sus, on the monument self and the pilgrimage at the Priest Arsenie Boca's tomb, on the dyadic entity – priest-monk , Arsenie Boca and priest-professor – Dumitru Staniloae, the strategy for a responsable development of the monastery pilgrim route to Prislop Monastery in Hateg County, Hunedoara, regards special demands:

- Analysis by a transdisciplinary approach of the relation between science, religion, art and a sustainable, dynamic and responsible tourism;

- Analysis of the integrity of the places founded on the recognizing of the archetypal characteristics as a starting point for a responsible and sustainable tourism;

- The typological study of the historical buildings, as a result of the empirical knowledge associated with aesthetic and architectural qualities, which takes into account the potentiality for offering typical elements to the contemporary architectural landscape; chorography of the building traditions and the relation between the cultural historical policy and the spatial policy

- Considering landscape knowledge of own life ambiance, as an experience strongly involved in certain experimental circumstances as ecomuseum, botanical gardens and places for relational changes as a possibility to discover the pluri/rurality.

- The Slow Planning as a different manner to create landscape, processuality based, reconsidering the relations with time and space in evolution.

3. CONCLUSIONS

In these places where the people (the tourists) can experience concrete the landscape, it becomes unavoidable to find an advanced ecological strategy to recompose the cultural ambiance which still exists only through some fragments and traces.
Including all these different rhythms, in the perceiving of the landscape, through the relational mobility, brings a new dimension in the sustainable approach of the territory, with all its specificity and diversity, with all its forgotten of hidden resources.

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TRADITIONAL SENSE OF SPACE AS BASIS FOR A NEW ARCHITECTURAL THEORY

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Abstract

Today it is almost a pleonasm to use the terms *society* and *crisis* in the same sentence. But, although at the surface we are apparently facing different disparate crises – ecological, economical, demographical or political – upon a careful analysis it become clear that society is passing, in fact, through a period of primarily ontological profound changes.

The mechanism of these transmutations is the expansion of scientific knowledge, confirmed through the day to day life practical applications and through its enormous transfigurative impact on our existential/living patterns. In other words, scientific understanding of the universe have constantly rewritten human concepts of space, time, matter, energy, life, existence, that form the core of human mentalities, existential patterns and, important for us, the creative practices and living patterns – art and architecture.

The paradigms forming the basis of human ontology changed first from traditional empiric beliefs to scientific knowledge - respectively to the mechanistic/materialistic theory; secondly from mechanistic to relativistic cosmology; and thirdly, nowadays, from relativistic to quantum cosmology. Thus, if the traditional man viewed himself as an integrant part of an organic universe, at the same time both material [physical] and immaterial [conceptual, symbolic, ritual], beginning with the 16 and 17 centuries and until the 20th century society has developed a materialist vision, based on the dissociation of the self from the world and on the idea that the Universe, respectively the nature, is an assembly of independent bodies conforming to a series of immutable laws and indifferent to the human presence but manipulable through science and that can be egotistic used on our demand regardless the consequences.

But today, at the beginning of the 21st century, traditional intuition and scientific knowledge are beginning to overlap. Lately developed science fields studying the world of quantum particles, chaos behaviour or complexity, have redefined our scientific understanding of our Universe as characterized by unity and interconnection. Clearly, following the historic pattern, the human mentality is beginning to shape itself a new unitary and organic vision, a new understanding of Universe, nature, life and existence and of the relations between them, similar to the traditional concepts, but parallel, based not on intuition but on scientific knowledge. Consequently, this phenomenon will transform culture and artistic creation, including architectural creation, anticipating the statement of new architectural paradigms, theory and practice.

By correspondence, the basis of this new theory has to be based not on the constant reinterpretation of the architectural theory specific to materialistic paradigms, but by going further into the past and looking at the architecture of the traditional society: similarities found by comparing the ideas of unity and interconnection as the basic principle of the quantum universe and the manifestation of the same ideas in traditional empiric cosmology are suggesting that traditional, in our study - Romanian, sense of space contains within an

intuitive knowledge that can, by means of interpretation, become a source of inspiration for a new architectural design.

This study looks into the spatial structure and representation of the traditional psycho-physical Universe in order to understand the traditional architecture as a complete expression of man experiencing its Universe, as a basis for extending these interconnections in the case of contemporary and future architecture built as a materialization of the relation between modern man and its contemporary view of its existential universe.

Keywords: Traditional, Scientific, Vision, Space, Transfiguration.

1 INTRODUCTION

This paper is based on two premises.

One is that of crisis, more and more present in the contemporary society. But even if we hear about many different crises, with time we can understand they are connected and have only one singular reason, respectively our own existential patterns in relation to the Universe's ones. In other words our way of relating with the environment around us and in other words the way we understand the Universe we exist in, its structure, processes, reasons. Everything else is just a mirroring of this, a simple consequence. Being in a state of crisis one has two options: going back, reverting to the state before the crisis, or moving forward and overcome the crisis through a breakthrough, signs of which we can see in today's scientific knowledge generation. As we will see, it seems that, in a way, now we can do both, at least in the case of architectural research and practice.

The second premise is the concept of a unitary and interconnected Universe. Although, at the beginning, scientific knowledge has differentiated itself from religious and metaphysical knowledge by affirming its interest only in the visible and sensory experienced Universe, but not rejecting the invisible Universe, at the beginning of the 20th century it stated a strictly sensory material Universe, made by disparate objects interacting through deterministic laws. However, at the present, sciences are rewriting paradigms and theories, beginning to describe a Universe whose unity and interconnection are its main characteristics. This idea, somehow strange and new to someone learned to see itself dissociated from a Universe which is inanimate or unconscious, was, in fact, a given of the traditional cosmological systems.

"*Architecture is in and of its time*" [[i]]; leaving aside the obvious differences between construction techniques and materials of different time frames, architecture and art are based on a system of values within which the sense of space, by which we understand how the space is conceived, perceived and experienced by the people of certain time periods, pays a determinant role [[ii]]. It becomes clear that, to be able to understand the implications of the current scientific theories on architecture and the built environment, we should first examine how the traditional man understood, represented and built the space of his Universe.

2 PSICHO-PHYSICAL SPATIAL REPRESENTATIONS OF THE TRADITIONAL ROMANIAN UNIVERSE [iii]

In all forms of manifestation of the traditional people's spatial representations, we can observe a very strong link between the vision of the world as a whole, the phenomenon of existence, the mentalities and their expression through life patterns and the act to edification.

Such relationships will form the basis of unity and organicity of the Romanian traditional universe, in which man, the culmination of divine Creation, founds himself in an indissoluble relationship with the universe that contains him:

"*In the popular vision, this dimension (the space) is not only a line or a direction, but it is a true frame, a complex phenomenon, an expression of human's participation to cosmos. The breath of cosmic harmony may be encountered in the various ceremonies of the family or in the agrarian cycles; in this way a literature of wide spiritual horizon was possible as 'Miorita', 'The Forgiveness' at weddings, 'The fir' in preparations for funerals, 'The Mohului Hill ', etc. Paying greater attention to the style of homes and interiors, the everyday life is responding to this influence.*" [iv]

For the Romanian traditional society, the concept of space's genesis has its roots in the Creation myth itself, an archetypal representation of world's birth and structure, extremely important for the understanding of mentality's foundations by which traditional man thinks about and represents the idea of space. The legend remembers that the act of Creation took place in the middle of a continuous undifferentiated space. After Creation, the space, the Whole, has been divided into two halves, two lands - the 'land/world of the living' and the 'land/world beyond' (sometimes of the dead) - complex spaces, between which permanent exchanges are produced.

Distinction between the 'world of the living' and the 'world of the dead' is very clear in traditional society, but, at the same time, they are so closely interconnected that they constitute an indivisible whole. The 'world beyond', which, to the contemporary man is the world of the imaginary, for the traditional man is just as material and real.

Another very important element of the myths of Creation is the fact that the 'world of here', once it is created, is flat, sometimes transparent, sometimes dry and barren and sometimes lacking thickness, thus a limited space. Only afterwards it will receive the other attributes that transformed it into what we call today the natural environment. As we know, the idea of a limited space and of the flat Earth has been supported for a very long period of time, both by traditional society's mentalities as well as by religious philosophy that vehemently rejected the idea of a spherical world. But we can extract from here one of the basic characteristic of our world: it seems that, in order to be able to exist, the world of the living must be a limited space.

Earth's vision as a primary flat space, dry and barren is also connected with the idea of 'emptiness'. Before becoming corrugated, or differentiated, and before becoming the receptacle of life, vegetal, animal and human, the Earth was empty. 'The emptiness', the desert, is the opposite of normality, the place where devil lives, the idea of separation, i.e. where the ascetic is separated from society and also the place where divinity 'turns his back' on creation. Therefore, logically, before it can support life, Earth has to be blessed, and only after the Divine blessing the Earth became the receptacle of life.

This act of Divine blessing has a correspondent in the day to day life of the traditional society through ritual acts of taking space into possession or the act of founding, an expression of the spatial continuity between Earth and 'Heaven'. Only after it has been taken into possession a space becomes a place, and then man can work with it – constructing it, plant it, gathering it or simply enjoying it.

"*For the Romanian peasant, the place is .... a concrete given, of high variation, with its own characteristics, impossible to define in abstract terms. The place is defined by its specific quality, the material's data (in terms of concrete) and its spiritual potential.*" [v]

This space is further conventionally divided through ideas of center, vicinity, distance, boundary, cardinal orientation, good or bad places. But there is no universal law of segregation – each people have their own quantification scale while the Universe remains a whole.

Another affirmation of the link between 'the word here' and 'the world there' is the presence of the *axis mundi*, which has, at the same time, the role of differentiating, of pinpointing the 'world here' and the 'world there' and the role of connecting them, of enabling there's exchanges. An effect of that is that traditional thinking is relating the vertical hierarchization of the spaces of the world, visible and invisible, with the ideas of good and bad. Thus man is expressing a connection, so close that we can speak of an identity, between moral principles, of the inner consciousness, and the cosmic and natural order. In this way he reaffirms its membership and participation to the universal life and order.

On a careful analysis, we can see that it is not so much about a connection, no matter how close it might be, but about a spatial, expressive and functional continuity, that has at one end the Universe as a whole, as it was perceived in those times, and at the other end the smallest and seemingly insignificant forms of the physical and ideatic universe and between them all other forms of manifestation of the Universe.

The traditional man has a mystical consciousness. In his life and throughout the space he's building, all the elements of the Universe are expressed, be they material, of physical nature, or mystical or divine in nature, collected, interpreted and transmitted by the way of myth, metaphor, ritual and religion. In traditional consciousness, but also more recently in contemporary sciences (and in the near future, also in the contemporary consciousness) these elements are part of a universal continuum, co-existing and reciprocally influencing each other.

These myths and metaphors, describing the cosmic structure, are expressed continuously through traditional universe, through mental and physical forms of spatial representations, through the built form, ornament or furnish, all of them representing a form of communication and participation, by which those attributes of the universe that cannot be understood logically are experienced, explained and revealed [vi].

3 SCIENCE, MORPHOGENESIS, MAN AND THE UNIVERSE

The materialist vision of the contemporary society excludes the 'land of the dead', the 'other world'. Everything that now is not part of the sensory perceptible world of the living is seen as void, nothingness, non-existent. The two lands/spaces are thus impossible to reconcile, between them there is no sort of communication.

It can be noted that, although both systems are dual, modern society remains trapped in the world of the living, while in the traditional society the principle of interconnection becomes the organizing principle, which do not refer only to spatial references, but it structures the entire life of the society.

However, starting with the beginning of the 20th century – the development of the quantum physics - and the evolution towards the Information Age – the development of the computer – the sciences changed the paradigm describing the foundations of the Universe around us, because the old matter-energy paradigm was not able any more to explain all the phenomena and natural processes the researchers had discovered. The new matter-energy-information paradigm was developed along with new scientific theories like chaos theory, catastrophe

theory, systems theory, network theory, fractal theory and other, all of them contributing to the new science of complexity and border scientific areas like Geobiophysics, Astrobiophysics or Bioeconomy. As professor Florin Munteanu states, these are just intermediary stages between disparate sciences and a *Gaia type global concept* in which sciences are interconnected and the end object of the study is the *natural/artificial hybrid* which is now the Earth [vii]. The natural and the artificial are interconnected and interdependent and the same relation exists between the visible macroscopic world and the invisible microscopic world, everything forming an indivisible whole, a unitary Universe much like the one present in the traditional beliefs and mentalities.

Catastrophe theory and fractal theory have also radically changed our morphological theories. First viewed as result of a strictly mathematical determination, the world of forms, be they mineral or biological, natural or artificial, is now seen as too complex to be analyzed only in quantitative terms [viii], because of its fluctuant and in balance character. Current leading morphogenesis theory, stated by the well-known biologist Rupert Shaldrake, advances the ideas of a morphic field and morphic resonance to explain the growth of forms from the smallest one to the biggest and it applies not only for the genesis of forms in general but also for other sciences like biology or psychology. The main idea is that of the recording into the morphic fields of all past information/event and that of transfer of the information to future objects, beings, occurrences, phenomena, etc with the effect of directing the present and future evolution of their forms. Equally important, a human being is conceived not only as a biological entity but as a matter-energy-information system that is in constant connection with the morphic field, with which he has a bidirectional relation. It influences and it is influenced by the morphic field and thus through the morpfic field "*a living being can emit morphic information (thus structuring, generating) to act on other beings or matter in general*" [ix].

It becomes clear that the interconnection and interdependency between the human being and its environment is inherent.

4 THE NEED OF NEW FOUNDATIONS IN ARCHITECTURAL THINKING

If the extent of human knowledge and inquiry was reduced by the preponderant materialistic orientation of the scientific research, then all cultural fields have been also depleted, the wealth of meanings, expressions and manifestations becoming increasingly limited by materialistic vision.

Today, the theory of architecture also presents signs of this degradation.

For example, when analyzing window's voids of a traditional building, the architects perceive them mostly to be specific to a particular material and technical construction. This is only partially true because, having the same construction material, e.g. rock, earth or wood, in different geographical or temporal areas, popular architects have created different proportions and locations of the voids on their building facades. What we forget, fortunately not always completely, is the fact that the essence of the idea of an opening/window, of its dimensions, of the mass-void proportion of the building etc, are a direct expression of cultural specificities of the various communities, respectively of their spatial vision and also a consequence of the ways by which this mentality is expressed in physical space through built spaces and lifestyles.

Another problem is that of the space creator's mentality. Traditional vernacular architecture shares, or in other words, it subsumes to a common vision of nature and of human existence within it. It was built by this mentality, by this credo. That is why all of the vernacular

construction assemblies, both villages and cities, are organically constructed, not just built but grown into being, unitary and in communion with both countryside and existing built context, becoming a direct expression of the phenomenon of life. Nowadays, especially with the increasing globalization, it can be easily seen the fact that the beneficiary of architecture, the ordinary people, profoundly feel the lack of unity throughout the built environment and the lack of the relationship between it and its environment, as well as the fact that this built environment, instead of becoming a support of connecting and relating, in fact, by uniformity and lack of significance, limits his the opportunities for expression and manifestation of natural processes.

It has become an established practice of contemporary architecture the grounding of our ideas and basic concepts on different sources of inspiration, cultural (philosophical, artistic) or scientific, seeking to create our own significations and meanings. Sometimes we seek to catch the praised *genius locci* in its various manifestations, to look for the most appropriate way to build a site, but in the end, most of the times, the qualitative attributes of the site become perverted by the desires of the builder. We again forget, in both cases, that the specificity of the site is given, in the first place, by its appurtenance and its relations with the Universe and environment containing it. This is what creates shape, meaning and significance, as stated by the morphogenesis theory. Site's attributes are a particularization of universal structure and laws and, just as a grain of wheat will germinate to become a speck of wheat and not barley, when we build and we lose the seed with the specific information, that building or that assembly will never relate or interconnect with its existential vicinity. The new construction, or constructions, will disintegrate the specific natural spatial continuity and will not be, or become, a part of the place.

All situations mentioned above are the result of a materialistic vision which dissociates and separates, forming mentalities and research patterns that interrogates by dividing the whole in apparent and ever smaller parts, but which, when trying to rebuild the whole by adding the constituent parties forgets that, in nature, the whole is always more than the sum of its parts.

These, so called 'fallacies', illustrated above, are first of all, I stress by repeating, a problem of mentality, this being the essential difference between the popular 'architect' and the cult (modern) one; it is the difference between a vision in which the human element is integrated in nature and is a part of the systemic exchanges which characterizes the phenomenon of life, and a vision in which the man is superior to nature and a handling it only on its own account. We can say that this is the result of the morphic field of the classical science; information strongly supported and defended, passed through the morphic fields, that has influenced architects and their architectural creations. Starting with the 18th century, the theory and practice of modern architecture has fallen into this trap of materialistic mentality, the House Machine of Le Corbusier being a perfect example of this.

5 CONCLUSIONS

If contemporary society has lost the attributes of unity and organicity by appropriating cartesian division I – world, which has had the effect of mental and physical fragmentation of the Universe, the new scientific paradigm is again stating the existence of an integrated Universe, supporting its immutable unity and human life as inseparably parts of the ecosystem of life which we call nature.

Following the new scientific paradigms, we consider that human society as a whole is on its way to a moment of awareness, of reconsidering our place and our role and, just as important,

a moment from which we will substantiate our life styles and patterns on a single scientific paradigm, that of an integrated and interconnected Universe. Step-by-step, this phenomenon will influence and transform the cultural and artistic creation areas of manifestation, and thus the process and the end object of architectural creation.

The morphogenesis theory of Rupert Shaldrake is more and more validated by scientific research areas like Quantum physics, Complexity, Neuroscience, Biology or Psychology. After a three hundred years detour of studying the quantitative mathematical attributes of the Universe, upon the point of entering the unseen world of quantum particles, sciences are re-discovering its qualitative dimensions.

As we have seen, if for the traditional man, space sizes, location, orientation are at the same time quantitative and qualitative dimensions, for the materialistic society and scientific paradigm, assumed by human perception, they remain only quantitative. Ordinary people, however, continue to confer qualities to spatial representations, but these are, more often than not, personal opinions or perceptions and not an expression or a prolongation of universal attributes, proprieties or qualities, or, in other words, of the morphic fields.

Although this fact was apparently understood in contemporaneity, it is just a partial understanding, still subject to materialistic ideas, considering the fact that current theoretical interrogations, although seeking to new foundations, are still based on the modern and postmodern compendiums [x].

This is why we need to research once again the traditional architecture. We need to start again, in the light of the new scientific discoveries, by considering traditional architecture as the result of information passed through the morphic field. It is not only about the experience of man building his home apparently indifferent of the environment around him but about man and nature building together, co-evolving [xi] and co-creating the *natural/artificial hybrid* that is our environment, our existential Universe.

Therefore, traditional mentality and sense of space is a potential source of knowledge, by means of which we can capture the ways in which the mental envision of an organic universe can be expressed in the space of material existence. Although this study made references only to Romanian traditional architecture, on the basis of logical induction and multiple other studies [xii] on traditional architecture, we may state that, in different forms and variations created by the particularities of the spaces they existed in, traditional societies everywhere were and are immutable linked, mentally [through myths and metaphors] and physically [in everyday life], with the Universe that they live and experience, and can be reevaluated in the same manner.

Of course, it is not possible, and we do not support, a return to traditional building typologies. As physicist Fritjof Capra explains: "*If today's physics determines an essentially mystical way of envision the Universe, it does only to go back, in a way, 2.500 years … This time, however, it no longer relies solely on intuition, but also sophisticated and high-precision experiments, on a mathematic formalism rigorous and well-rounded*." [xiii]

In conclusion, the new scientific paradigms indicating a new way of understanding the Universe, which for us means ideas of space, nature, man, architecture, will represent the basis of a new concept of unity in diversity, which includes not only the functional and aesthetic building blocks of the future constructions, but also human element, natural element, etc. Clearly a new architectural theory needs to be formulated, the basis of which we can find in the common ground of contemporary sciences and the forms created by traditional societies and expressed through architecture [material, quantitative] and spatial representations [immaterial, qualitative].

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SOCIOLOGY OF THE INDUCED URBANIZATION DURING THE COMMUNIST TIMES

EFFECTS ON THE URBAN AND ARCHITECTURAL DEVELOPMENT IN THE 21ST CENTURY – BUCHAREST

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Abstract

The mega-tendencies of the post-modern or post-industrial world have generated important changes in the way the urban areas are organized. Peter Calthorpe discusses the changes that affected the American cities from the end of the 20th century. Among these modifications, there were named the traffic congestions, the price problem when it comes to buying a house near the city-center, the stress of living in an important metropolis or the lack of space. Another change that occurred in the post-industrial cities is the way of life of the inhabitants. In the specific case of families with children, says Calthorpe, the members of these families prefer to live in the suburbs. This fact leads to continuous traveling from home to work, which causes, at the urban level, traffic congestions, and at the social level, stress and exhaustion.

The urban population began to feel suffocated by the city, which is why the space began to gain more and more importance in opposition to the proximity to the city-center. This trend was mainly observed by Calthorpe in the case of the families with children. The young people, the ones that are not married yet, on the other hand, prefer to live in a central area, which offers a wider diversity of activities. This duality *space – functional diversity* caused segregation at the social level, determined by age and social status.

The phenomenon that occurred in Bucharest was similar to the one described by Calthorpe, but it started at the beginning of the 21st century and it had some individualizing aspects. The stress and the limited space from the city, as well as the price which was a lot lower in the areas near the Capital, determined a massive migration from the part of the population towards these settlements. If during the first years of the 21st century, these areas were mostly mono-functional, as sleeping-areas, today both them and the peripheral areas of the city were transformed into new urban centers. An example could be the presence of the business-centers, the shopping areas or the recreational facilities which are situated in zones like these.

The effects of the communist period, on the other hand, caused a series of *malformations* in the development of these new urban areas. The induced urbanization, which was caused by the law regarding the *Systematization of the territory and of the urban and rural areas* (Sistematizarea teritoriului şi localităţilor urbane şi rurale), generated the partial or total destruction of numerous villages, the relocation of the peasants into the big cities, the demolition of the old bourgeois neighborhoods of the cities. All these measures were taken in order to increase the urban population, assuring, in this way, the necessary workforce for the industrialization.

The direct effects are: the peasants, who were used to owning a house into a small community, working the field which they owned, were forced to move to the big metropolis, to live in collective housing and to adapt to new working and life styles. The need to return to the lifestyle they had before remained, causing, after the end of communism, a search for

space and individual housing. Unlike the migration from the American and Western European cities, a natural process, the migration from the Romanian cities (in this case, from Bucharest), came on the basis of a forced urbanization. This caused an exaggerated reaction from the population, traduced, at the physical level, by large – inutile houses (most of the time occupying almost all the courtyard), meant generally for only one family.

Keywords: induced urbanization, collective living, individual housing, stress, migration.

1 THEME

On the 29th October 1974, was adopted, in Romania, the law 58/1974 regarding the *Systematization of the territory and of the urban and rural areas,* which imposed the partial or total destruction of villages, the relocation of the peasants into the urban areas and the demolition of the old bourgeois city neighborhoods. All these measures were taken in order to increase the urban population. As a result, the rural population was moved into the big industrial cities, living in the new collective houses which represented the communist style. From the social point of view, this is known as the process of *induced urbanization,* which had a great impact over the Romanian society, and has caused many changes for the population of the large cities.

Starting from one of the theories that Christopher Alexander presented through his famous article *"A city is not a tree"* (1965), if an individual is taken (forced to leave a certain place) from his birth place or from his natural environment, the ties with his own past will be *"unacknowledged, lost, and therefore broken"* (Alexander, 1965 in LeGates, Stout (ed.), 1996: 131). His theory applies perfectly to the phenomenon of *induced urbanization* which was caused during the 1970s in the Romanian society. A large number of the rural population of Romania was forced to move to the large cities in order to work in the new factories. Changing their rural environment, a simply and strongly organized traditional society, for the large cities, which Alexander himself names in his article, a *semi-lattice* represents in fact a strong disjunction for this groups of people. A *semi-lattice* society is defined, in Alexander's theory, when different sets of elements tend to overlap. This is what a city is.

The mega-tendencies of the contemporary world: globalization, development of technology, mobility and so on, as well as the end of communism for the Eastern European countries (in 1989), have opened the pathways to a different type of society. The end of communism, the increased mobility, the admission in the structures of the European Union, they all have facilitated the migration from the less developed countries (such as Romania) into more developed ones, such as the Western European countries. This phenomenon offered the possibility to assimilate new life styles. It is why, in today's Romanian society, the housing style differs strongly from the 19th or 20th century lifestyle, being, somehow, more similar to the Western European one or the American way of living.

2 PROBLEM

In this article, we argue the status of the *induced urbanization* during the communist times, as a *socio-political factor* that has influenced the urban and architectural development of the cities in the 21st century.

Considering the theory of Christopher Alexander, the rural society which was forced to move into the cities, during the communist times in Romania, has suffered a *disassociation* (Alexander, 1965 in LeGates, Stout (ed.), 1996: 131), causing the rupture between the past and the present in the life of the individuals.

This phenomenon overlaps the tendency described by Peter Calthorpe (1989), who observes the migration of urban families, from the big city to its peripheral and satellite-areas. This migration of the urban population towards the more quiet zones, while still belonging to the city, is caused by the lack of space, agglomeration, stress and expensive housing (Calthorpe, 1989 in LeGates, Stout (ed.), 2000/ 1996: 351).

This article focuses on the problems caused by the induced urbanization on the urban development of the 21st century in Bucharest. We start from the next hypothesis: *if the rural population of Romania has brutally bracken its ties to the past, than the tendency to move to the satellite-areas of the city is partially a desire to recreate that rural atmosphere.* Among the repercussions of these events are the large courtyards (some of them even have small vegetable gardens on them), properties surrounded by tall fences (most of them made of concrete, almost like walls, causing both a visual and physical closure). There is also the case when the house itself is very large, sometimes exaggerated, suggesting a desire to make a statement of status among the vicinities.

From the architectural and urban point of view, on the other hand, it seems that each of these houses has a different architectural language, individual and unique. Most of these differences are obtained on purpose, like the chromatics, the materials, the roof tops, the fences or the form of the building. It all seems to come from the need of individualization and separation from the rest of the community.

3 METHODOLOGY

The city of Bucharest is what C. Alexander calls, a natural city. It has grown and developed itself during a long time, engraving in its urban and social structure the marks of the stages it has lived.

The present article represents a qualitative research paper based on observation, analysis of documents and maps of the old Bucharest. It is also based on the morphological analysis of the development of the Capital, from the end of the 19th century until the present times.

The paper is structured in two parts. The first part of the article focuses on the social theories regarding the evolution of the cities during the 20th century. Given the mega-tendencies of the contemporary times, such as globalization, increased mobility, development of technology, the urban models tend to repeat themselves. However, they all have some particular aspects, argued by the divergent theories, which are deduced from the history, social structure, geographical and political conditions of each society.

The second part of the article presents an analysis of the urban and architectural housing in the areas recently developed, near Bucharest. A large number of the population of the Capital, nowadays, no longer lives inside the city area. Many people have moved their permanent residence outside the city, even if, during daytime, they are permanently in Bucharest, working or spending time with their friends. These aspects make the areas near the Capital, an extension of the city, even if, administratively, they don't belong to the city structure.

4 THE INDUCED URBANIZATION DURING THE COMMUNIST TIMES

4.1 Theories of the urbanization

In accord with Abraham's research (1991), the theoretical models developed regarding the urbanization have generated two different types of interpretations: the convergent and divergent theories of urbanization. First of all, we mention the convergent theories of urbanization, emerging from the evolutionist logic. These theories support the statement that the urban changes follow the same general global model (Abraham, 1991: 9). The phases in which is separated the urban evolution, in accord with the *"convergent"* theories are: the agrarian phase, the industrial phase and the post-industrial phase. Abraham highlights that, according to the principles of the convergent theories, *even if in different societies these phases don't emerge simultaneously, the evolution of this process will repeat, eventually, the same general model* (1991: 9).

The Hungarian geographer and sociologist, G.E. Enyedi (1988), was the first to develop this type of interpretation. He argues that the Eastern European Countries will follow the same development pattern as the Western Europeans Countries and the U.S.A. In his theory, the four stages of urbanization are: 1) the industrial growth – migration from the rural areas to the urban ones; 2) the concentration of the population inside the metropolitan areas; 3) the under-urbanization – changes in the occupational sectors; 4) counter-urbanization – the decline of the industry, total decentralization (Enyedi, 1988).

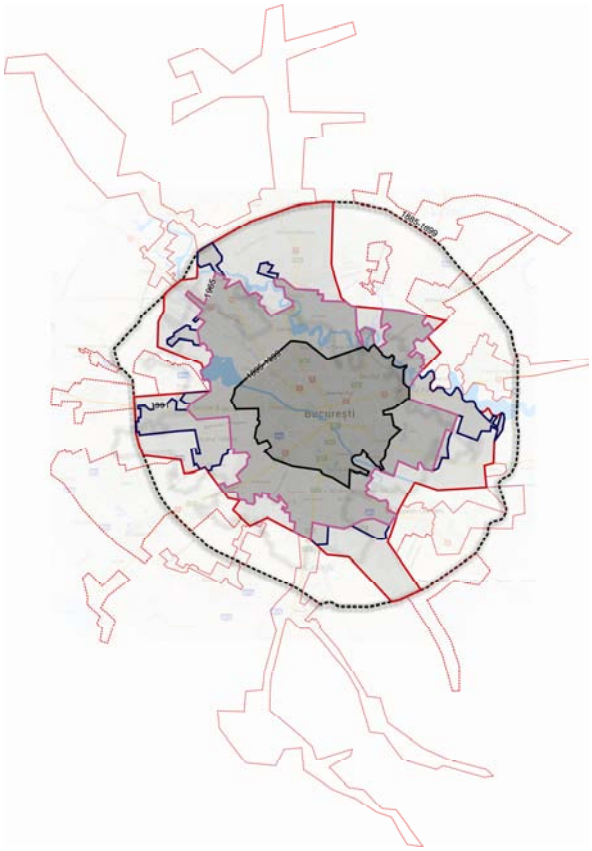
Secondly, there are mentioned the *divergent* theories, which argue that the urban evolution is conditioned by the differences of geographical scale, of historical heritage, social and political conditions (Abraham, 1991: 42). The events that make the subject of this article, *the induced urbanization* from the communist times in Romania, come to support this theory. From a quantitative point of view, the results are the same: the increase of the urban population and

the growth of the cities. From a qualitative perspective, on the other hand, these events have generated different effects in the Romanian cities, as opposed to the U.S.A. cities.

4.2 The 21st Century housing near Bucharest – a social rather than architectural style

The urban and architectural tendencies in the contemporary period, regarding the housing style, can be divided into four categories. From the urban point of view, we suggest the next categories of housing: the central housing, the housing outside the central zone, the peripheral housing and the housing in the new residential zones, outside the city area. From the architectural point of view, there are the collective housing and the individual housing. Of course, these two types of living: individual and collective, have different characteristics, imposed by the urban zones, previously named.

According to the way in which the city of Bucharest evolved over the past two centuries, it seems that the first urban zone (the central zone) corresponds to the nineteenth century development (up until the 1900s). The second urban zone belongs mainly to the period until the 1970s, while the third one, representing the periphery of the Capital, was developed between the 1980s-1990s. Starting with the 21st century, Bucharest's urban society experiences new tendencies. The population, especially couples, is starting to migrate towards the villages surrounding the Capital, in search for more green space and less density of construction.



In this image we can see the way in which Bucharest has developed during the four stages mentioned earlier.

The four stages are:

1)Until the beginning of the 1900s – the old city
2)Until the 1970s – instauration of communism; creation of new districts; massive expansion of the city area
3)Until the 1990s – modification of the existing urban tissue of the city; construction of a few new districts
4)The 2000s – significant growth of the living areas outside the Ring Road

The growth of the city - XIX-XX centuries

- 1895-1899 - The plan of the Geographical Institute
- The Ring Road
- 1965 - Laurian,1965, drawing XXVIII
- 1991 - The Cadastral Plans for București
- The Administrative Area of București today
- Localities situated outside the area of București

As Christopher Alexander (1965) says, the city structure is very similar to a semi-lattice, which makes its layers interconnected and interdependent. These four urban zones of the city are interconnected, architecturally speaking. The older the zone (as, for example, the central zone), the more architectural styles combined we can find in it. This is why, inside the central zone, we can find architectural buildings dating from the 19th century, from the beginning of the 20th century, communist architecture as well as post-modern/contemporary architecture.

The new housing areas, on the other hand, are more homogenous. Most of the constructions are built in approximately the same period, using, in consequence, the same building materials and style. Inspired from the modernist times (during the first part of the 20th century, until the 1970s), the materials mainly used in construction are concrete, glass and steel, which makes

them easy to build and very functional. If we analyze the way of living from the socio-architectural perspective, we come to some common elements regarding the style of the constructions and the households.

As previously stated in the article, most of these localities were developed as mono-functional areas, serving only for inhabiting. These urban areas were developed near an important road which connects them to the Capital. The community was, at least during the 2000s, very poorly developed, as the inhabitants spent most of their time in the big city (Bucharest), where they had their jobs and friends. The infrastructure, roads, sidewalks, supermarkets and all the necessary equipment for the development of a cohesive community, appeared later, as a result of the shaping of a few permanent households.

The household itself has a particular aspect. The courtyards are large. Most of them are covered with grass and concrete, for the pathways. The houses, also, have a large built surface. The style in which they are built seems to be inspired by the American houses, many of them even utilizing the same building materials (wood). Even if the organization of the courtyards, houses and urban community seem to be inspired by the American style, the tall and visually impenetrable fences highlight some Romanian features. These specific features are introversion, individualism and lack of communication with the vicinity.

Even if the general image of the localities are organized, sometimes, in the style of a village, the occupation of people living there is still most of it, tied to the urban stile of life. While the peasants used to work the land, to have private large vegetable gardens and different types of animals, these occupations are almost completely gone in the areas developed near a big city as Bucharest. Some households have, nowadays, a small vegetable garden, remembering, in some way, of the quiet life from a village. Even fewer households have animals. The courtyard has become, somehow, an extension of the house, dedicated to leisure, with some small, almost symbolic elements remembering the country life.

Václav Havel, in a letter to the president Gustav Husak (1975), characterized the communist societies as individualists, saying that the people acted as if they had lost their hope for the future (Havel, 1989: 16). At the urban level, the individualism that Havel mentions in his letter to Husak is found in the chromatics of the houses, the fences, the placement and shape of the houses. Each one of these houses is developed separately, differently, forming an enclosure around it. It all shows a different style and, what is more, a need to highlight that difference.

5 CONCLUSIONS

The induced urbanization affected both the urban and rural societies of Romania. As a consequence of this phenomenon, during the communist times, the urban population has increased rapidly, causing a series of problems which are still visible today.

During the present times, the urban society is facing the phenomenon that Eniedy named as *counter-urbanization* – the decline of the industry and total decentralization. While during the first years of the 21st century, these areas were mostly mono-functional, as sleeping-areas, today both them and the peripheral areas of the city were transformed into new urban centers. An example could be the presence of the business-centers, the shopping areas or the recreational facilities which are situated in zones like these.

As previously stated, the housing style and the organization of these zones are often inspired by the western societies, such as the Western-European Countries or the U.S.A. This

is due to the rapid development of the means of transport and to the phenomenon of globalization. The Romanian architectural style has a remarkably large number of elements that come from the West, as well as a large number of *individualizing* characteristics. Some of them were named in this article, such as, chromatics, placement on the terrain, dimensions and so on. It is remarkable, from a sociological perspective, the need of distinction and separation from the community, an objective that is easily obtained in the absence of a clear urban regulation.

As a result of these social traits of the Romanian communities, the urban development of these new housing areas expresses *detachment from the urban space, social segregation, self-isolation and disjunction.* More obviously than the city-center, which still has the marks of the past centuries, these new formed living zones are the exact image of the present urban society: *un-unified and un-attached to its urban space.*

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THE ARCHITECT AS CRITICAL CARTOGRAPHER, GRAPHIC ARTIST AND SOCIAL ACTIVIST

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Abstract

The professional identity in architecture is redefined. Architecture itself extends far beyond buildings. The architect often works inside strategic processes as researcher, coordinator, consultant, informal educator, ad-hoc artist and even as a social activist. This situation is generated by an increased interest on public debates, urban visions and scenarios preceding the built objects; it is also stimulated by the necessity of democratic cooperation envisioning better politics of the built environment. Mass media reveals new claims or protests concerning urban space and neighborhood life coming from the self-organized citizens and directed to the city administration. Architects are able to redefine their social role by common strategies and civic actions. Common creation and collaborative consumption become strategic terms for an equitable urban life. Observing and interpreting this social reality is a primary tool for architects and urban planners before any action or intervention.

Critical mapping of reality appears as a first democratic tool for highlighting systematic problems and needs of a community. Observing the complexity of urban life in the everyday activities, beyond the official messages and desirable images finds now more prominent channels of urban resistance. Historiography can investigate a new social expression embraced by different civic associations and informal groups of citizens. Architects, designers and urban planners start from small strategies and develop bottom-up initiatives, self-initiated / self-organized projects, and unsolicited researches for independent cultural events.

Critical mapping (including researches, texts, info graphics and diagrams) describes alternative realities different from the official versions delivered by administration, assuming that reality is a socio-cultural construct; it deals with graphical representations of hidden issues, revealing neglected or deprived aspects of reality, offering testimonies of alternative practices (involving interpretation, subjective perception and public debate). It also stimulates the city transformation, collective participation and social emancipation. Weakening the image of the architect directing interventions „from above", this participatory process supports multi-, inter- and transdisciplinary research teams, promotes horizontal collaboration, reduces the aesthetic discourse and enhances ethical considerations about the built environment.

This essay highlights the new role of critical mapping in what we may call social sustainability, and also tries to offer a preliminary interpretation to this phenomenon. In the Romanian context, critical mapping accompanying architectural projects or social actions / workshops / exhibitions are recently developed and insufficiently systematized in theoretical terms in historiography. This text investigates three possible strategies in our professional environment, starting from a recent series of significant initiatives:

> *Narrative and comparative mapping*, engaging reflective thinking and highlighting the existing power relations and events that shape the territory. Examples: studioBASAR – "Habitat of Bucharest" (2008), "Normal of Bucharest" (2008), "Evicting the Ghost" (2010),

"Km. 0 – Model of things and facts" (2010); Ioana Lupaşcu and Ştefan Ghenciulescu – "Roşia Montană – Mapping of the 12 marches in Bucharest (September – November 2013)"; Bogdan Ilie, Dan Achim – "Portmanteau.ro".

> *Participatory mapping* that anticipates operational and practical goals through direct mobilization of the community and tactics for implementing concrete solutions. Examples: Komunitas Association – "Workshop Ferentari – Livezilor Alley" (2011); Oberliht Association, Chişinău – "Mapping of public space in Chişinău workshop" (2012); Vadim Ţîganaş – "Chisinau UNDERGROUND" (2010, design Diana Draganova); Oberliht Association in collaboration with AREA Chicago – "Notes for a People's Atlas of Public Space in Chisinau" (2010, design: Dave Pabellon); SUPERBIA Group – "Workshop in Floreşti neighborhood near Cluj" (2011).

> *Communicative and interactive mapping* by multimedia applications based on digital maps and GPS positioning, looking not only for practical knowledge but also for social entertaining. Examples: Serendipitor (serendipitor.net); Boskoi (www.boskoi.org); Repudo (www.repudo.com); Nextdoor (nextdoor.com)

Clearly, further development of critical mapping will require a more evident technical and multidisciplinary support, involving new communication technologies and generating new professional niches in what we call open source areas. But beyond the need for entertainment or fashionable high-tech gadgets, it should be encouraged a deeper understanding and appropriation of urban space, motivated not only by subjective issues, but also by political aspirations and collective energies. Critical maps must remain a social technique for ordering the observations, a strategy of analysis, a disclosure of neglected or negative aspects in our cities, establishing meaningful links between open or diffuse urban conflicts, articulating an expression of cultural resistance, revisiting territorial boundaries and facilitating transformations of society.

Keywords: critical mapping, social activism, bottom-up initiatives, info graphics, diagrams

1 NEW SOCIAL ROLES FOR ARCHITECTS

We understand architecture beyond its traditional borders: aesthetics, style, facades, layout, and functional program. Architects are more and more conscious about their social role and ethic responsibility; they are interested in strategic processes, activism, dialogue with administration and coordination on larger scale. A growing interest on the public debate on visions and urban scenarios preceding the constructed objects is doubled by the implication of our professional community into different schemes of democratic cooperation and environment policies. We mention here a significant desire to set in motion "bottom-up" social strategies to counterbalance the old "top-to-bottom" relation between administration and citizens. Clearly, we may talk about a new input into the direction of social progress where the voice of citizens does matter when speaking of urban plans and buildings. New concepts are recently discussed into the theory of architecture, such as collaborative creation and consumption. Civic activities emerge with new building practices and administration patterns. In this context, the processes of observing and interpreting social reality become a priority.

Critical mapping of reality offers answers to the constant need for fairly and lucidly understand the urban life. And the primal aim is to improve it on democratic bases. Critical mapping is a tool for highlighting systematic problems inside a community. This type of

observation extends beyond the official or desirable pictures, and concerns a broad spectrum of scales, from everyday personal habits to political decisions at national level. It finds prominent expression in various channels: social media networks, independent cultural events, unsolicited research generated through self initiated projects by civic associations and informal groups of attitude and urban resistance etc.

We assume that reality is a socio-cultural construct; therefore we believe that we can intervene in that reality to improve it. We can read that reality in a different way from the official versions of administration, or local ideologies. Through critical mapping we can disclose some hidden, neglected or deprived aspects of reality. Critical maps become graphical representations of that disclosed aspects of reality. Involving interpretation, subjective perception and public debate, they appear also as alternative practices and participation models at social transformation and community empowerment. In this participatory process, on the one hand, we may speak about a weakened role of the architect; the planning / design office involves itself in larger multi-, inter- and transdisciplinary research teams. On the other hand, we notice a significant reduction of the aesthetic discourse by enhancing more ethical considerations in thinking and action concerning the built environment.

2 NARRATIVE AND COMPARATIVE MAPPING

StudioBASAR, a very young design office founded in 2006 by Cristi Borcan and Alex Axinte, is a prime example in this regard in the Romanian context. This team observes the city and urban reality and intervenes on the basis of Search-and-Rescue principle. Functioning as an agent of voluntary observation of neglected, informal, or devalued everyday life aspects, this group attracts public attention on social issues overlooked by institutions or administration. Moreover, studioBASAR brought back to our profession the idea of public activism, social commitment and the need to investigate our urban territory beyond official aspects. Mini-project "Habitat of Bucharest" inside the larger project Trans Urban Bucharest (TUB) 2008, conducted by studioBASAR with Diana Culescu, Vera Dobrescu, Dorel Ruşti and Raluca Vişinescu, mapped the unique presence in the city of some species of plants and animals, accompanying the map with 20 postcards that associate scientific data about species with urban myths and tips for locals, tourists and specialists [1] (Fig. 1).

Fig. 1: studioBASAR with Diana Culescu, Vera Dobrescu, Dorel Ruşti, Raluca Vişinescu, "Habitat of Bucharest", 2008 (© studioBASAR).

This effort highlights a type of urban journey or architourism "deviated" from the official tourism based on iconic and glamorous architectural images. This walk represents a personal research into the anthropic environment, a subjective discovery of common spaces and

objects and also a construction of meanings. Critical interpretation of our city rises from this meanings, offering new perspectives of the places we live, decontaminating the mind from the touristic ideology of beautiful official places, desirable monuments and acceptable meanings.

Also inside TUB 2008, the project called "Normal of Bucharest" (studioBASAR + SYAA) identified 10 hidden places, minor, trivial and ignored in the capital, but culturally significant, ranking them on a tourist map dedicated to unconventional and informal practices related to housing and daily improvisations [2]. Cartography interweaved with subjective research and social criticism is amplified in two further researches: "Evicting the Ghost", a project dedicated to the phenomenon of forced evictions as a result of the law concerning nationalization and restitution of private properties [3], and "Km. 0 – Model of things and facts" [4] inside the exhibition called *Km. 0. Representation and repetition of the University Square* performed with tranzit.ro association (November 30th, 2012 – February 28th, 2013). Here is specifically amplified the political aspect of the space as a place of expression and civil claims by mapping events of recent history in this urban area in a three-dimensional narrative image: consecutive actions undertaken over the last 25 years were simultaneously superimposed in a diorama / survey so as to reveal a palimpsest of meanings, use and informal appropriation of the city center. The University Square is an overexposed place in mass-media; it witnessed the most important social events of the past 25 years in Romania. We cannot reconstruct this urban area in our mind out of all meanings that were layered over this recent period, desirable or not. StudioBASAR triggered the analysis and interpretation in that context taking into account the mass of people who interacted there during some peaceful or violent events. The space was radically transformed during the exceptional events, rallies and demonstrations, reconfigured in surprising ways depending on diverse social confrontations, and then returned to the normal situation of everyday use.

In another example, mapping 12 protest marches against the mining project in Rosia Montana, held in Bucharest from September to November 2013, also reflects an articulation of a civic attitude (counteracting a media boycott), exceeding the usual confinement of these protests in the University Square [5]. This marked a first run in recent history of Romanian civic movements, in terms of the scheme of organization and mobilization through social media and especially in terms of pedestrian appropriation of the city in its totality. The research and drawing by Ioana Lupaşcu and Ştefan Ghenciulescu confirmed some social valorization differences between the north and south of the capital, but also the inactivated or segmented urban areas by totalitarian urban operations (Fig. 2).

Fig. 2: Ioana Lupaşcu and Ştefan Ghenciulescu, mapping 12 protest marches against the mining project in Rosia Montana, Bucharest, September-November 2013 (© Ioana Lupaşcu & Ştefan Ghenciulescu).

This example is again very suggestive for the exceptional situation of the public space when pedestrians took control over the driveway or boulevard (otherwise very crowded with cars). This situation allowed a new perception of the city and also a new social effect; moreover, it

is worth noting that these marches did had a positive effect on the political decision concerning the case of Rosia Montana, which reverberated into the international media.

I would also include the recent example of Portmanteau.ro project, carried out by the voluntary and interdisciplinary collaboration between an MA student in urban and strategic planning (Bogdan Ilie) and an IT engineer (Dan Achim) [6]. The focus here is on the significance of the visual comparison of maps keeping in mind the urban trauma produced by demolitions and totalitarian projects in Bucharest during the 80's. On a digital platform integrated with GoogleMaps, one may overlap Ceausescu's plan for the civic center to any other city plan in the world to highlight the scale of destruction and the confrontation with the existing historical urban tissue. Portmanteau.ro is not just a mapping tool for interdisciplinary research, but also a memorial, a remembrance and a form of public awareness.

We may compare these examples with those from Eastern Europe neighbors: "Belgrade, Belgrade: Ongoing Archive of Unruled Practices" (a project coordinated in 2007–2008 by Ivan Kucina and Dubravka Sekulic) [7] and "Struggle Machine Assembled" (a view of the regional movements of urban resistance in Croatia) and the "Red Plan" of informal activities in Pula, Croatia, both conducted by the multidisciplinary team Pulska Group in 2012 and 2008 [8]. These latter projects were accompanied by the Komunal Declaration – a larger critical view formulated around four basic points: 1) equal right to use the benefits of the city; 2) flexibility in urban organization; 3) self-organized citizens; 4) the idea of multiple ecologies, concerning environment, mind and society. Mapping political actions, protests and social demands in Croatia during the period 2009–2012 highlights a little-known area from the point of view of professional journalism in Southeastern Europe, and discovers important areas of potential for alternative architectural practices.

3 OPERATIVE AND PARTICIPATORY MAPPING

A second set of examples refers to mapping as a tool for democratic participation in community actions and for conducting concrete urban or architectural operations. Coordinating the intervention in Ferentari – Aleea Livezilor, Bucharest, 2011, Komunitas Association used maps and photos for a public consultation at School no. 136, involving students and adults in the area [9]. Directly over the graphics offered by organizers, residents intervened with their own proposals in form of collages, drawings or texts in a genuine empowerment process of a disadvantaged community. With the help of social scientists and urban planning professionals, and on the bases of mapping the community aspirations, the participatory project "Our city – our decision" ended with a specific intervention to revitalize Livezilor Alley Park. This was actually a transnational and interdisciplinary project that involved 3 NGO's from Romania and France and experts in community facilitation, landscape architecture and arts. Social solidarity was the aim of this initiative based on civic education and participative planning workshops articulated by concepts such as urban revitalization, local redevelopment and valorization of abandoned public space. Reactivating a former football field and generating new public spaces for socialization together with the inhabitants represented the concrete results of a larger research that took place between February 2011 and July 2011, financed by the European Commission through Youth in Action Program, Action 1.2, Transnational Initiatives (Fig. 3).

Fig. 3: Komunitas Association, urban intervention in Ferentari, Livezilor Alley, Bucharest, 2011 (© Komunitas Association)

Oberliht Association from Chisinau developed on a wider scale the operative mapping by the workshop called "Mapping the Public Space in Chisinau" (2012) within the project SAPCES (Sustainable Public Areas for Culture in Eastern Countries) in collaboration with Planwerk office from Cluj [10]. The purpose of this workshop was a critical analysis of the existing situation in the capital of Moldova, restoring civic character of the public areas of the city by the inclusion of disadvantaged social groups and the reactivation of some ignored urban spaces. Two more aspects were added: the contextualization of interventions by invited artists who collaborated on the project, and the effort to obtain the support of the media for raising public awareness, debates and protests. Artist Vadim Ţîganaş wrote on the map entitled "Chisinau UNDERGROUND – spaces defined by alternative cultures and initiatives" (design Diana Draganova): "The maps usually bought from the city bookshop are not offering more than a strict guide of finding some streets or buildings [...]. Places and spaces which are really searched are normally then marked up with a pen on these maps which, after all, are functioning as a form of blank map that is to be completed by its user depending on his interests and preferences." [11] The initiative of Oberliht Association in collaboration with AREA Chicago (art & politics magazine from Chicago, USA) generated the appeal "Notes for a People's Atlas of Public Space in Chisinau" (design: Dave Pabellon) [12]. The maps drawn by the residents themselves will progressively reveal the invisible geography of the city and common interest platforms for future democratic urban projects.

SUPERBIA 1 workshop (2011) mapped the absence of the public space in the new neighborhood near Cluj, Floreşti, to offer a set of remedial principles [13]. Students of architecture, anthropology and sociology mapped the street network and completed questionnaires and interviews with local residents to identify their real needs. Plans aimed at developing specific projects capable to engage both community (still in formation) and administration. The constructive role of action was highlighted by repositioning the group of architects as mediators between public and private interests. The findings centered on the idea that the approach must be two-way between the residents and the administration, with specialists in the middle position as mediators that trigger change and actions into a context lacking any real reserve of public space. Therefore, the operational mapping process included a construction of public space by establishing connections between different plots of land, and offering proposals for short-term events, temporary construction and long-term infrastructure improvements (Fig. 4).

Fig. 4: Workshop SUPERBIA 1: operational mapping and remedial principles for Florești neighborhood Cluj, 2013. Project organized by Atelier MASS (Silviu Aldea, Marius Cătălin Moga, Camelia Sisak, Tamás Sisak) through the Chamber of Romanian Architects – Transylvania section, and financed under the architecture revenue stamp 2011 by the Chamber of Romanian Architects.

4 COMMUNICATIVE AND INTERACTIVE MAPPING

Narrative and comparative mapping provide effective tools for critical historiography, highlight existing power relations that shape the territory, prompting reflective thinking about the city and architecture. Operative and participatory mapping aims on the other hand, in advance, practical goals through direct mobilization of the community, and even participatory concrete solutions. Participatory methodologies by graphic investigation are still insufficiently known to us, reduced to major theoretical examples, such as the Situationist Movement [14] and Kevin Lynch's cognitive mapping [15]. The recent contribution of the Argentine group Iconoclasistas (Pablo Ares & Julia Risler) fill a significant methodological gap and gives specific examples in the current South-American context [16]. This duo established in 2006 combines graphic art, creative workshops and collective research to produce models of social actions and new patterns of urban collaboration and resistance. Active network, sharing and organizing are the key words of this hybrid practice critically oriented against the late capitalist ideology of consumption.

By way of conclusion I return to contemporary technological challenge of communication in the digital environment with important consequences for critical mapping tradition. It is about the smart phone applications that use digital maps and GPS positioning for social, practical and entertaining purposes. Serendipitor (serendipitor.net) is a playful application that uses Google Maps to generate algorithmic "drifts" in a city, in a Situationist and funny way, depending on the parameters entered; Boskoi represents an open source project (www.boskoi.org) that identifies on a city map species of edible plants and urban agriculture information, enabling any user and professionals to intervene with information; Repudo (www.repudo.com) is a funny game that combines concrete visiting a city with digital interaction on an interactive map where photos, audio & video files and texts can be attached [17]. Nextdoor (nextdoor.com) is a social network created by Nirav Tolia and Sarah Leary from United States that connects local community members (marked on an interactive map) on various topics of everyday life, ranging from public projects to mutual and personal recommendations [18].

5 SOCIAL RELEVANCE AND RESPONSIBILITY

Clearly, further development of critical mapping will require a more pronounced multidisciplinary support, and will take advantage of the new communication technologies and generate new professional niches in the open source domain. But beyond the need for entertainment or fashion, high-tech gadgets should foster understanding and profound assimilation of urban space, motivated by personal / subjective issues, and also by political aspirations and collective energies.

Critical mapping could be practiced both with a pencil or a smart phone. It should prospect reality without dogmas and denouncing specific situations of social injustice; this direction points towards maps of inequality and diagrams of social problems: unemployment, poverty, gender problems, the distribution of wealth the common property, flaws in the capitalist model, irresponsible exploitation of natural resources. Sometimes it could be ironic or like a parody but never without a public responsibility; comic strips or postcards freely distributed could illustrate everyday scenarios with a serious critical content behind, highlighting communities' problems and conflicts. Friendly drawings like cartoons or iconic symbols can help people to understand more easily some complex urban or social concepts. Info graphics is also a very pertinent tool to make a summary of events and happenings, offering a synthetic overview on a territory. This is about making statistics understandable and suggesting a clear political potential of graphic art. Multimedia dissemination and open resources are the main constituents for a horizontal exchange among users and knowledge appropriation. From this point of view, critical mapping could energize the activity of cultural organizations, social movements and critical pedagogies; it must remain a social technique for ordering the observations, a reliable strategy of analysis, a disclosure of neglected or negative aspects, a connection between or diffuse conflicts in society, an expression of urban resistance, a revision of borders, a cultural production and a responsible impetus to activism, social movements and social improvement.

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NOTE:

This essay is based on a modified, extended and translated version of my previous article "Cartările critice urbane: trei strategii" – winner at the architectural essay competition at Timisoara Architecture Annual 2014.

ARCHITECTURE IN SCIENCE FICTION MOVIES

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Abstract

Architects and designers often find themselves experiencing movies a little differently than the vast public, especially when it comes to the science-fiction genre featuring buildings, cities or urban landscapes that are "out of this world"; they see the buildings in the background (or foreground in some cases) and begin to analyse how they are designed. Some sci-fi movies or TV shows suggested technologies that have inspired generations of scientists to research and develop them. In other cases, the images of buildings and cities envisioned some 30 or 40 years ago, predicting the future, have a striking resemblance to some present day urban environments; there are also movies with visions radically different from what we have today. Sci-fi can sometimes serve as a warning but often enough can be a source of inspiration. Several movies have acquired a cult status, not only in popular culture but also in the scientific community, their images becoming almost iconic, referenced by many architects, theorist and researchers. Some movies drew inspiration from various architectural studies or models of utopia, on works from the avant-garde or competition entries.

Considering all of these situations, the question risen by this paper is what can we, as architects, learn from science-fiction movies, what (practical) design lessons are there?

Analysing architectural representation in over one hundred and fifty feature films, live-action or animated, this study offers a synthesis of architectural design features as well as highlights directions for further development of building technology while making the case for the study of media-architecture. This paper also serves as a tool for those engaged in the movie industry, especially in the art-direction departments. At the very least, it shows architects and designers how to use sci-fi material as a mood board in their creative process.

The study is structured in three chapters: the first one is an overview of the selected material and the description of the used criteria, the second chapter is the bulk of the research, analysing the design of the buildings and urban landscapes, divided into four sub-chapters based on themes – a technological futuristic Earth (including utopian and dystopian scenarios and interplanetary colonies), a post-apocalyptic Earth, "other worlds" (alien worlds not colonised by humans or virtual reality environments) and one about alternate reality (past or present day). In all these scenarios the architectural features can be made-up (physical models or CGI) or the film makes use of real-world buildings and cities. The design lessons and conclusion of the research are detailed in the final chapter.

The study addresses the representations of architecture in science-fiction films, live-action or animated (only if they are 3D modelled animations) without referencing sci-fi video games, because these follow different design rules with a focus on interaction; the analysis is made using real-world criteria, but taking into consideration that architecture is a by-product in movies whose main purpose is entertainment and usually disregards aspect of safety, maintenance or cost in the favour of compelling evocations.

Keywords: Science-fiction, technology, cinema, design, architectural representation.

1 WHAT MAKES THE CUT AND WHY

"Science fiction is always rooted in the present, and it almost always reflects contemporary paradigms."[1] This genre has established itself on film in the middle of the past century (the 1950s being very prolific) but visions of the future were put on film as early as 1902 with the short *Le voyage dans la lune.* It was in 1927 that director Fritz Lang brought to the silver screen the story of *Metropolis* inspired by his first trip to New York. This futuristic urban dystopia is regarded as a pioneer of the genre and its Art-Deco style has influenced many film-makers and architects since. In recent years the use of Computer Generated Images (CGI) made building entire virtual worlds possible, achieving a very high level of details and realism, thus becoming very compelling for designers to investigate further. Nonetheless, large scale models are not to be considered the product of digital technology alone; movies like H.G. Wells' *Things to Come* (1936) or *Logan's Run (1976)* made use of scaled physical models and filming techniques to evoke future cities and buildings. Architecture has been a tool for story-telling in cinema since the early silent films and, in return, the film has served as inspiration to architects and designers.

This paper addresses the use of architecture in science-fiction feature films (shortened to sci-fi movies) focusing on buildings and urban landscapes created especially for the film and real world constructions used differently than their actual destinations. So, what makes the list? First, a film is taken into consideration if IMDb (*Internet Movie Database* – www.imdb.com) indexed it as Sci-Fi and it has above 5 points in rating. Due to the large amount of material, TV shows, short films and animations will not be included. Secondly, it has to have buildings that are permanent; meaning that space stations, capsules, containers and other temporary installation are not taken into account, with the exception of extremely large space stations that accommodate the equivalent of a small city (with buildings, not just rooms and corridors). The third and last criterion is the exclusion of interior design, as though it can be argued that interiors are part of the whole and discussing only exteriors might seem superficial, for the current research the are considered a part of stage design rather than building design and they can be the focus of a different research - one that can include space ships with living quarters like the ones in Stanley Kubrik's *2001: A Space Odyssey* (1968).

The purpose of this paper is to analyse architectural representation in sci-fi movies in order to extract practical design lessons and to serve as a tool for architects and film-makers. While using real-world criteria on buildings that are not real (and most were not meant to be) might seem unfair, the point is to investigate what makes them different (futuristic or alien) and to serve as guides for what to do or what to avoid when we, as designers, try to achieve something that looks from the future or just from another world. Sci-fi movies need to make their audience believe the story they tell (when talking about this world, directly or indirectly and its future or strange alien worlds) and they employ different means, one of them is the built environment; by making these architectural features believable they use elements that audiences can relate to. In other words, if it works for them, some of the designs can work for architects as well. It is also noteworthy that behind some of the most influential designs in science-fiction are names like Syd Mead (*Blade Runner,* 1982*; Tron,* 1982*; Star Trek: The Motion Picture,* 1979*; Aliens* 1986*),* Joseph Kosinski (*Tron Legacy,* 2010; *Oblivion,* 2013*),* Fritz Lang *(Metropolis,* 1927*)* or H.R. Giger (*Alien,* 1979*);* these are people who have studied architecture or worked as architects before being involved in movies. [2]

2 USING ARCHITECTURE IN STORY-TELLING

"The only job that was ever of interest to me other than film making is architecture. And I'm very interested in the similarities or analogies between the way in which we experience a three–dimensional space that an architect has created and the way in which an audience experiences a cinematic narrative that constructs a three–dimensional -reality from a two-dimensional medium—assembled shot by shot. I think there's a narrative component to architecture that's kind of fascinating."[3] - Christopher Nolan (director: *Inception*, 2010; *Interstellar*, 2014*).*

Architecture in movies depends on the story; the visuals of the built environment vary greatly from dystopian futures to space opera fantasies, from post-apocalyptic decaying structures to complete virtual worlds. Some of these use fictional building inserted in real-world context while others make use of real buildings because of their uniqueness or their iconic status. Karl Gajdusek (writer for *Oblivion,* 2013) considers the five pillars of science fiction to be: alien contact, artificial intelligence, technological breakthroughs, space exploration/adventure and origin stories. For this paper, these five categories were compacted into four, each accounting for the overall set for a story style: technological future of Earth, a post-apocalyptic Earth, an alternative reality of past or present day Earth and alien worlds (including virtual reality). The aim of these

categories is to establish a basic guideline for the analysis (or the mood that the built environment is used to generate) and some movies can be featured in more than one category.

2.1 Technological future

The first thing that comes to mind when science-fiction is mentioned is the future, future advancements in technology, a future society developed from current paradigms. Usually the future is portrayed in such a way that it makes a statement about present day issues regarding society, environment, politics, economics and religion or to question progress in various fields of science. Speculative technology used in films has inspired researchers to make such devices. One famous example is the first mobile phone developed by Motorola that was actually a flip phone resembling the communicator in *Star Trek* (the original 1966 TV series). This category of stories that take place in the future of Earth within a society that followed an upward path of technological development without suffering major set-backs is the most common of themes in sci-fi movies. Consequently this is the richest in architecture speculative designs and it is usually meant to inspire. This is a vast part of the genre and includes utopian and dystopian worlds and also the colonization of other parts of the universe where humans have brought their history and building styles. Almost half of the movies studied (68 from a total of 153) are set in technological futures of the Earth. Nonetheless, some movies have both a partially destroyed world and the rest of humanity is either on another planet or in few densely populated cities, in which case the first part will be discussed in the next category of post-apocalyptic Earth. The main focus of this section is architecture done by and for humans in the near or distant future.

2.1.1 Utopia

Under the term of utopia I catalogue movies set in a generally peaceful future imbued with technology and movies where the society is portrayed as idyllic even if throughout the movie the narrative takes different turns or the characters become aware of a different reality. This is conducted for research purposes meaning that a movie might be considered dystopian story-wise, but it is architecturally presented as an utopia therefore shares visual similarities with other utopian worlds. Basically, everything that is not a clear dystopia (oppressive or savage in nature) or a remote colony falls under this label. One of the first movies to evoke a utopian future is *Things to Come* (1936) and the year is 2035 in the fictional city of Everytown. The city is built underground similar to an open mine and the buildings are all white with no decorations; elevators are exterior glass tubes and long linear bridges cross in several directions. The buildings are modernist in style with soft curved surfaces or balconies. Some vegetation can be seen, but is not abundant. At the bottom of the pit that is tens of levels down from the green surface there's a large plaza with an obelisk made from reflective material, lighted from the bottom. In *Logan's Run* (1976) the idyllic society from 2274 lives in a domed city, shielded from the outside (although it is near the ocean) and everything is cared for by a computer. The domes are enormous, hundreds of meters above ground covering buildings of all shapes and sizes: pyramidal, concave or faceted facades, conic or just boxy looking. Although white is predominant, various vivid colours are introduced and a preference for iridescent material can be noted. There's a lot of vegetation and travelling between buildings is done by small capsules in horizontal transparent tubes elevated above the trees. Since the '90s, sci-fi movies took utopia to a


Fig . 1a Demolition Man (1993); Fig. 1b Star Trek Into Darkness (2013)

different look, one of high rise cities. Towers covered in glass and steel, shiny and sometimes transparent are seen in *Demolition Man* (1993), *Minority Report* (2002), *I,robot* (2004), *The Island* (2005), *Star Trek* (2009) and *Star Trek Into Darkness* (2013) – Fig. 1a,b.

Almost all of them are rendered in shades of blue and silver, white is occasionally present and vegetation has slowly disappeared from these large cities. It can be argued that in all these scenarios the cities are real and their envisioned future is heavily based on their present day silhouettes and previous years trends of development. On another note however is the city of New York in 2263 from *The Fifth Element* (1997), a vision that continues and exaggerates its Art Deco tradition, removes almost all glass facades and presents a city very high above the ground where there's only garbage and pollution. Dense and with even heavier traffic (flying cars on countless levels) it has expanded into the ocean past the Statue of Liberty where the once iconic island has become a

space-port. Dominant materials are concrete and stone with a beige and sepia colour scheme. Bordering on dystopia are the themes used in *Aeon Flux* (2005) and *The Giver* (2014) (Fig. 2a,b) both movies presenting a closed society that appears to be peaceful, balanced and desirable. These are circular cities behind walls (natural or man-made) with a lot of vegetation and communities arranged in circles and the overall layout is symmetric on one axis. In *Aeon Flux* the year is 2415 and there are 5 million people left in the world, all living in the city of Bregna. The predominant material in the built environment is reinforced concrete, using real buildings found in Berlin, Germany (among them are Treptow Crematorium, Adlershof Trudelturm, Windkanal wind tunnel facility, Haus der Kulturen der Welt and Bauhaus Archive). In *The Giver* all buildings are dominantly white; the houses are identical, minimalistic in style, white with small insertions of wood panels and they are position randomly on site connected by sinuous pathways. The central plaza is host to a large geodesic dome covered in

Fig. 2a Aeon Flux (2005); Fig. 2b The Giver (2014)

glass plus several public buildings with slightly curved shapes as well as a central official building with classical architecture and a large extension both behind and above, in the same style as its neighbours. Besides the dominant white finish some buildings feature concrete, stone and metal finishing.

2.1.2 Dystopia

This is a sub-genre very prolific in science-fiction and in most movies it makes use of real buildings, generally modernist, rationalist or brutalist to emphasize it's oppressive theme like *Farenheit 451* (1966), *A Clockwork Orange* (1971), *Nineteen Eighty-Four* (1984), *Brazil* (1985), *Gattaca* (1997) and *Equilibrium* (2002). In *Equilibrium,* filming locations included landmarks marked by the Fascist movement: the Olympic Stadium in Berlin and Il Palazzo dei Congressi in Rome; in *Brazil* the apartment complex of Palacio D'Abraxas (near Paris), also designed in the fascist style was used for the main character's residence. If these sets put an accent on conformity, symmetry and rhythm, another trend is to make an agglomeration of element like buildings, cars and trash layered with advertising in bright colours. In *Blade Runner* (1982), the buildings are highly decorated – filming locations included Ennis House by Frank Lloyd Wright and Bradbury Building in Los Angeles, California and the entire city has an industrial vibe, dominated by two large pyramids belonging to a powerful corporation. With this movie director Ridley Scott makes an homage to *Metropolis* and also establishes a style that will influence generations of film-makers and designers. Another take on the claustrophobic conglomerate is the cyber-punk style used in *Johnny Mnemonic* (1995) or the shanty towns and slums in *In Time* (2011), *Total Recall* (2012) and *Elysium* (2013) – Fig. 3a resembling the South American slums (favela) where the poor and the workers live below and the rich, high above. Also influenced by *Blade Runner* a combination of Asian elements can be seen in several movies, including *Judge Dredd* (1995), *Babylon A.D.* (2008), *Cloud Atlas* (2012), *Pacific Rim* (2013) and *Total Recall* from 2012. “Many film-makers return to familiar landscapes, believing that the destruction of places we know is more disturbing” [4] as seen in *Escape from New York* (1981), *Robocop* (1987), *Looper* (2012) and *Divergent* (2014) but this is more obvious in post-apocalyptic movies. One distinct example is *Dredd* (2012) – Fig. 3b that features an unsettling interpretation of Le Corbusier's model of La Ville Radieuse with isolated 200 storey massive towers, one kilometre tall, made of concrete and equipped with steel blast doors and windows that can be armed to shield it effectively, sealing it from outside world. But no matter the scenario a common trademark of all dystopian worlds is the lack of

Fig. 3a Total Recall (2012) Fig. 3b Dredd (2012)

vegetation; nature doesn't belong in these futures of the Earth.

2.1.3 Colonies, bases or settlements

As mentioned before this study excludes temporary establishments such as research containers, capsules or pods and also space stations because most of them function as a ship with living quarters and not as a town, almost everything takes place indoors and there are no buildings to speak of. Exception from this are the space stations in *Elysium* (2013) and Oscar winner (for best visual effects) *Interstellar* (2014); these function as a large city, mapped on the inside of a large spinning cylinder – another shape can hardly function, the spinning tube is creating the effect of gravity thus resembling Earth's conditions. The common denominator in these two examples is the overwhelming greenery and the scattered buildings among these pastures; this was made to contrast the world they come from (in *Elysium* the Earth is polluted and overpopulated and in *Interstellar* the blight brought an ecological collapse and dust covers everything) but the effect of a thriving green utopia in space is compelling. Opposed to this vision are the military bases or corporate colonies and *Aliens* (1986), *Total Recall* (1990), *Starship Troopers* (1997), *Ghosts of Mars* (2001) or *Avatar* (2009), usually established in harsh environments, thus, in need of strong protection – blast doors and windows, rough metallic exterior or exposed concrete walls – giving them a look of opaque container architecture and emphasizing the strict and sometimes cruel interests of the management of these facilities (military or corporate). Common in features is also the remote prison-like establishments in *Alien 3* (1992). Other prisons portrayed on distant planets are designed inside natural caverns with little or no adaptation as seen in *Star Trek: Nemesis* (2002) or *The Chronicles of Riddick* (2004). Although still on Earth, the underwater research facility in *G. I. Joe: The Rise of Cobra* (2009) has all the trademarks of a remote military base. It is connected to the frozen Arctic surface by three metallic tubes resembling the industrial exhaust towers and the overall look is that of a factory platform. A different tone is used for the settlements done in the interest of exploration, colonization and expansion of human race in space (without the push of a military or corporate agenda). These colonies are outright large cities that when located at the core of the new civilization are mostly white with curved organic shapes and set in green idyllic environments as in *Serenity* (2005) or *After Earth* (2013) – Fig. 4a, but when presented as remote and bordering civilization they often seem taken from a western movie or cob architecture – *Star Trek V: The Final Frontier*

Fig. 4a After Earth (2013) Fig. 4b Star Trek V: The Final Frontier (1989)

(1989), *Star Trek Insurrection* (1998), *The Chronicles of Riddick* (2004) or *Serenity* (2005) – Fig 4b.

2.2 Post-apocalyptic Earth

No matter the scenario, weather it is environmental disaster, a plague or a virus deadly to human beings, nuclear holocaust, alien invasion or the rise of artificial intelligence (AI) that decides to wipe humanity from the face of the Earth, a few people manage to survive the apocalypse only to live in the ruins of present day civilization. In these movies we rarely see new buildings and when we do the built environment is made from salvaged bits and pieces, scavenged or re-purposed materials and installations. In a few movies the ones that provoked the doom of humanity have either their own base of operations that suffered little to no damage or have built some new structures in order to maintain control and/or security as seen in *Matrix Revolutions* (2003), *Terminator Salvation* (2009) or *Resident Evil: Retribution* (2012); these facilities are used for research, development and production so they look like industrial platforms. A different route was taken by *Oblivion* (2013) that instead of a large factory structure proposed a small house above the clouds with smooth white and grey surfaces, large glazing, a transparent pool and a helipad platform, all supported by a supple pillar. This house is meant to look advanced and a bit alien, so, in order to underline this, the movie also shows a little wooden cabin hidden in a clearing in the mountains by a spring. All these are found in a devastated landscape, where water is being taken from the surface of the earth by large floating harvesters. Paying tribute to movies like *Planet of the Apes* (1968) or *Logan's Run* (1976) director Joseph Kosinski shows a few representative American buildings partially destroyed and almost conquered by nature (in this case a dark grey dusty terrain) like the Empire State Building, MetLife Stadium, the Pentagon and New York Public Library avoiding the stereotype of a damaged Statue of Liberty. In other movies the return to a basic way of living can be seen: cottages made of raw wood and adobe structures resembling primitive settlements are used to show the loss of technological and building knowledge

and tools – *Planet of Apes* (1968, 2001), *Reign of Fire* (2002), *Cloud Atlas* (2012), *The Maze Runner* (2014) to name just a few. However not all stories have such a drastic take on technology, some suggesting a post-apocalyptic world that undergoes a process of reconstruction where one its first steps is to build a massive wall to isolate it from the damaging environment; such examples include *Judge Dredd* (1995), *Aeon Flux* (2005), *Dredd* (2012), *World War Z* (2013), *Divergent* (2014) and *Automata* (2014).

2.3 Alternative reality

This section addresses scenarios that take place in the present day but with a small alteration, or take place in an alternative past time and change the history as we know it either with interpretations of notable events or the addition of fictional ones as part of an untold or hidden history. In most cases, this involves the existence of a fictional race or the invention and use of speculative technologies. These are worlds of comic-book superheroes and supervillains, vampires and werewolves, mutants, supernatural beings or aliens living among us. One very prolific alternative world is based on the Marvel comic-books (now referenced as the Marvel Cinematic Universe [5]) where multiple movies share the same setting. Other fictional worlds include the alien race of sentient machines from the *Transformers* (2007) series, the vampires from *Blade* (1998) trilogy or the ones from the *Underworld* (2003) series; in all these cases the real-world built environment was not changed at all. In *District 9* (2009) however, the city of Johannesburg received the addition of a refugee camp for an alien group that becomes a militarized ghetto and, in *Hellboy* (2004), the Czech's National Monument in Vitkov, Prague has been interpreted as headquarters for a secret organization (most of the movie was filmed in Prague). In *Jurassic Park* (1993) a research facility with exhibition spaces and several tourist accommodations were designed on a fictional island, inspired by similarly themed parks. If these movies weren't very architecturally creative, the same cannot be said about *Man of Steel* (2013) where an entire city was made using CGI just to be torn apart during the battle between the main characters. This fictional city of Metropolis is modelled after New York respecting both its Art-Deco tradition and recent trend in skyscraper design.

2.3.1 The Marvel Cinematic Universe A different past

The 2004 *Fantastic Four* and its sequel from 2007 *Fantastic 4: Rise of the Silver Surfer* offered us a new "old" building – The Baxter building – using the existing Marine Building in Vancouver with its Art Deco appearance [6] and digitally inserting it into the urban landscape of New York. A similar technique was used in *The Avengers* (2012) where the fictional Stark Tower was added to the scene of New York; this was done by altering the upper part of the real-world MetLife Building. A different approach was taken for *Iron Man* (2008) and its two sequels from 2010 and 2013 where the spectacular residence is completely CGI from the exterior and it is placed on a cliff in a state park (in reality there is no building there) – Fig. 5a and its interiors are filmed inside The Razor Residence by architect Wallace E. Cunningham. The same method was used for the Triskelion Building – the headquarters of the fictional international agency in *Captain America: The Winter Soldier* (2014) – by placing a computer generated model on the Theodore Roosevelt Island in Washington DC – Fig. 5b. The building also spans beneath the Potomac River with an impressive hangar. Noteworthy for this alternative

Fig. 5a Iron Man 3 (2013) Fig. 5b Captain America: The Winter Soldier (2014)

cinematic universe is the careful design of the buildings so that they seem not only possible but naturally belonging to the site.

2.3.2 A different past

There are two main themes commonly used in the science-fiction of the past: Jules Verne's Victorian period and the World War II time. The first makes use of steam-punk elements and designs: complicated mechanism of cogs and pipes, highly decorated facades usually with metallic embroidery and massive factory facilities that combine brick and stone cladding with iron cast elements. The colour palette is comprised of earth shades combined with dark grey, bronze and sometimes silver. Such examples include *20,000 Leagues Under the Sea* (1954), *La cité des enfants perdus* (1995), *Time after time* (1979), *Vidocq* (2001), *The Time Machine* (2002), *The*

League of Extraordinary Gentlemen (2003) and *City of Ember* (2008). The second theme makes use of film noir techniques and the built environment is reminiscent of the industrial age sometimes with steam-punk elements; this particular style is referenced as neo-noir or tech-noir (sometimes science-fiction noir) and examples include *Dark City* (1998), *Sky Captain and the World of Tomorrow* (2004), *Watchmen* (2009), *Priest* (2011), *Iron Sky* (2012). In these movies the dystopic society lives in cities usually portrayed as dense, dark and polluted.

2.4 Other worlds

These are worlds with different rules than the ones we are familiar with, usually alien worlds built by life forms other than human or worlds where the laws of physics can be altered or simply don't exist.

2.4.1 Alien worlds and space opera

If building a futuristic Earth is challenging, building an alien world that is completely different from what we know but in the same time recognizable as built environment is a different challenge all together. In most movies there is only one alien world that the humans come in contact with and it features a strong design paradigm, usually revolving around the anatomy of the aliens. When the aliens are humanoid then their buildings might borrow elements from Earth's history, but when they look nothing like us then the envisioned world becomes something else entirely. This is the case of the *Alien* (1979) designs featured in the all movies of the franchise including *Prometheus* (2012), and they are all based on the creature referred to as a "xenomorph" created by H.R. Giger. The visual style is called "biomechanical" and, in architecture, it was influenced by the works of Antonio Gaudi but with a darker and surreal touch. Drawing from similar inspiration sources was the unique world of the "formic" race in *Ender's Game* (2013), an organic architecture that blends seamlessly into the environment to the point where it is impossible to separate one from the other. [7] A more familiar approach was conducted in *Man of Steel* (2013) designs of planet Krypton by blending biological and organic patterns with a rocky harsh environment thus giving the impression of something grown rather than built – Fig. 6a. In *Star Trek* (2009) we can see a similar natural environment for the planet Vulcan but with a very different take on architecture – instead of approaching organic design, the art department created faceted buildings that look as shards of rock spiked through the earth, and they are vague references to Gothic style cathedrals. A combination of organic elements with fractal inspired shapes and various prismatic silhouettes comprise the built environment of planet Oa in *Green Lantern* (2011). In *Star Trek Into Darkness* (2013), the abandoned mining facility on a small moon called Praxis belonging to the "klingon" alien race borrows elements from Mayan architecture but develops them into a distinct design that echoes the warrior nature of the race. Also borrowing from ancient civilizations are the designs in *Stargate* (1994) where the premise revolves around the influence of extra-terrestrial beings to human civilization thus interpreting ancient Egyptian architecture. Designer Holger Gross who worked on *Stargate* has been later brought to the concept art team for *The Chronicles of Riddick* (2004) to help create the key looks of the film. "Huge, detailed, elegant yet heavy, punctuated with dark metal finishes, Gross calls the Necro world <twisted Baroque, if you will a cross between fascism and theocracy, very religious



Fig. 6a Man of Steel (2013) Fig. 6b The Chronicles of Riddick (2004)

and aesthetic in terms of architectural detail, yet at the same time cold and evil, but very powerful. Finally, we developed a style we called 'Necro- Baroque.'>" [8] – Fig. 6b

Showing multiple worlds, each unique in climate, natural environment, building styles and alien life forms has been the trademark of the *Star Wars* (1977) franchise and received the name of space opera (it was previously used for a sub-genre in science-fiction literature); although the television shows *Doctor Who* (1963–1989) and *Star Trek* (1966-1969) are the first to take this approach, it was the now classic *Star Wars* that had the most impact over generations since its release and it is considered a pop culture phenomenon. With a similar optimistic tone and vast elaborate worlds are the recent films *Guardians of the Galaxy* (2014) and *Jupiter Ascending* (2015). In the *Star Wars* franchise (1977, 1980, 1983, 1999, 2002, 2005) we are introduced to an abundance of influences, patterns and motifs from the artisanal dwellings on Tatooine to the mega city of Corsuscant that covers the entire planet and from the underwater Gungan city to the Cloud City on Bespin. Doug Chiang, chief artist for *Star Wars: Episode I – The Phantom Menace* (1999) stated in an interview: "I've found

that you should avoid making things up without anchoring them to a strong foundation based in world history" [9]. He further explained: “There were many architectural influences. In order to make these new worlds believable, we had to anchor them in reality. We researched the eclectic architectural style of Venice for Naboo. The Art Nouveau movement, particularly the work of Gaudi, was used for the Gungan city. Frank Lloyd Wright's Marine Country Civic Center served as inspiration for the blue domes of Queen Amidala's palace. Hugh Ferriss and Albert Speers' monumental buildings influenced Coruscant. And lastly, Djerba architecture from Tunisia inspired the slave quarters of Tatooine.”[10] He continued the work of concept artist Ralph McQuarrie from the first trilogy whose most notable designs include the saucer shaped floating Cloud City with its high rise in Art Deco – Streamline Moderne style, the domed adobe buildings of Mos Eisley space-port (Fig. 7a) and Jabba the Hutt's fortress on Tatooine – described in the movie by one of the characters as more of an iron foundry than a palace. In the prequel trilogy Coruscant (Fig. 7b) – the planet covered by one city that goes for kilometres both above and below the surface – is a homage to Fritz Lang's *Metropolis* (1927) and also pays

Fig. 7a Star Wars (1977) Fig. 7b Star Wars: Episode III - Revenge of the Sith (2005)

tribute to Ridley Scotts' *Blade Runner* (1982), showing two massive buildings that hold dominion over the rest: the Senate, a two kilometres wide dome and the Jedi Temple, a Mayan inspired ziggurat with five towers “which has similarities to the minarets which surround the Ahghia Sophia in Istanbul” [11].

Other noteworthy built environment includes the cloning facility on the ocean planet Kamino – several domed platforms raised above the water surface on central massive pillars, the hive structures with neo-Gothic details on the planet Geonosis (including an open arena) and the capital city of planet Alderaan with aerodynamic shaped towers and Art Nouveau influences.

2.4.2 Virtual worlds

There are two types of virtual worlds: cyberspace and dream world and in both of them the rules of physics can be altered from within, usually gravity – bending, folding or twisting the built environment. A world with 4 layers of dreams within dreams was conducted for *Inception* (2010) – each dream had a different setting where the first three layers are rather conventional: a town, a hotel, a fortress in the mountains (filming location was a ski resort) but with a fourth layer called “limbo” almost entirely computer generated. The dream landscape is comprised of tall buildings arranged to a grid, some decaying but most of them intact. It is meant to represent an architect's dream city with no people – a composition of prismatic towers, ordered and aligned, cold materials such as concrete, steel, glass and tiles, square plazas with large water basins and all the designs are modernist with a desaturated colour palette, argued by the main character's fondness for that style (Fig 8a). In the *Matrix* trilogy the virtual world is considered a cyberspace but has elements of shared dreams similar to *Inception* and makes use of real-world built environments almost without alterations. If in those movies the virtual worlds are supposed to resemble reality, in *Tron* (1982) and *Tron: Legacy* (2010) the cyberspace is nothing like it and almost everything is CGI; it is meant to resemble a video game. Although present day video games have realistic graphics and physics, *Tron: Legacy* (Fig. 8b) presents a minimalistic and hyper stylized environment where

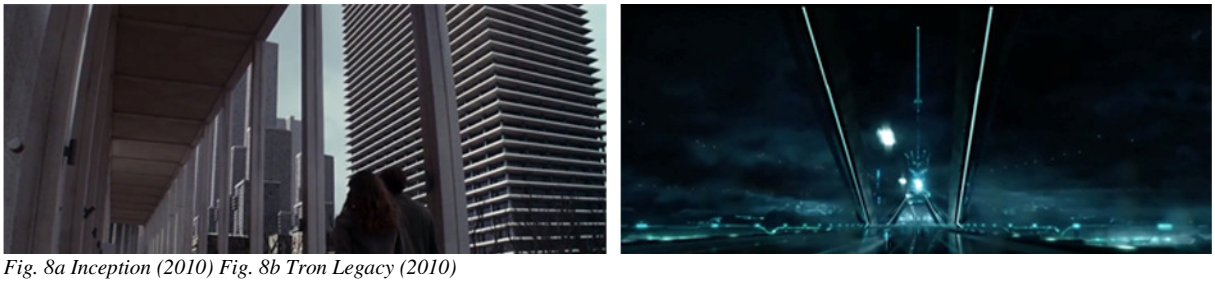

Fig. 8a Inception (2010) Fig. 8b Tron Legacy (2010)

people (considered programs and users), buildings and vehicles share the same design features: uniform colours (mostly dark and preferably black or sometimes white) with light strips outlining the shapes – echoing the patterns on electronic circuit boards.

"The architecture in the film is as much a set of characters as those that speak and wear clothes. All the sets … represent specific ideas" - Terry Gilliam, director of *Brazil* (1985) [12]

3 LESSONS IN DESIGN

After going through all the various themes in sci-fi movies and their use of architectural representations (real or constructed for the film set) two basic trends cand be determined: before the 1990's most futuristic visions revolved around machines and their expressions with a dominantly dark tone adding smoke and steam to mechanism – we can call this *black box environment*; after the turn of the century the future is dominantly white, clean, translucent and glossy – we can call this *white cube environment.* This can be also correlated to the digital revolution and the change of paradigm in our current society. At first glance, the common denominator for making a building look from the future is to make it look bright but cold, polished and in light colors with various shapes and styles. Glass is used in abundance when picturing an utopian future while heavier materials combined with smaller windows are used for dystopian societies. The preffered materials are white polished concrete, glass (mostly with a reflective bluish tint) and shining steel elements. Metallic covers are used mostly when envisioning a darker future. One very important aspect is the scale – oversizing buildings gives them a sense of dominance over the population, thus underlining their importance in the narative. Another technique to make a built environment look advanced is to use conventional models of buildings and overlay them with semi-transparent media. When trying to achieve an older "vintage" look or to give the feeling that something is not so technologically advanced the frequently used method is to recall industrial designs from steam-punk to cyber-punk: large apparent pipes, cogs and wires, exhaust tubes, turning wheels, displays and devices with more mechanical controls rather than digital. This technique of crowding various elements together is generally used to denote a lack of interest in the aesthetics of built environments – militarized or corporate exploitation facilities, shanty towns or other settlements that are usually poor and/or overpopulated. These are examples of what to avoid especially when developing designs for disadvantaged or disaster areas. When picturing utopian cities (bordering on totalitarian regimes) the designers in movies make use of symmetry and circular patterns in their layouts. A lot of vegetation is meant to soften the perfect symmetry but in less than perfect visions of the future nature is almost eradicated. A strong lesson can be underlined here: no matter the scale of the project, nature must find a small part in it. This doesn't come as a surprise, but might sometimes be overlooked. Although organic designs might seem a solution to the integration of buildings in the natural environment, movies that explore this path have proved that bioengineering and anthropomorphic designs are exaggerated and ultimately seem unnatural. Nonetheless, when looking to achieve an "alien aesthetic" blending biological patterns with mineral surfaces can make a strong statement. One less obvious technique in achieving a believable futuristic look is the mix of styles – when all the buildings look the same they give a dystopian vibe of something frozen in time, where life as we know it has become rigid and sterile. When mixing different styles in a city, but without overcrowding it, the result is a rich environment presumably with a rich history behind it – thus believable for audiences (and the architects among them).

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INDUSTRIAL HERITAGE:BETWEEN HISTORY, MEMORY AND TRANSFORMATION[i]

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Abstract

The subject of this article - „Industrial Heritage: Between History, Memory and Transformation" wishes to bring into question some of the issues facing valuable buildings dedicated to this architectural program.

The industrial ensembles, once an expression of prosperity and progress of the early twentieth century, have become today symbols of decay, victims of a system in transition. However, over time, the factory not only provide a functional role, but was also a witness to the various stages of technological transformation, economic, social and political life undergone by the European society.

Through their location and size, the former production facilities have left their mark on the city, conditioning its structure and influencing the future urban development. The industrial complex constituted over time meeting points and exchange places, in which each individual culture and traditions have evolved differently, contributing greatly to the implementation of a special character in the area they were located. However, the visual identity, the distinct images generated by industrial buildings, allowed them to become landmarks for the local community. The factory, the plant and the production workshop talk about history, transformation, progress as well as social control and exploitation, thus becoming places of memory.

As Christian Norberg Schultz observes, any place is a center - what is within the limits, as close to the center, differs in rank from what remains outside. This is particularly obvious in the case of industrial buildings. By definition, they are „islands", inaccessible, absolute places, which creates a boundary between inside and outside. Industrial ensembles can be defined as heterotopias: real places, a kind of utopia actually realized, with a specific function, organized by its own rules. A place is not heterotopic by internal homogeneity, but precisely because of external differences. Heterotopias are related to certain „cuts of time" and also requires a closing and opening that makes them penetrable and isolates them simultaneously. At the same time, heterotopias can juxtapose in one place several spaces, which are otherwise incompatible. In here, „the time is narrated and exposed spatially", the space of history, full of symbols and interpretations, along with the contemporary space offering meaning to the historical time.

As Pierre Nara notes, such topographic areas represents „places of memory", defined by space, objects or ideas possessing a symbolic value, that encourages the connection of a community with its past and thus, becoming elements of identity. However, in our contemporary world, remembering is experienced less frequently often by appealing to our consciousness, to the meanings acquired over time by the community. The memory is now manifested only through external representations and tangible markers of the extinct history. The new role of memory is to record, delegating archives (museums, libraries, monuments, symbol - buildings) the responsibility of remembering.

In the context of major transformations occurred in the past half century, the remains of industrial architecture can create a link between the different social layers, different generations being able to relate to them. Understood in this sense, the industrial complexes can be assimilated to these „places of memory", the buildings dedicated to production, alongside the actors of the industrialization process, being the carriers of such meaningful messages. Even if the industrial ensemble is perceived by the materiality of its vestiges, the intangible sources of memory become equally important during the revitalisation process. In the absence of these informations, the understanding of the industrial culture can be distorted and impossible to decipher.

A series of discussions concerning the condition of industrial heritage is required: Can we talk about the memory of the place in the case of an abandoned, deconstructed site? It is possible to perpetuate the significance of industrial heritage by selective preservation of a fragmented history? Can the conservation requirement be reconciled with the current needs of new users? Can industrial heritage regain a stable reference, becoming once again a landmark for the community? This article tries to answer these questions, based on the analysis of the industrial heritage (yet) existent in Romania.

Keywords: industrial heritage, memory, landmark, identity, re-use

1 INDUSTRIAL ARCHITECTURE - AN EVOLUTIVE PROCESS

Started in England in the late eighteenth century, the industrial revolution triggered a series of defining transformations in the European landscape (and not only), influencing the economic development of the region and also marking its social, political and cultural frame. It must be mentioned that this industrial boom occurred in stages, the elements that caused it being represented by the continuous change in the social classes relations system, through the transition from feudalism to a capitalist society and adaptation of new technologies in the production system assets [1]. The first European countries affected by the transformations determined by the Industrial Revolution were England and Belgium, followed closely by France - still recovering from the 1789's political movements, the Northern Countries, the Habsburgic Empire and later, Italy. Nearly a century away, these changes were also sensed in Eastern Europe. The Romanian Principates, Russia or Japan become aware of the implications due to the industrial revolution much later, after 1848 [2]. Transylvania and Banat, on the other hand, being part of the Habsburg Empire, had experienced the industrial effervescence simultaneously with the Western countries.

The continuous improvement of scientific knowledge lead to a technological change in the production process, the mechanical technology, based on steam power being replaced with electrically operated mechanisms and subsequently, with the intellectual know-how. A number of major stages can thus be identified in the evolution of industrialization, from the railway system construction period, in the early eighteenth century, continuing with the electricity based industrial process and the streamlined operations from the late nineteenth century, the increase prosperity period prior WWI's outbreak, the fluctuating phase from the interwar period, the hyper-industrialization of the totalitarian age, concluding with the post-industrial era, characterized by de-industrialization and abandonment of production spaces. The consequences of this extensive process in Romania will be detailed in the next subsection.

1.1 The impact of industrialization

The increasing number of industrial units in a short period of time, generated a series of major changes, the main consequence of the industrialization consisting in the transformation of the social context and the urban landscape. The economic growth has engaged the migration of population from rural to industrialized areas and the colonization of a wide territory. The changes within the social structure influenced important aspects of cultural and economic life. Thus, the behavior of the population was permanently altered. On the other hand, this demographic growth has resulted in a restructuring of the territory, through the densification of the existing urban centers and the development of new ones. The systematization of the region altered the urban image, the transformations produced in the industrial era being poignant even today.

As a result, the industrial units have marked the evolution of the city, while conditioning the urban structure. The industry became a catalytic element of a region, providing identity to the members of its community. Equally, the industrial complexes built in the nineteenth century are filled with personality, being the living expression of the society in which they functioned. In contrast with the contemporary industrial architecture, the factories of the past centuries are not lost in anonymity, but reflect the changes undergone by the city over time.

Currently, however, the situation of former industrial sites is rather unfortunate. The change of their status, from state property to private ownership, together with the technological progress of the last decades, coincided with the onset period of decline in industrial evolution. The lack of investments and the continued ignorance of production process upgrading, led to a collapse of existing industrial units. As a result, an important contingent of former industrial buildings have been closed, abandoned or have restricted their activities.

The delayed implementation of alternative solutions, in order to solve the economic and social problems caused by the deindustrialisation phenomenon, decreased the living standards of the community and lead to the deterioration of the urban image. In this regard, the problems of the urban landscape overlapped the social ones, the former industrial centers are seen today as a cluster of residual, deconstructed spaces. Concurrently, the industrial heritage is in an advanced state of decay. Despite the protection imposed by the authorities, the former production buildings maintained in situ do not benefit from the necessary funds required by their propper conservation or adequate rehabilitation. The neglect of industrial complexes arises also from a lack of appreciation from the community. The industrial ensembles, once an expression of prosperity and progress of the early twentieth century, have become today symbols of decay, victims of a system in transition.

Fig. 1, 2. The Stocking Factory in Timisoara (1908), during its demolition in 2014

Although the de-industrialization phenomenon has influenced economic and social aspects, brutally marking the urban landscape, the specificity of former industrial centers can be recovered. Understanding the dual characteristics of industrialization can restore the connection between the individual and the build environment, facilitating the definition of a future for the local community. In order to preserve the specificity and ensure the continuity of the city, the re-use of former industrial heritage becomes imperative. Witness of a glorious past, former industrial complexes deserve a second chance, their salvation consisting in assigning appropriate functions, demanded by the contemporary society.

2 INDUSTRIAL HERITAGE AND MEMORY

2.1 Industrial buildings, as heterotopias

The industrial complex constituted over time meeting points and exchange places, in which each individual's culture and traditions have evolved differently, contributing greatly to the implementation of a special character in their location area. However, the visual identity, the distinct images generated by industrial buildings, allowed them to become landmarks for the local community. The factory, the plant and the production workshop talk about history, transformation, progress as well as social control and exploitation, thus becoming *places of memory.*

Fig. 3, 4,5 Water Towers in Timisoara

As Christian Norberg Schultz observes, any place is a *center* - what is within the limits, as close to the center, differs in rank from what remains outside [3]. This is particularly obvious in the case of industrial buildings. By definition, they are „islands", inaccessible, absolute places, which creates a boundary between inside and outside. Industrial ensembles can be defined as *heterotopias*: real places, a kind of utopia actually realized, with a specific function, organized by its own rules. A place is not heterotopic by its internal homogeneity, but precisely because of the external differences [4].

By denying the environment, the production units have an autonomous character, thus becoming exponents of a distinct world. Like heterotopias imagined by Foucault, the industrial architecture constitutes a *different space*, being invested with a number of qualities. It involves a closure and an opening, isolating the inside space from the outside, making it at the same time penetrable. The demarcation becomes important by generating an absolute fracture with the traditional space and time. By definition, industrial assembly becomes a space of exclusion, the access is allowed only to "those initiated"; once inside the factory, the individual steps in another universe, performing his activities simultaneously with the outside world, but in a parallel level. Equally, the production areas become "a sort of continuous and endless accumulation of time in a fixed place", the collection of products or the archive documents being an evidence of a disappeared era. The juxtaposition of several worlds, otherwise incompatible, an essential prerequisite in defining a heterotopia, allows the creation of an hierarchical system of relations. Therefore, the industrial plant causes a reflection of emerging relationships between different social classes involved in the technological process. In addition, by resorting to the palimpsest concept, the industrial complex enables the coexistence of different temporary and physical layers. In here, „the time is narrated and exposed spatially", the space of history, the reminiscent traces of the past glory could be seen along with today's degradation signs.

In relation to the outside world, the industrial assembly becomes a compensation space, contributing to the proper functioning of the contemporary society. From a *place of fabrication,* the industrial site becomes a *fabricated place*, with a unique character and a specific atmosphere. Artificial and abstract, the industrial setting is the background against which the modern society operates on a daily basis. The internal laws, together with the sensorial qualities of the built form (light, color, sound, smell, touch and kinesthetic sensations) allows the transmission and the assimilation of the attached message, while facilitating the cultural identification of the individual with its inhabited environment. Within the limits imposed by the industrial complex, the image of the past can be reconstructed, the former industrial spaces contributing to the act of remembering an extinct world.

2.2 From collective memory to places of memory

The individuals experiment the inhabited space, the contact with the outside world being manifested at the boundary between the *self*, as an instrument of interpretation and *the human body*, as a receiver. The sensations born in the brain, once decrypted, lead to the creation of memories. The urban image, filtered through the psychological structure of each community member, is thereby understood, encouraging the establishment of an emotional connection between the individual and its inhabited environment. The appropriation of the urban setting leads to the creation of a common social memory. As defined by Maurice Halbwachs, the *collective memory* is developed within a social group, the community members being indebted to remember the essential elements composing it. Within this process, the society "does not preserve the past, but reconstructs it with the

aid of the material traces, rites, texts, and traditions left behind by that past, and with the aid moreover of recent psychological and social data, that is to say, with the present" [5]. The collective memory is influenced by the contemporary context and can therefore, be modeled: "the society of yesterday could indeed be diverted from the contemplation of its own image-reflected in the mirror of the past - only if little by little there appeared in the same mirror other images, perhaps less clear and less familiar, but that opened up to that society vaster perspectives" [6].

In our contemporary world, however, the act of remembering is experienced less frequently by appealing to our consciousness, to the meanings acquired by the community over time. The memory is now manifested only through external representations and tangible markers of the extinct history. The new role of memory is to record, delegating archives (museums, libraries, monuments, symbol - buildings) the responsibility of remembering [7]. On the other hand, the intentional memory, modern by its very nature, stores the defining elements and depends on the "materiality of the remains, the recording of the real, the visibility of image". In contrast with the genuine memory, transmitted orally and acquired by all community members, the materialization of the modern memory is a response to the particular phenomenon of mobility, present in our contemporary society. Thus, the feeling of alienation born among every individual requires the existence of tangible items.

Nora notes that authentic collective memory tends to crystallize around places and thereby introduces the concept of "*lieux de memoire*". Such topographic areas represents „places of memory" – defined by space, objects or ideas possessing a symbolic value, that encourage the connection of a community with its past and thus, becoming elements of *cultural identity.* In contradiction with history, the memory of a community is alive, anchored in the present and subjected to evolution, it can be manipulated and appropriated, forgotten and remembered. Like a perpetuum mobile, the memory is constantly changing, incorporating only those elements that corresponds to its demands. History, on the other hand, is constantly relate to a past that no longer exists, rebuilding it repeatedly and subordinating it to the analysis [8]. Understood in this context, the places of memory are "the last bastions of memorial consciousness", marking their presence through "the de-ritualizationof the contemporary world", as they are "the rituals of a society without the rituals". Therefore, the places of memory are crucial in preserving the memorial elements, despite a disappeared history. Once lost this evocative incorporated component, essential in defining an identity, the memory places would become unnecessary. Nevertheless, the wish to remember is fundamental in creating a place of memory. In its absence, those places lose their memorial function, becoming mere places of history [9].

2.3 The industrial space, as "lieu de memoire"

As Maurice Halbwachs mentioned, each social group develops a common memory, giving rise to a collective memory, appropriated by every member of the community. The places where the collective memory is born become impregnated with meanings and thus acquire a symbolic value, their role being that of creating an identity. In the context of major socio-economic changes of the last half century, the remains of industrial architecture can generate a link between the different social layers, distinct generations being able to relate to them. Understood in this context, the industrial plants can be seen as "lieux of memoire" - the industrial buildings, components of built memory, alongside the actors of the industrialization process, representatives of the human memory, are carriers of meaningful messages. However, the perennity of the material remains enters in disharmony with the transience of integrated social components, that are forever lost with the disappearance of the last generations involved in the production process.

The material traces are not the only factors that determine the identity of a space, as this depends on to a large extent on the meanings assigned by various activities associated, whose memory "haunts the physical space like a ghost" [10]. The embedded technology is more than a means of production - according to Heidegger, the technical components are designed to reveal, to produce truth [11]. The industrial heritage lies therefore in the relics, often ephemeral, it leaves behind: "the archives of the enterprises, walls of the factories, the remains of the infrastructure and its equipment, the collection of products, the environmental impact the memory of the last generation of employers or its employees" [12]. Even if the industrial complex is perceived by the *materiality of the preserved vestiges,* the *intangible sources* are equally important in the process of revalorisation. In the the absence of this information the understanding of attached significations can be impossible to decipher.

Over time, the industry has occupied a leading position in our history, as a representative of society's evolution, celebrating the progress and the prosperity. The industrial plant is a testimony to the development of science and technology, but also to the various stages of transformation (technological, economic, social and political) undergone by the society. However, the industrial spaces conditions the structure of the city and affect its future evolution. The former production areas are characterized by the multiethnicity and multiculturalism of its members, therefore becoming spaces of innovation. Messenger of human inventiveness, the industrial ensemble has constantly represented a landmark for the community, its distinctive image impregnating (visual) identity

within its location. At the same time, the former industrial units evoke the memory of the worker, being carriers of messages regarding the control and the social exploitation. Through the delimitation of an exact territory enclosed within it, like Bentham's Panopticon, the industrial ensemble becomes a power operator. As Foucault notes, by applying the panoptic schema, the industrial building becomes a remodeling factor for the individual, the expression of power being performed in the name of efficiency, education and discipline [13]. However, in the transition from industrial to post-industrial era, the laborer - ideological figure and symbol of work value, disappeared, being driven form the center of the society towards its periphery. His status has changed, from "labor hero" he became a "victim of transition" [14].

Nevertheless, the industrial buildings provide a suitable framework for the salvation of these memorial typologies. Once a central place, a catalyst for the city, the former industrial complex has now lost its original characteristics, becoming over time a deteriorated, ruined area. Even abandoned, the industrial ensemble does not constitute a non-place, as it is not emptied of senses. Rather, it designates a special space loaded with meaning, whose decipherment is however distorted by the diversity of transmitted messages. In the context of frequent changes of the inhabited environment, the individual becomes unable to develop a sense of belonging. In this respect, the revaluation of the message carried by the architectural object becomes mandatory in the recycling process. Despite its abandonment, the industrial ensemble still remains an area of events, any form being subjected to changes over time. As Baudrillard asserts, the aim of the architecture is to transform this matter that has been accumulated over time [15]. The successive layers of the architecture can be folded, unfolded, refolded, the modeling of the matter being however impossible in the absence of a spirit [16]. When it is no longer present, the spirit of the place has to be re-created, as the distinctive atmosphere perceived inside the industrial complex, dependents on the presence of a revealing genius.

Fig. 6, 7 The interior of the former Bragadiru Brewery, Calea Rahovei Bucharest (© Alexandru Iacob)

In addition, the transformation of matter engages a reinterpretation of the cultural significations attached to the place, the message delivered by the architectural object thus being deformed. Therefore, the strategies of revitalizing the former production buildings are designed to identify and preserve the specificity of these spaces, since the distinctive peculiarities of the place enable the connection between the individual and the environment. The historical evolution knowledge and the understanding of the place, facilitates the identification of authentic elements that form the cultural identity. In a society dominated by excesses, the recognition of places filled with significations becomes a necessity.

3 TRANSFORMATIONS AND LIMITATIONS

Currently, there is a deep desire to rescue the industrial heritage, since the memorial values attached to these objects is being fully recognized. The need for conserving these places of memory occurs "after a period in which we destroyed a lot, with the desire, more or less conscious, to remove even the memory of an adventure that has ended in a painful failure, transformed today into an impossible dream of total conservation, without any concern for a triage or the respect of a hierarchy" [17]. Jean Claude Daumas bases this assertion on the memorial components attached integrated by the industrial architecture, "the material remains left behind by the industry is increasingly often perceived as constitutive elements of a professional or local identity that deserves to be respected, consolidated and enhanced, through which the pious commemoration of the past is experienced as a a compensation for the decline of of industry" [18].

Fig. 9, 10 The Hydroelectric Power Plant in Timisoara (1909) and the nearby street name plate

The industrial heritage reinvents itself permanently - the attached message, once accepted by the community, can be easily transposed. However, the refunctionalisation of former industrial spaces can generate multiple controversies about the patrimonial object. This raises some legitimate questions about what should be kept and what can be transformed. While contributing to the improvement of the image and the character of the area, the revitalization projects concerning the industrial sites may affect the authenticity and integrity of ensemble, causing drastic alterations. Some argue that the selective preservation of historic fragments can lead to a permanent loss of its character. On the other hand, maintaining unaltered the ensemble limits the reuse possibilities and the further development of the industrial heritage. However, the remodeling interventions of the industrial resource can cause a radical change in the cultural landscape, the memory attached to the building being severely affected.

To avoid this aspect, within the regeneration process of former industrial the limitations imposed by the historic building plants must be considered. In this respect, it is necessary to preserve the valuable components and characteristics (space, structure, equipment), the addition of new elements designed to take over the specific functions must be performed in a cautious manner. Otherwise, the total transformation of the industrial building, risks to become a mere element of scenography; the memory is deleted and the delivered messages are perceived in a confused manner. In this context, preserving the material traces becomes mandatory, as the relics are "able to trigger the memory- materially recorded or not – of an event and thus to re-establish the previous situation [...] This previous state. it is assumed that has currently ceased, which requires even more the presence the vestiges. The vestige is necessarily un-inhabited. He "triggers" the memory of a place (or of its inhabitants) precisely because there seems to be "in place" somewhere where contrary, long ago, he was part of the reality of the place" [19].

Therefore, the re-use projects of industrial heritage require the reconciliation between the current needs of the new users and the conservation requirements imposed by the patrimonial asset. The possible approaches should be analyzed holistically, by considering the industrial building, easily adapted to new functions, as well as the entire ensemble which, regarding its size, becomes more difficult to refurbish.

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THE VISUAL EXPLORATION BY PHOTOGRAPHICAL MEANS AS A RESEARCH INSTRUMENT FOR AN EXTENTION OF PERCEPTION

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Abstract

Space, time, emotion, gravity - are the ingredients that define how we relate to the known world. We adopt an architectural thinking and we build the city under the power of some clear constraints and routines paradigm: the contact with the ground, the bi-pede position, some simple joys, inner conflicts, eyes pointed to the sky, vertical direction of rain drops. Everything is perceived in vertically, horizontally and in depth movement, evolution which we organically obbey, by **the architecture of the human being** in existence on this earth, itself. To do our existence more complex, there is also a permanent oscillation between **the Self** and **what appears to be Real**. It seems that we know everything, we do not doubt much of what we know, usually we do not allow ourselves to think outside the box. For sure, the unknown can be dangerous. We become almost unconcerned simply because routine seems to place an impenetrable veil over the senses. We use the same thinking by having sometimes the illusion of creating something new. But there is nothing new to create, some things might not be yet discovered. We need just to learn to find and to use **new instruments**.

We allow these conditionings to have a "for granted" status, making us who we are. From one point of view, perfection has already been reached on the evolutionary scale. From another point of view, things can be annoying unpermissive, limited. Sometimes maybe we dream to think a building with the top down, or a building that float, or a diffuse building, consisting of spaces that are defined with the power of thought. Sounds like Sci-Fi. For sure, it might be nothing but impossible to overcome these physical constraints, but this should not prevent us from exploring the infinity of ways in which we relate to the world, ways in which we use the components to design the relationship with it. Multiple realities can offer a completely different picture of the world by the extension of **Perception**. Finally, from now on we cand find ourselves free. If those already cited constraints can not be negotiated in any way, we can assume that a different view is needed. Sometimes it's enough to look obliquely or upside-down. But it is necessary to **Focus** on as many of the plans and situations around as we can. With a little but efficient effort, we can connect with the world around us, **can gain a new Perspective**, we can succeed to doubt the certainties, to relax the ways we relate to the world we already know.

The everyday life environment is one in which **Synchronicity** brings in same layers the **Observer**, a **Place**, a fraction of the **Time** and what is likely to become a **Subject**. By the **Immersion** in this open context, open and ready to welcome the **Unpredictable**, evolving during the present and the future with a feeling of the present **Moment**, of what reality becomes, the observer can find himself in **Harmony** with the **Vibration** caused by the game of **Occurence**. This opens the opportunity to identify a single point of **Convergence and Balance** of all horizons that defines **Reality**, thus being born the **Here and Now**. **Photographic** approach may value the **Spontaneous reaction**, turning it into a real moment of "**State of grace**" and harmonization with an intense feeling of the **Whole**. By triggering the

shutter, the process is **Decisively captured** in what will become **the photographic image as true witness**.

By consequence, we can become aware that anything can actually be **much more than we know about it**. As a matter of fact, perhaps nothing might be as it seems to be. The photographic tool is probably the most appropriate means of investigating the immediate reality, the **visual exploration** having the ability to reveal new meanings by assuming an **exploratory behavior** with its own rules. New meanings and learnings can be born by accesing **sensitive, flexible and creative** registers of **Behavior**. Thereby, reality can reveal new facets, by extending the knowledge about the world.

Keywords: perception, photography, observation, competence, space, time, emotion, moment, state of grace, vision, gravity, perspective, play

Space, time, emotion, gravity - are the ingredients that define how we relate to the known world. We adopt an architectural thinking and we build the city under the power of some clear constraints and routines paradigm: the contact with the ground, the bi-pede position, some simple joys, inner conflicts, eyes pointed to the sky, vertical direction of rain drops. Everything is perceived in vertically, horizontally and in depth movement, evolution which we organically obbey, by **the architecture of the human being** in existence on this earth, itself. To make our existence more complex, there is also a permanent oscillation between **the Self** and **what appears to be Real**. It seems that we know everything, we do not doubt much of what we know, usually we do not allow ourselves to think outside the box. For sure, the unknown can be dangerous. We become almost unconcerned simply because routine seems to place an impenetrable veil over the senses. We use the same thinking by having sometimes the illusion of creating something new. But there is nothing new to create, some things might not be yet discovered. We need just to learn to find and to use **adequate instruments**. In this regard, we have developed the utility and the systematic, analytical capability of **photography** as an adequated instrument of studying the urban and architectural space (*1). Photography, as a process, involves the assertion of certain **Competences**, finding the **Decisive moment**, involving **Emotions** and being in **Time**, outlining a possible new **Vision** on things that generates the world.

We will try to deepen several directions of the “extension of perception”, and, beyond an apparent “romantic” vision, to structure an explicit theoretical course. By identifying the **competences** required by an ideal **observer**, the contact with the surrounding world through a sensitive conection, through what we call the “**state of grace**”, linked to the necessity of founding **new angles** and **perspectives** to look at “what seems to be real” - are the topics to be developed and corroborated, in order to achieve the target of this study.

1. ON OBSERVATION AND PERSONAL COMPETENCES

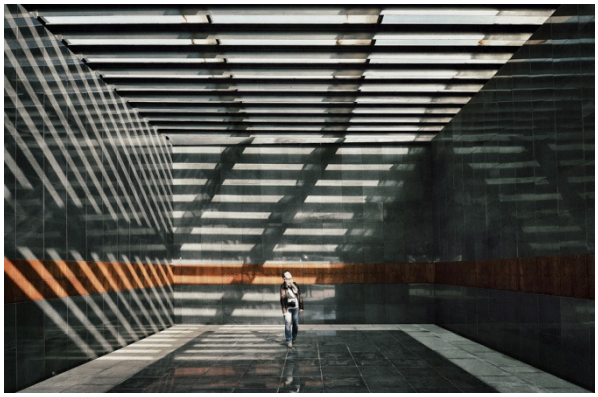
Multiple realities can offer a completely different picture of the world by the extension of **Perception**. Finally, from now on we cand find ourselves free. If those already cited constraints can not be negotiated in any way, we can assume that a different view is needed. Sometimes it's enough to look obliquely or upside-down. But it is necessary to **Focus** on as many of the plans and situations around as we can. With a little but efficient effort, we can connect with the world around us, **can gain a new Perspective**, we can succeed to doubt the certainties, to relax the ways we relate to the world we already know.

Or what we almost know, at least from the the viewpoint of an architect or an urban planner. Louis Kahn opens an issue that characterize a dialectic relationship between the “measurable world”, represented by the physical nature of things, and the “un-measurable” one, a part constituted by emotions, feelings and aspirations of people (* 2). Therefore, when something imaginary is drawn in concrete forms by measurable standards, in fact much "less" than possible reality can be achieved. And what we cannot see, cannot touch, do not hear – what is not though accessible through immediate senses, does not mean it does not exist. The “un-measurable” starts from where emotion creates vibration as an invisible binding material of those elements that define the world around, the City, with all his constituents. Following this idea, for Ciprian Mihali “*the urban space obeys the Time factor which opposes Length and Distance by Speed and Movement, or by introducing emotional shortcuts, disconnecting the three-dimensionality lines of force and affective states, in the areas of enrollment and description, which are not geometric surfaces, but rather plans of immanence, relative and variable as horizons and countless*“ (* 3).

Ignasi de Solà-Morales talks about a "vibration" of layered elements that compose the city: *"... there is a culture of the event, a culture which, when fluidity and decomposition that leads to chaos is occuring, is capable of generating instant energy that links a resent moment to a future one - a new layer of reality* [...] *the event is vibration* [...] *is like a stretched string, bringing intensity at the intersection of communicating energy flows* " (* 4).

For a better understanding of the world "measurable" layers and also for gaining access to what is invisible, "un-measurable" - as the emotional resonance, it is necessary for the proffesionals to develop and learn some **specific competences**. To build for people, one have to proove a comprehensive understanding of the meanings of the sensible world. It's evolution and behavior can influence the activity of the architects and urban planners.

1



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The changes required by the sensitive relationship with the environement are triggered by the observation process (*5), which requires - at least, the presence and participation in a given context and situation, in order to record it and interpret it. Since this situation is the product of an **interaction**, the subject of interest that one can submit is the result of the observation and understanding of the visible and aprehendable mechanisms that the city lays ahead. Buford Junker (* 6) notes that the very practice of observing "*calls an appropriation of the rules, attitudes and phenomena that describes the studied environment.* [...] *It also informs the researcher o facts that can be extracted from a given environment, and how they can be better understood*". The effective practice of observation suppose the adaptation of the observer to the studied environment, which opens a real need for a certain "personal development", according with the complexity of the studied subject. This mechanism may reveal, as we shall show, a series of **social, intellectual and emotional competences**, assuming adaptability to environments and situations more or less familiar, the practice of communication and socialization skills, sensory amplification capabilities (visual acuity and attention in particular), the reaction time, the synthesis capacity by identifying significant issues that characterize the subject studied, as well as emotionally resonating and empathetic capacities.

Observing by photographical "immersion" can trigger interior processes and phenomena, often felt as an incomprehensible transformation, but yet very present. This can "unleash" an inner Ego probably never felt nor known before. The **common sense** of **measure** and **balance** is a human quality required for an observer, photographer.

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The real interest for the subjest is a key theme on any photographic approach. Normally, what we do not know should not scare us, but on the contrary, should incite us to discover, to uncover. The camera is a great tool for searching and even for defying the rigid laws of Time. **The need to open up the world around**, the **lively interest in what is happening outside** of you and inside you, is a major working condition within planned approach of photographical research, the driver of an *immediate reaction in front of a possible subject*.

The observation competences, the distributivity, adaptability and lively curiosity are some essential human qualities. They can be able to help the observer to be a head above, one step ahead and one reaction quicker than the strangers on the street, in the search for the "*state of grace*". These are the ingredients of possible tactics and strategies which often are required to be involved in order to find out valuable information.

The ability **to empathize** with unknown people can itself be a stand-alone analysis theme. The interlink with the invisible layers of the reality is a key in reaching those strings that vibrates, the emotion being able to create emotion, by itself. By entering this area of emotional state, one can find the much-needed **inspiration**. The **ability to be impressed** is in this context, by the involvement of the self in a sensitive way, one of the key components of the photographic approach. To **let itself being amazed** by facing the world is a characteristic of contemplative and shy natures, which are perhaps more valuable in this case (though contradictory) - by requiring, as we have shown, the overcoming of most internal barriers. In this context it is likely that at some point we can talk about *photography as a means of therapy and self-improvement*.
We insist on emphasizing the emotional factor in photography only because, experimentally proven, the display of the ability to empathize and the ability to vibrate the intimate resources of emotion, we believe that can be central concepts in urban or architectural photography.

"How to communicate" is at least as important as "what is communicated". The two instances are simultaneously able to be found find, indirectly - both inducing a reaction that influence the spontaneous behaviour, and directly - by finding themselves in the visual result. The Observer needs to find an emotional openness by exposing itself to the "target", this bringing into question the necessity of creating a flexible interface upon a potentially infinite states regarding the possible influences of the external environment. On the other hand, a personal opening is required even if the exercise can bring a sense of vulnerability. It is a process that **strengthens the spirit** and helps the observer to become more aware on **deep and pure feelings**.

The need to control **the emotional space of the self** but also **the emotional relationship with the outer world** calls on concepts that are specific to the **emotional intelligence** domain. Relatively new, it turns attention on the individual level, focusing on **self-control, determination and ability to self-motivation**. It may briefly highlight some crucial attributes which can now complete the range of skills of the observer-photographer from the perspective of the emotional control. Thus, in terms of **identifying emotions as they happen**, an essential skill consists to **recognize and accurately discern emotions both in the self and in others and to monitor them**. Correct and coherent expression of emotions is also a key point in the quality of communication and relationship with the outside world. In the level that causes a photographic reaction, the identification and expression of emotion requires a very short **reaction time** and passes through the artistic filter of vision, being related with sets of rational decisions.

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Another quality lies in the ability to use in his favor the diversity of states in which the observer may be subject, in mimetic resonance with the external environment. In the absence of awareness or a decoding mechanism, its

influence could be disconcerting. Multiple emotional references can be speculated constructively, thus having the opportunity to broaden the spectrum of perception and understanding of the diversity of met situations, the urban environment being extremely dynamic.

Also, we can identify **the ability to use emotions - both positives and negatives ones in order to successfully overcome various situations, to prevent affective changes, or to nurture creativity**. We pay special attention here to the potential *negative moods transformation into a platform for creative work*, because when we refer to self or external work environment, different situations can occur as barriers. By having a positive attitude, we find ourselves already in the presence of constructive thinking and of application of strategies regarding the emotional management, facts that can prove a **strong personality**.

Knowledge and **understanding** are natural (desired) consequences and are also reference points of the photographic approach. In this direction, for Susan Sontag, the act of shooting requires "*closness with the photographed subject, establishing a relationship of knowledge, of power*" (* 7). The photographic work is an event by itself, influencing the way of assimilation of the different situations that have been met. A problem with a victorious outcome is assured, because photographic observation brings **knowledge** and at the same time, knowledge can be achieved by making photography. Knowledge itself is a state that is reached without delay, nor the possibility of giving back, and has the effect of **illumination** upon those **mysteries which tempted the observer to explore**. Knowledge can of course be permanent deepened, yet it can create dilemmas. What one do with what it have been found? What direction one can choose now? Knowledge brings maturation of sight and feelings and also compel the observer to reinvent itself with every shot made, with each found answer, with every enlightened curiosity. A difficult task, but not a problem for a professional with a lively, creative spirit.

The **ability to discern** from the infinite layers of urban reality that opens to be explored, the **ability to see beyond** apparent things, the **acuity of a contemplative gaze**, all are required sensitive skills. They can be practiced by an assiduously photographic work and have the advantage that they can immediately be found, filtered in photographic frames. Their influence can be relatively easily observed and evaluated. They all describe what we call by the concept of "**photographic vision**", that works in tandem with the ability to prove **a visual thinking**, which is essential. The contact with the surrounding world is predominantly sensory, vision is a key element that mediates the contact with the outside. We perceive images that triggers new attitudes, behaviors, emotions. The photographic image transcribe all these elements into new images, this time filtered through the personal, subjective **vision**, which depends on a whole series of factors - such as the cultural, social, physiological, etc.

In direct relation to the understanding and the visual thinking we can place the **ability to interpret and report** - features that can be improved over time through constant effort and passionate photographic approach, by realizing the qualities and capacities of photography by raising the self-awareness and by knowing oneself better. Interpreting and translating reality through image can be achieved in a realistic key (objective, "measurable") or pictorial (subjective, "un-measurable"). Ideally, it is preferable to perform it as a hybrid between the two currents.

By **affirming imagination** and **creativity**, the practice experience can enlight and can individualize a photographic approach, offering an unique imprint of the author's vision. Here we can think of music improvisation technique, this exercise being able to be a real positive challenge. Of course, improvisation techniques requires perfect mastery of execution, but in photography there is the advantage that mistakes are allowed, and they can initiate (in the absence of visual unwanted interferences) a new aesthetic context (the lomographic style).

Opinion and conclusion sets photographic gesture to a final cut, by triggering the shutter or by further selection which tells and help the reconstruction of elements of the reality discovered by shooting. Remembering the words of Andreas Feininger, the photographer have to be aware of what is important to be communicated through the image (* 8), the evaluation of the own piece of work requiring a **detachement** from its own visual product. The **ability to synthesize** requires a "cold" product vision. We believe that this fact is perhaps impossible, even given the time lapse meant to fade the direct experience which naturally links the photographer to his images. Sorting images is a gesture meant to discover the most significant ones, to highlight the success of of the "immersion" in the studied environment.

2. ON TIME, SYNCHRONICITY AND THE "STATE OF GRACE"

The theme of Time is probably impossible to be completely revealed or exhausted, not even in pages that tries to discern the mysteries of perception extension. We start over being aware that we are subject of submission and, by this respect, we can try, more realistic, a wisely approach and not a bold one. We can try to give him (the Time) a respectful roundabout way and try not to challenge him.

The concepts of time and space are inseparable. A rational analysis is difficult precisely because they are the background every experience we live. Nothing exists outside of space and time. The second, infinite divisible on it's own, it is only a measure that determines the realtion between elements and events we perceive as real. The present moment is a simple transient instance. Our time becomes visible, palpable if we realize how this settles in the coming future. The passage of time seems to differ from one age to another, from one season to another, from one event to another, from one state of mind to another.

Photography may be one of the few areas where Time becomes a very condition of achievement, providing the ephemeral – the illusion of permanence. Time becomes accessible and visible in photos because of the way in which the observer is connected to the subject. By correlating the observation process with the equation that brings together, at one same level, *the photographer*, *the subject* and how they articulate in this *co-presence*, we can enunciate two instances of Time – the *interior* time and also the *exterior* one, together defining the reference system of the observer-subject relationship.

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Of course, each of them is defined by a time of evolution and a specific space. Because the city is a living environment, dynamic, comprising a plurality of events and layers that slides or intersect under the incidence of personal laws, their meeting can generate new instances of reality. Time seems to flow differently for every one of us. The photographer-observer has it's own perceived time, differently from that of observed outside subjects. "*There are so many things that happen so fast around me that I cand easily find myself lost*" are words that we can hear often from common people. The photographer has a privileged role, however, to penetrate the layers of everyday reality, to bring in a same layer disparate elements that evolve apparently by chaos and to harmonize with events during it's evolution. He must be able - in temporal relationship to the subject, to access different "vehicles" that are moving at different speeds, and to easily and quickly adapt to different reference systems, such as the observed and analyzed subjects.

Time of gaze, of contemplation, of learning, of memory settlement and of asimilation of feelings and emotions – are equally essential temporal dimensions that the observer can consider to deepen, in his process of conciliation and harmonisation with the *nature of things*.

As we have entered the gate of Time, we can further approach typical issues of concepts such as **simultaneity** and **state of grace**, which become a priority in the context of space and time, involved by the widen of peception through a deep connection to the environment.

Let us outline a picture sketched with thin lines: city, buildings, public furniture, textures, pedestrians, vehicles, birds, wind, light. Then, the observer: attentive, he has a magic tool, his camera. His presence on the street introduce the **subjective perception**. A place and time, continuous search and spontanous reaction.

The first question that we can submit when one comes out on the street with the camera - can be: where do we start? Where shall we be, where are we going, especially when – when comes to take pictures in the city? The

relativity of response can raise some legitimate obstacles in the attempt to evolve as a urban or arhitecture photographer. Rather dilemmas than real obstacles, these questions contain the essence, the sketch from which we can start shaping what is to become an accomplished urban-architectural photographic approach.

Some conditions can be easily fulfilled: first involves the simultaneous presence of a subject, the observer and the "writing" instrument, in a given spatial and temporal sequence. Simply put, this means to be present on the street, with the camera ready, looking for a subject. Some questions that can be a ferment of a relentless search: *how do I find myself at the right time and in the right place*? *How do I recognize a valuable subject? How do I know to react accordingly when something accurs?*

The city is a complex system that overlays an infinite number of an apparent chaotic layers that defines the daily life. The multiple layers of reality describe it by **synchronicity**. In fact the city, as complex environment is characterized by the "*simultaneity in one single place of all relative pathways that may be produced inside of it*". This feature which "*can not be spotted being stable in any way, remains impossible to catch*" (* 9).

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Of course, we can immediately agree that one can never know everything about a moment of the everyday reality. We do not know what is going on three streets away and neither what is going to happen in five minutes from now. Based on **experience** and **intuition** - involving specific competences already stated, we can just "approximate" things to come. One can perceive what depends on where and when, according to the observer moves. If it can not be everywhere and at any time, eventually invisible and equipped with the best camera money can buy, one observer can focus the full attention and energy on the present moment.

The simultaneous oscillation between **objective observation** and **the subjective reaction**, the **continuous search**, the **focused attention**, the **tactics and strategies** on approaching the subject, they all are able to transform the apparent nonsense of free wandering. The senses can bring a confirmation that one way is the right one, making possible the existence of a genuine **momentum**.

For the conciliation of what initially appears to be *unknown, random, unexpected, incomprehensible, disturbing, distant, inaccessible* - photography comes in a tangible way to contradict any concerns about any impossibility induced by the urban reality. Using photopraphy and implying the mechanism of immersion, conciously and passionate, following an efficient connection with the surrounding reality, synchronicity then calls the *stability* as an attribute that defines photography. It operates then the fixation of visual sequences, cropped from reality. In this way, **sinchronicity** become an accesible, palpable dimension.

The approach – both poetic or rational, is yet dependent on the purpose of the act of photographic observation. Invoking the fate can stand into a perpetual contradiction: that of a necessary dismiss of what appears to be real (by turning inwards) and the simultaneous relation with reality, in a well defined image layer (an outwards look). "*Introspective discovery compete with the outside world that can model us and whici is in the same time shaped by our presence. One must find a balance between these two worlds. As a result of the mutual action of the two worlds, they come to define a single one. This is the world that must be told*" (* 10).

When looking for *what you do not know if exists*, *for what is not yet known* or *how it looks and if it will be found* - and the picture in the city depends largely on the management of unpredictable and unknown events, the **mind should be released by those thoughts which are anchored in the reality**. It becomes a source that can **emphasize senses, opening the way of self aknowledgement and one of the surrounding world**. When you "happen" simultaneously with the world around you, when you no longer feel unfamiliar or alone, but

surrounded and "dressed" with the city, then you can realize that you are **There, Now**. **The inner voice** gets stronger, **the intuition** starts to lead the way and **the unpredictable** can become an ally, also.

Kairos is the concept that describes the subtle process of determining and finding the appropriate time and place for an action. *Kairos* can be seen in terms of opening up the possibility for something *to happen, to become, to take place*. Photography wonderfully comes to meet these possibilities, putting both the open and receptive photographer-observer and the subtle medium, able to capture the vibration of those converging waves that leads to the birth of situations to be photographed. In the daily routine light, the event creates vibration. This can highlight *what is different*, *worth taking into consideration*, *noticeable*. For a fraction of *time*, this assembly of simultaneous situations - the synchronicity can be exploited, photographed, consumed, narrated.

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These are the outlines of the process that **shapes the subtle understanding** of the world dynamics, in terms of **subjective perception**. The everyday life environment is one in which **Synchronicity** brings in same layers the **Observer**, a **Place**, a fraction of the **Time** and what is likely to become a **Subject**. By the **Immersion** in this open context, open and ready to welcome the **Unpredictable**, evolving during the present and the future with a feeling of the present **Moment**, of what reality becomes, the observer can find himself in **Harmony** with the **Vibration** caused by the game of **Occurence**. This opens the opportunity to identify a single point of **Convergence and Balance** of all horizons that defines **Reality**, thus being born the **Here and Now**. **Photographic** approach may value the **Spontaneous reaction**, turning it into a real moment of "**State of grace**" and harmonization with an intense feeling of the **Whole**. By triggering the shutter, the process is **Decisively captured** (*11) in what will become **the photographic image as a true witness**.

So, the systematically and consciously **work with oneself**, with their own conceptions, **a perception of reality** and also of **what is about to happen**, **the sense of time flowing**, **the harmonization of incident events** through an **active observation** which involves a **photographic experience** – they are all factors that may lead to a convergence of all variables in a **single subtle layer**. Focused through the senses and by the spontaneous triggering reaction in an **unique image**, this process creates a memorable visual witness that merges all the "ingredients" of visible and invisible matter in a **tangible product, unique, unrepeatable**.

The permanent search, an avid creative energy consumer, is always restarting the process in a new subtle formula, using an infinite combination of "ingredients", always displaying new situations the city lays for the observer.

3. ON VISION AND CHANGE OF PERSPECTIVE

We can become aware that anything can actually be **much more than we know about it**. As a matter of fact, perhaps nothing might be as it seems to be. The photographic tool is probably the most appropriate means of investigating the immediate reality, the **visual exploration** having the ability to reveal **new meanings** by assuming an **exploratory behavior** that follows its own rules. New meanings and learnings can be born by accesing **sensitive, flexible and creative** registers of **Behavior**. Thereby, reality can reveal new facets, by extending the knowledge about the world. The conditionings of the relationship with the world as we know it, whom we allow to have a "for granted" status, makes us what we are. From one point of view, perfection has already been reached on the evolutionary scale. From another point of view, everything is "annoying" compressed, unpermissive, limited. Sometimes maybe we want to build something upside down, or a levitating

building, or a “diffuse” building, consisting of spaces that are defined with the power of thought. None of the apparently impossible to overcome constants should not prevent us from exploring the infinity of ways in which we relate or we design the relationship with the known world.

We are so accustomed to the way we perceive the relationship of buildings with the ground, for instance, by the natural effect of gravity that sets the physical measurable coordinates, that we get to think of the science fiction or imaginary any venture beyond the laws of known environment. Sure, technically, we depends on these coordinates, despite that the modern computer-aided engineering cand design architectural solutions we can see only in sci-fi movies. But **mind and imagination have no limits**, and even we can not defy physics, neither can change anything essential, at least, boldly pushing the limits of perception, we can overcome unimaginable obstacles.

A whole literature imagined futuristic cities, spiral urban spaces or mirroring worlds (Star Wars, Upside Down, Interstellar are just a few examples). The link with the abstract poetry of Ion Barbu seems now to enlighten it’s secret. The verses can put the urban space and the architecture itself in a new light, because only “*by entering the mirror, in a pure light*”, is possible to distinguish “*a second image, more pure*”. Reflection (and why not, the afterthought also) becomes the medium from which we can extract **new purified, essentialized meanings**.

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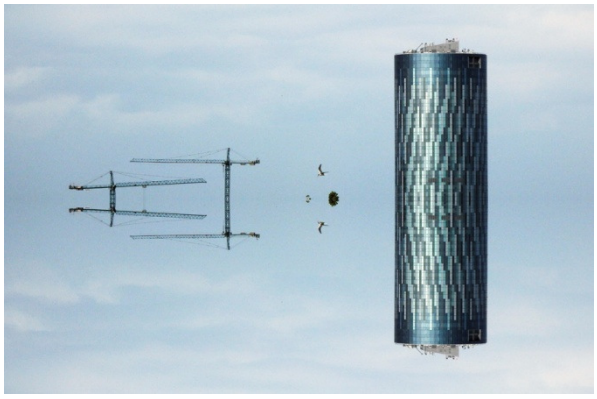

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A **change of perspective** in the way we see things can be able to bring openness towards new horizons. It's very possible that this can become also possible through **play**. To play – like in that childish game that Brancusi refers to when he says “*I think what really makes us feel alive, is our permanent childish feeling*”. To play is to allow the world research and the self-awarness, creating the link between reality and imagination. Therefore, between the “measurable” and the “un-measurable”, already revealed by Louis Kahn.

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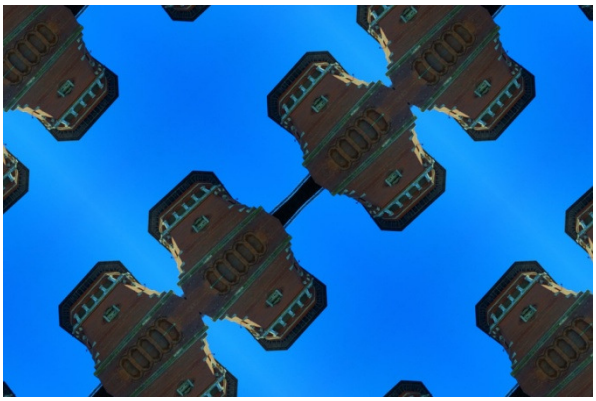
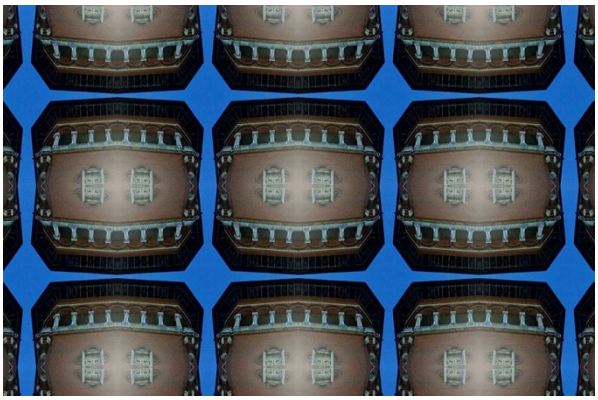
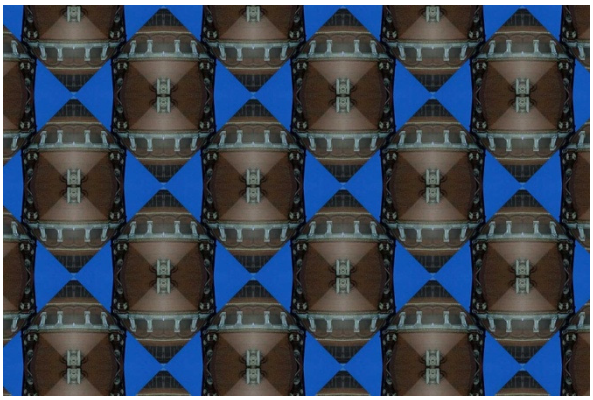
Can we think in this case if there might be a *toy* that can provide a new way of seeing? Looking through a *kaleidoscope,* the finder can show those unexpected possible facets, varied using the same ingredients to depict always something different, in a permanent game of dynamic decomposition and recomposition. This relatively simple toy but with infinite possible images that can be found at the end of "telescope", can provide a key of reading the surrounding world itself, but on a smaller scale, for sure. Only one step separates us from a simple extrapolation.







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"*If you look through a kaleidoscope, the first impression that you have is that the world will be decomposed. But this is only apparent. The way we choose to look at the picture can influence significantly the perception. You can choose to look at the world only from one angle, which we can not say if it is correct, coherent or not, right or not. You can either choose to look and contemplate the world in a different way. The fact is that the chosen way of perceiving things can bring a change of self, a change in the way of thinking and feeling.*

What do you choose?" (*12)

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Fig. 1-18 : by Vlad Eftenie
Fig. 19-22 : courtesy of Mara Coman

TRANSFORMING THE BUILT LANDSCAPES – INITIATIVES ON CITY CULTURAL SUSTAINABILITY: PHOENIX PROJECT DORTMUND.

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Abstract

Transforming and integrating former industrial landscapes is quite an actual problem in establishing new purposes, activities and community new life within the city. Evaluating the site and establishing priorities, values and potential is one of the first actions to be done in such situations, than the second one could be a draft listing of the successive initiatives and diverse costs on expenditure and possible futures incomes. Different scenarios are important, and also the transformation of the further possible places atmospheres are to be evaluated, together with the local real-estate policies but also the resulted value of the place, thought as cultural sustainability according to the city, region and time metamorphosis. Including a part of the industrial buildings on a short list or a 'red list' and protect their future alteration is a first action to be done when intervenes in industrial landscapes. Preserving, preserving and improving on different scales gives history and memory needed to local communities and the sense of place for global initiatives. Accepting (by locals) the transforming built landscapes is another issue to be considered, so the continuity has to be contended in developed layers of culture and public space coherence. Glocality and sustainable interventions should be constituted in thinking also at inherited society means but also giving opportunities on establishing new traditions. Present text essay/paper aims to recommend a case study: a possible experiment and the theory besides the experiment, that is a new important chapter in research through architecture with significance based on initiatives on cultural sustainability: Phoenix Project Dortmund. The Phoenix Project resides in a continuous development with two main areas that have supposed transforming the built landscapes of two integrated industrial sites: one of coal exploitation and one of coal processing, in a traditional area as Germany RUHR region used to be in the past. After eco-greening the site(s), the first area becomes a inner city sea lake (filling the hole of coal exploitation) establishing a development from the scratch with integrated residence housing and condominiums, together with commerce and spaces for offices connected through a large opened pedestrian side to the sea lake, and the second one becomes an integrated cultural in process site to the city of Dortmund. The Phoenix Project was presented on the site(s) by the urban planner specialists from the City Hall Development Department of Dortmund, within the conference workshop and study trip organized on this occasion. The event Urban Futures – Implementing Cultural Sustainability in Governance and Spatial Planning took place on 3-5th December 2014 in Dortmund (hosted by ILS Institut fur Landes- und Stadtentwicklungsforschung gGmbH, Research Institute for Regional and Urban Development GmbH, Dortmund, Germany), and the author was invited by courtesy of the COST IS1007 action (Investigating Cultural Sustainability). Also an important archive of the site(s) photo was realized on this occasion and it will be presented in the ICAR conference. The author hereby thanks to the action COST IS1007 Investigating Cultural Sustainability, where she is a Member of the Management Committee since November 2013.

Keywords: Architecture, archive, experiments, landscape, cultural sustainability, innovation, technology, research project.

1 INTRODUCTION. THE CONTEXT OF THE STUDY AND METHODOLOGY.

Present article presents a particular initiative on land regeneration through transformation of the built landscapes in two major areas, former industrial sites within RUHR area - the city of Dortmund: Phoenix Project [1] (Fig.D1), in the context of site visiting evaluation within Dortmund workshop event *Urban Futures – Implementing Cultural Sustainability in Governance and Spatial Planning* which took place on 3-5th December 2014 in Dortmund (hosted by ILS Institut fur Landes- und Stadtentwicklungsforschung GmbH, Research Institute for Regional and Urban Development gGmbH, Dortmund, Germany) as part of the COST IS1007 [1] action (Investigating Cultural Sustainability) [3]. The author of the present article was part of this event as a consequence of Romanian adherence to the COST IS1007 action, which was possible made through institutional cooperation (according to Romanian rules) through a national research project – the author's postdoctoral research project *Types of innovation in cultural spaces.]working with/in[cultural spaces_tradition and innovation*. [2] project supported by a grant of the Romanian Ministry of Education, CNCS – UEFISCDI, project number PN-II-RU-PD-2012-3-0515.[2] Article aims to develope the proposed subject *Transforming the Built Landscapes – Initiatives on City Cultural Sustainability: Phoenix Project Dortmund.* on several sequences of approach in four major sections/chapters. The proposed methodology is based on three major lines: 1. observation on the site visiting within the presentation within dedicated workshop in Dortmund, 2. the focus of COST IS1007 [3] action on the topic of *cultural sustainability* in the context of best practices, 3. the focus and objectives of the postdoctoral study (of the author) on defining notion *cultural space* and "define several types of innovation that were relevant and successful in application" [2]

2 DORTMUND: PHOENIX PROJECT.

Project's overview and description. The Phoenix Project [4] is developed within the city patterns of Dortmund on two former industrial locations that necessitate ecology greening and conversion as a consequence of multiple tasks to follow for the local govern, from the green sustainability climate of the area and the need for space of the city for livable expansion in the brownfield(s), to the change of technology and use of the resources on the global regard (Fig.D2-3). The two former industrial sites (Fig.D4-6) are now (2015) in full progress for development – consisting in two somehow different approaches: Phoenix West (Fig.Ph1) and Phoenix East (Fig.Ph2-3), but being part of the same plan of greening, regeneration, re-landscaping, activating and urban development (Fig.D2-3). Called after the former Phoenix Work, the Phoenix Project [5] covered the areal of the two sites that were accommodating the exploitation of coal (East) and the steel factory (West), together with industrial necessary facilities. The first one – the exploitation of coal – had generated a huge hole in the landscape but also in the area of the habitat. In numbers the current Phoenix Project developments totalizes: 10 years of urban development [6], 70.000 new jobs [6], space of 200 hectares [7] [8], 99 acres of lake – Phoenix See [8] ("The lake is 1.2 km long in an east-west direction and 320 meters wide in north-south direction and with a water area of 24 acres larger than the Hamburg Alster Lake. One laps around the lake to lead the separate footpaths and cycle paths, resulting in a distance of 3.2 kilometers. With a depth of up to 3 to 4 meters PHOENIX Lake was created as a shallow lake and holds around 700,000 cubic meters of water." [8]) Phoenix project is a work of local authority government, started since 2000 [9], that ensured on long term view the principle of sustainable environment in a single vision: reconverting the industrial former major sites within the city into a contemporary approach integrated development, both keeping the valuable buildings for the memory of the place, and inserting a whole new urban growth pole in a new shape of a real-estate rising project amplified by a new artificial lake. The two Phoenix industrial areas have become new integrated areas within the city of Dortmund, borderless to the built environment but also to the natural landscape. Phoenix West is in the phase of searching for investors and starting implementing its new face as pedestrian and commercial urban pole, after it finished successfully the stage of ecology greening and cleaning. Phoenix East is in full use after the main development has finished, enlarging its epicenter of construction, utilization and function as urban sector – being designed as a main surface of plazas and pedestrian areas, besides the residential housing and office-services-commerce facilities which progressed on the site, germinating the place with a whole new urban activity breath. The Phoenix project was defined through Dortmund project that was "initiated by the Thyssen-Krupp AG, the

local government and the management consultancy McKinsey & Co in good co-operation to transform the “Old Dortmund” to the “New and fast Dortmund”.[9]

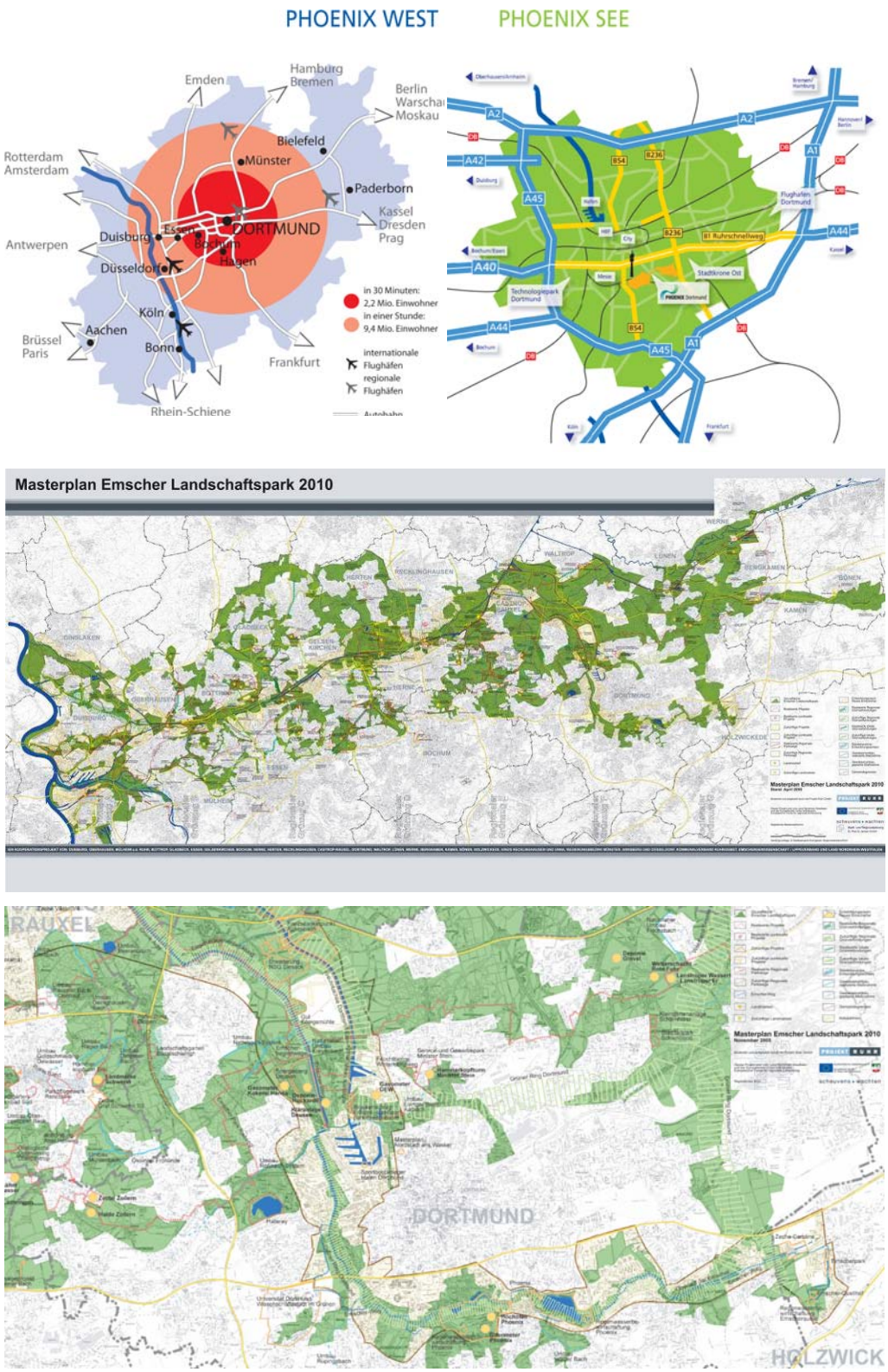
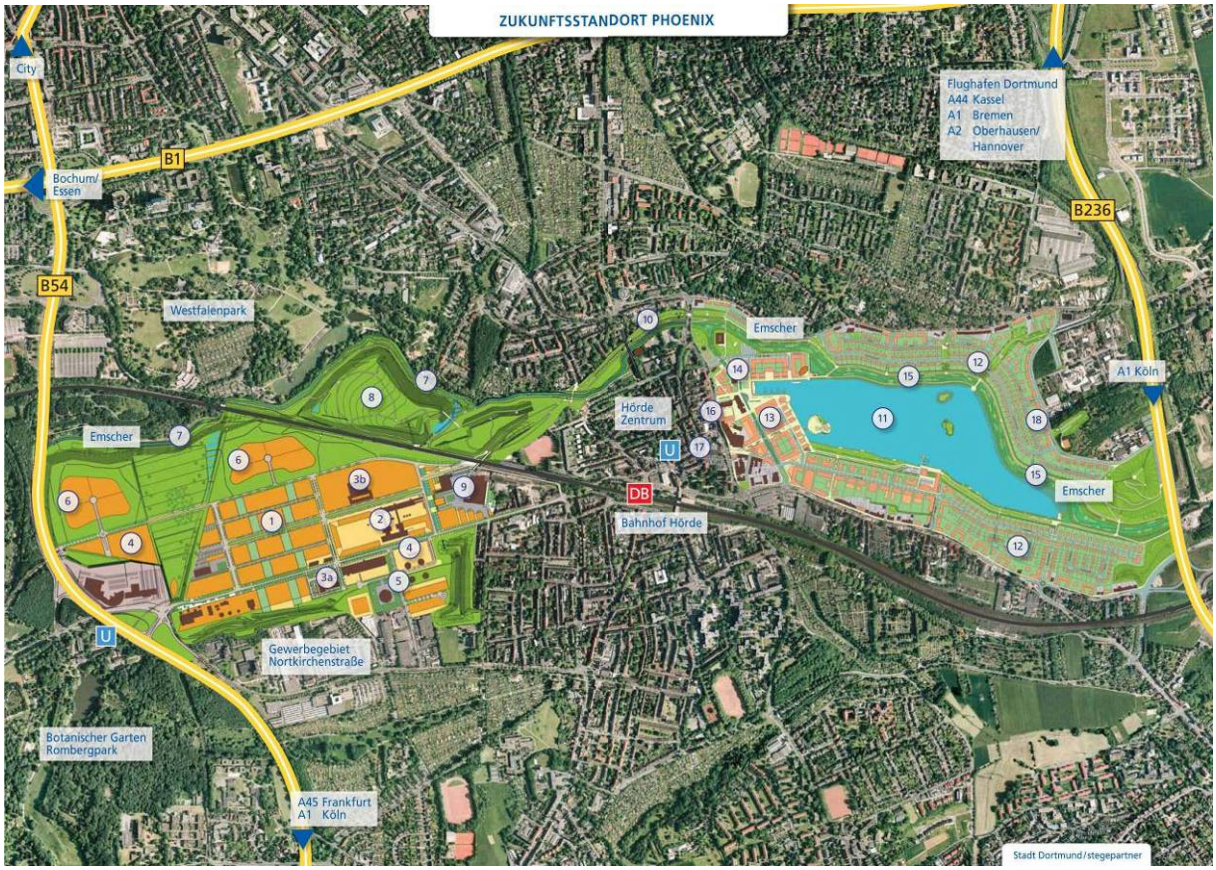


Fig. D1-3. 1-Connection within city territory – Phoenix West and Phoenix East; 2-Macro-landscape master plan, evidentiating green beld and parks, target 2010; 3-idem, detailed on green belt Dortmund and connectivity with surroundings. Source: http://www.phoenixdortmund.de/de/services/downloads/ [10]



1. technology park for micro and nanotechnology, IT, production technology, sector-related services
2. industrial heritage – former blast furnace with viewing platform
3a. MST.factory dortmund – center of excellence for micro and nanotechnology
3b. Center for Production Technology Dortmund (ZfP)
4. offices and services
5. general commercial use
6. sites in green areas: research/education, administration, leisure industry
7. PHOENIX Park: meadows along the Emscher river – ecology, leisure, walking and cycle paths
8. PHOENIX Park: Hympendahl slagheap – viewing point
9. leisure industry and cultural events, services
10. new green link through Hörde: linking the PHOENIX Lake with the Emscher valley, PHOENIX West, Westfalenpark and Bolmke woods
11. PHOENIX Lake: urban development highlight, oasis in the city, leisure-panorama, nature
12. housing at the PHOENIX Lake
13. office and service center at the lake, lakeshore promenade, restaurants and cafés, retail
14. the harbor: leisure center for the new Dortmund in Hörde
15. Emscher nature zone – paradise for flora and fauna
16. Hörde Castle: city landmark on the west bank of the lake
17. Hörde center: a future for shops and services
18. Infopoint at the PHOENIX Lake

PHOENIX West is the multifunctional location for technology in Dortmund. Companies from the fields of micro and nanotechnology, IT, production technology and technical services can find an attractive environment here. The former blast furnace, striking converted industrial buildings – protected industrial heritage – and the intensive greening emphasize the unmistakable character of this location.

Total area	115 ha
Marketable area	38 ha
Green space including PHOENIX Park	61 ha

PHOENIX Lake is the new location in Dortmund for living, working and leisure. Near the city center but linked to the Emscher countryside park, attractive residential areas and an urban office and services center are being created around the new lake, integrated in a unique natural and recreational environment.

Total area	99 ha
Lake surface area	24 ha
Residential sites	26 ha
Commercial sites	11 ha
Public infrastructure and green areas	38 ha

Fig. D4-6. 4-Phoenix West and East site plan; 5-Notes with facilities on the site; 6-Notes on technology cluster – Phoenix West and on the right notes on the new city center – Phoenix East. Source: http://www.phoenixdortmund.de/de/services/downloads/ [10]

Technology, ecology, sustainability – reinventing the landscape. As urban management the project is the result of a public-private partnership, and these kind of join-venture made these projects possible, because the amplitude of development management and financing. Reinventing the landscape was a matter of creating novelty inside the city, particular in specific type of Brownfield. The initial settings were establishing a process of active development sustained by an implicit policy of real-estate, the local authority government sustaining a whole new city upgrading – social and urban scale – of rethinking the degree of public space together with the economic production and flow, and with upgrading and diversifying the level of professional [3] academic training trend of population, targeting new sectors of preoccupations, concerns and future possible jobs within the area of Dortmund. ("In Dortmund, only 11 per cent of the population have tertiary education" [11], p 536.) In these ideas, Phoenix project was designed to be a contemporary urban attraction pole of the metropolis, converting the spaces and activities towards a glocality culture, based on a microsystem technology cluster (MST) – "Technology cluster: The new MST factory Dortmund on the former Phoenix West steel works site is the starting point of a microsystem technology cluster (MST). This regional cluster currently consists of 33 companies." (p 318) [1]. According to Tata, p.3 [7], "Dortmund-project focuses on three fields: Support of the development of industry clusters in certain fields; Strengthening of soft location factors; Provision of attractive locations for business and housing by implementing the concept of the Zukunftsstandorte". European funding was also a support for active implied urban actors [7]: ""For Phoenix West all in all 127 Mio. Euro are forecasted to be invested during the next years. A huge part of it is covered by the Regionale Wirtschaftsförderungsprogramm (RWP) („Regional Economic Promotion Program") which includes funds from the EU ("Target 2"), the federal government, and the state for developing the area (clean up of former waste deposits, preparation of land, infrastructure like the MST.factory). A smaller part of the total amount is made available by the so-called Grundstücksfonds ("Property Fund") of the state of Northrhine-Westphalia. Profit is expected to be generated by selling the pre-developed properties to private investors such as companies which want to settle there. In the context of the financing of Phoenix East/Sea mainly public means are used as well. Beyond the City of Dortmund again they are made available by the EU, the federal government, and the state (RWP, urban regeneration funds, ecology program means). These means are primarily provided for the coverage of the whole area as preparation for the estimated use. The DSW as owner of the area intend to make profit by selling the high-quality water front realties from 2009." (p.6) [7].

Work in progress – testing the sustainability, new downtown habitat, the livability. Integrated industrial areas supposed divided territory, but also supposed existent infrastructure, roads and utility facilities. Testing sustainability usually is not a question of developing and converting browfields but establishing right connection on different scales and layers of the city. Human and social established relations in new developed territory prove whether the sustainability is correct deliberate and the livability is verified. Urban attraction could be calculated, but only verifying the new habitat is the key to the functioning of the project. The novelty of developing a whole new Phoenix downtown area was sustained also by new urban and architectural freshness within the city, upgrading the contemporary outlook styling and the easiness of 'reading' and sight accommodation with new insertions and (re)conversions in the metropolis landscape. For example, one of these new insertions-conversions is the Ostwall Museum building which is the former brewery building converted in a new shape, and as a new pole of cultural-social urban attraction [12] . Somehow the thinking of the two Phoenix areas development is fascinating also through its novelty in approaching different and nuanced the sites: one keeping its few valuable former buildings and facilities, and another starting from the scratch, as a pair in balancing and mutual support in the costs and phases incomes on management stages. Establishment of new urban islands has not been a priority for local urban planning, but investment in a friendly urbanism, oriented to public spaces, bike trails and a nature integrated city orientation were most important. The connection with natural environment from the neighborhood looks like an important premise, but also is the orientation in high market costs for constituted quality of life sustainable understood – without pollution (of the former industry) and as a future investment that could support also the construction and maintenance.

Other component of the development and livability is the IT nucleus formed in this areal of Germany, as a consequence of integrated macro-territorial scale management: "With 10,000 software companies employing more than 100,000 people, the Rhine-Ruhr Region is Germany's hub for information and communication technology. Dynamic IT companies now dominate the city that was, a decade ago, dominated by the coal, steel and beer industries. Almost 700,000 companies are located in the larger Rhine-Ruhr Region. They produce more than 25% of Germany's gross national product (the ideal launch pad for the e-solutions of tomorrow). Dortmund therefore is situated in the heart of a region that has Europe's greatest density of universities and research institutions, with the largest and most renowned department in computer science in Germany. Dortmund itself has 25 scientific institutes for the study of software and IT. Consequently, Dortmund is Germany's nucleus for training IT talents." (p 66) [13].

Visiting the site(s). Visiting the site is quite an experience, in both Phoenix sides of the development [14] [15]. The presentation for Phoenix West the site was imagined with a visiting opened route above the industrial

features, starting from the new formed plaza (Fig.Ph4) though a stairs-case, and passing by the buildings, street and factory, on a suspended bridge - over a main pipeline between the buildings and factory – Fig.Ph5-6. Phoenix West is in present a ecological place pending for private investors for highlight also this area composed from former industrial facilities. Visiting the site – Fig.Ph7-9 – is still charming, scenographic, at height, presenting the site and the built but also natural environment besides the industrial zone. The ecological greening is impossible to estimate at a glance, but it is very clear that the industrial boundaries together with different metallic warehouses and pollution activities and noise had gone from the sight. Visiting Phoenix East – Fig.Ph10-13 – shows a complete different landscape, a development where the former industry activity is not 'felt' at the human-urban level – here the city area started from the scratch: filling the ground hole with water, generating a lake (called "See" as all German lakes, translatable as "sea"/"interior sea") and a beautiful architectural surroundings, residential and services-commerce based. Phoenix East shows a mixed urban composition: with a pedestrian area conceived as an urban principal pole with commerce and offices bordered with residential blocks, and a whole development around the new established "See" with luxurious individual housing residences, with individual architecture outlook that state increased future value of real-estate, and future self-sustainability.

Fig. Ph1-3. Unfolded view Phoenix West, in image: former industrial facilities, new plaza and pedestrian area; Unfolded view Phoenix East, in image: the new lake development, with mixed used and residential development/housing around the lake view; Unfolded view Phoenix East, in image: overview o project development, photos and unfolded view: Author, December 2014

Compared with the South Germany where the economic growth and public sustainability is ensured by the local private investors, developers and a culture that was supported by novelty of the automotive industry, the RUHR area had to find new and innovative way to redesign itself towards new sustainable thinking and integrated development, fighting actively with pollution and the threat of poverty generated by the economical failure of the local industry.

The mechanism of starting from scratch and converting browfields into new urban active territories, motivated by a innovation start point, is readable also in cities like Malmo with Turning Torso as starting innovation point, but also in Copenhagen with multi-extension with strategic insertions along the main channel, each of them generating and sustaining a whole new development in every vicinity. I would say, in similar pattern of thinking, in the Dortmund Phoenix case study, the innovation point is the artificial lake, the "See", that is the epicenter of the whole new approach and solving on different scales of the city former issues, and also that made everything possible in terms of urban planning and architectural approach, but also balancing the two developments in between as phasing, timing and costs.

Fig. Ph4-9. View Phoenix West; View Phoenix West, in image: former industrial facility, new plaza and pedestrian area; View Phoenix West, in image: the former factory; , in image: new plaza and pedestrian area; Views Phoenix West- in image: 7-8 views on the former factory, 9 view to the site and pedestrian visiting route - all three from the bridge-on-the-pipeline., photo: Author, December 2014

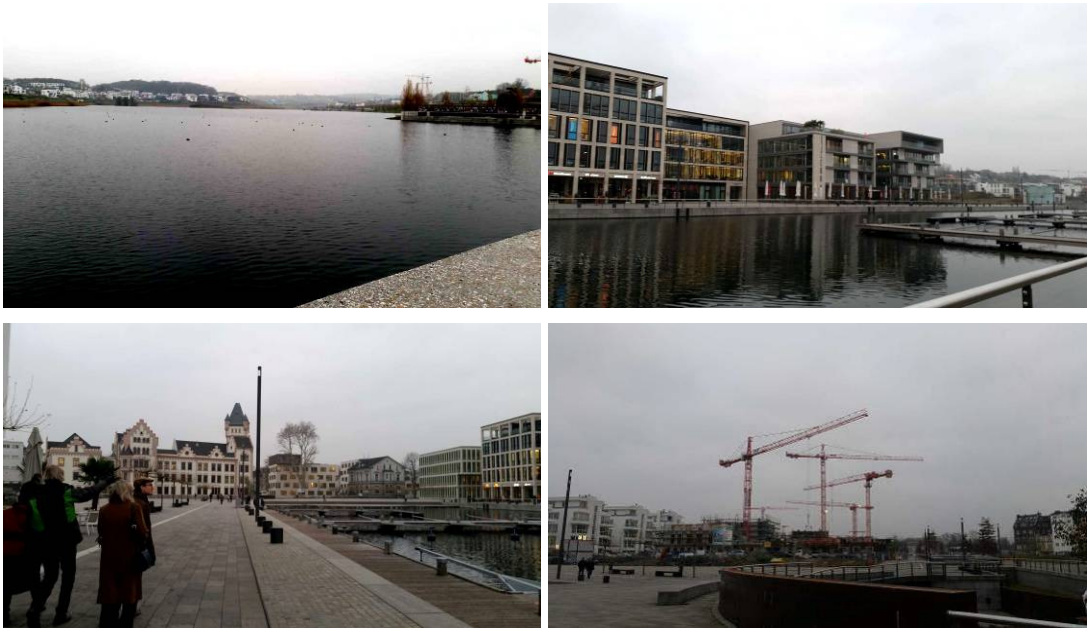


Fig. Ph10-13. Views Phoenix East, in image: Phoenix See, New Development towards Phoenix See, View towards “entrance” in Phoenix Esat development with pedestrian architectural environment, and View with construction yard in progress adjacent Phoenix East. photos: Author, December 2014

3 TRANSFORMING THE BUILT LANDSCAPES – INITIATIVES ON CITY CULTURAL SUSTAINABILITY: PHOENIX PROJECT DORTMUND.

General conclusions on the rethinking the landscape. The Phoenix former industrial landscape had created a discontinuity in the lines, activity and nature of urbanity. Successively the urbanity had avoided and eschewed the areas because of the existence of the exploitation epicenters. The direct result in landscape was several gaps created at the geographical level: a hole of excavation, a gap in the continuity of urban layers – among which social, green and public space were the most important as an absence in the city life. These gaps in natural geography of the city but also the ones at architectural landscape level were strategically thought to be filled. This intention of development could be called a specific re-landscape because the direction of new scenery

outlook is one of the most important components of the implementation project result. The filling of the physical hole in geographical landscape and the formation design of an artificial lake are the most important direction in creating a new artificial climate that could rewrite the codes of diurnal life – public and private, and to generate not only an active real-estate, but also to generate leisure-relaxation attraction activities in the global landscape of the city.

Differences between management, project, construction and functioning in site. The process of strategic thinking management of the territory has supposed finding solutions, designing a project and applying through methods that could made it functioning in site. Redesigning the functioning of the city within territory was another side of the integrated management of the local authority – and concerns the connectivity with urban and natural environment, but also the definition of urban layers connections between the neighborhoods. The differences consisted, as far they are observable now, in short timing for ecology greening and des-assemblages of the former facilities – Phoenix East, the discussions with ecology NGOs, and the issue of raining debit that could fulfill the artificial lake, a real German "See". Possible differences of costs will be probably observable in time evaluation of built and geographical environment.

The new landscape and its current relevance for the local and global experimenting and innovating sustainability. Industrial site conversion into cultural settings spaces in not a new direction, but a new preoccupation that generated few interesting discussions, but also interesting case studies in RUHR area. Idea of refocusing local economic interest on steel and coal towards urban culture, was also sustained by the global economic crises between 2000 and 2008, that generated more than 100.000 unemployed. The Phoenix project – West and East – is in fact a multidimensional balance of sustainable thinking, from the social-urban education and environmental based management, but also towards improving level of individual education for increasing the qualification and degree of specialized university level, through developing local high-level academic facilities and cultural insertions. Therefore, innovating is, in this case study, understood at local level – social and urban – but also at the level of building the 21st metropolis through experimenting a balanced conversion of site for a changing global future, with nuanced and multidimensional results.

Coordinates of the research through architecture and research by design within landscaping architecture(s). The process of designed and applied strategic management is by default a followed operation of research. The possibility of track the results in practice is an important issue of contemporary research. This specific case study is proving that architecture could be a valuable resource for the regeneration of landscape – in particular case of Phoenix West, maintaining the existence industrial work and hall, and advertising in-site the process of ecological greening –, but also is proving that architecture could be a solution of sustaining re-landscape, building from the scratch – in the case of Phoenix East: lake and architecture as a new habitat for urban living.

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[1] The action ISCH COST IS1007 Investigating Cultural Sustainability, as the name reclaim, focuses on the notion of cultural sustainability in the context of best practices. The research goal of the action "is to increase understanding of and determine the role of culture in SD based on multidisciplinary principles." [3], and the process is focusing on "1) by investigating and operationalizing the concept of culture in the context of SD through multidisciplinary approaches and analyses; 2) by examining the best practices for bringing culture into policy and practical domains, and 3) by developing means and indicators for assessing the impacts of culture on SD. The results of the Actions will be exploited by the scientific community, policy makers, administrative personnel and practitioners working with sustainability and culture from the EU to the local level." [3] Twenty-five countries are part of action ISCH COST IS1007, one is COST Near Neighbour Country, and another three are COST International Partners Countries. [3]

[2] The postdoctoral research project Types of innovation in cultural spaces.]working with/in[cultural spaces_tradition and innovation. (PI Dr. Arch. Marina Mihaila) is developing notion of cultural space connected mainly with architectural and urban applications on public space, and establishing the research in several directions for innovation in cultural space based on observing the inputs between tradition and innovation outlines. [2] The additional list of case studies proposed initially by the postdoctoral project (at the beginning of 2012, in projects competition) were enriched with different analyses of interesting best practices at the domains' limit, between architecture, urban planning and management of territories, based on observations at human scale, human perspectives, and future directions on globality and locality, and the emergencies for balancing quality of habitats. The postdoctoral study is promoting architecture and architectural space as a solution of preserving and improving innovating methods for valuable landscapes: understanding the architecture value and power of cultural space(s) for glocality could be a measure in the change of mentality for individuals, communities and governors.

[3] "[…] the five cities with an unfavourable sector mix and a legacy of declining industries (Rotterdam, Enschede, Dortmund, Aachen and Manchester) also tend to have relatively high unemployment rates, a high percentage of people on benefits, a low-educated population and a low score on quality of life" (p 539) [11].

[4] "These areas have established the archetypal post-industrial landscape: empty, rusting factories; unemployment; population loss; a cultural and social vacuum. In some cases, they have also proved that economic catastrophe is not just an ending but also the chance for a new beginning. Case in point: the Ruhrgebiet /Ruhr area of western Germany, once one of Europe's largest industrial areas and the powerhouse of the nation's Wirtschaftswunder (economic miracle), stepped onto the world stage as the 'Cultural Capital' of Europe 2010. How does a cultural capital arise from the smouldering spoil heaps of abandoned industry? In the Ruhrgebiet , the industrial past has not been left behind for the creation of something new. Quite the contrary: conservation of the industrial heritage has formed a cornerstone of the area's economic, social and spatial restructuring." (p.183-184) [12]