

# Architecture - Conceptual design in terms of the intuitive metrology method as an element of the natural development of the landscape and spatial context

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**Abstract** – Each type of architecture (associated with both cubature architecture and landscape architecture) has its unambiguous dimension in the landscape. It is determined by the scale in which it occurs. The article is a kind of attempt to open a discussion on the role of intuitive metrology in landscape archeology. It should be taken into account that the measurement methods will sometimes fail and will not give the same conclusions as those resulting from human perceptual impressions. Therefore, let us note that the landscape refers to a diverse environment. It has not only a material layer, but also an intangible one.

## I. INTRODUCTION

Each type of architecture (associated with both cubature architecture and landscape architecture) has its unambiguous dimension in the landscape. It is determined by the scale in which it occurs. Thus, space, without a reference point (human, nature), does not allow us to specify a specific space scaling. Recalling, for example, the lunar landscape, which does not contain references on a scale, eg through the measure of man, it is difficult for us to accept what proportions and quantities are real. Measurements help determine the scale of the place. If we want to find the scale of an architectural object and its location in the landscape, we must refer it to the human scale. However, there are situations in which even the dimensions can be ambiguous. An example of the possibility of making a mistake is the use of very realistic models and architectural mock-ups, which delusively resemble reality - they create an illusion

of places. Considerations based on this scheme will be the subject of work. For the purpose of creating a specific term, combining seemingly contradictory terms, the authors will use their own intuitive metrology. In the work the authors will present their thoughts in an indirect way.

## II. STUDY OBJECTIVES

The architect tries to look for comparisons and references while conducting conceptual activities, often using the intuitive metrology unconsciously. Of course, basic measurement methods like metrology and measurement are very necessary, but in the case of construction, executive or conservation projects based on very specific data. However, in the case of conceptual designs in which a deep idea is sought, based on the abstract thoughts of the architect, we are dealing with intuitive metrology. The aim of the authors' research is to carry out analyzes regarding the creative process during project and conservation activities. With particular attention to the issue of landscape archeology in the context of architectural activities. In addition, the authors want to draw attention to the importance of the issue of intuitive metrology in the creative process, while reading landscape features and subsequent design activities.

### III. INTUITIVE METROLOGY AS A METHOD IN ARCHITECTURE AND ART

Architect joining the design usually follows its intuition and subconsciousness. He attempts to sense the proportions that he must give to the designed object. Taking into account the surroundings (landscape, cultural and historical context). However, should the design process be guided only by the measurements obtained? Architect - the artist carries a natural unit of measurement called intuition, which (according to a dictionary definition) comes from the Latin word *intueri*, which means to watch, to observe. Today's meaning derives from the medieval Latin word *intuitio*, which means whispering, premonition. Dictionaries under the slogan "intuition" also give a premonition, predictive ability or creative imagination [1]. Hence the intuitive metrology adopted by the authors.

### IV. USING IN PRACTISE – CASE DESCRIPTION

It should be taken into account that the measurement methods will sometimes fail and will not give the same conclusions as those resulting from human perceptual impressions. As an example, the so-called Rooms of illusion or shoulder painting, abounding in optical illusions. They exerted them through curvatures, changing the shape of the façade, which often gave the impression of being rounded, being in fact flat. Similar treatments have been used, for example, sometimes by applying the appropriate play of light and shadow, or using the appropriate color palette. In the case of illusionist painting, such a procedure is called quadrature and we can observe it eg. in Villa Rotonda in Vicenza.[2] Another example of illusion are objects of modern architecture, which, for example, appear to us to be objects created on the basis of round forms, based on a curve, but when we come closer to the object it turns out that it was only and delusion which the recipient evokes a certain type curvature. An example of this is the BRE Bank building in Katowice. Its dynamic composition gives the impression of a moving arc based on an oval. Only when looking at the details can be seen that the individual fragments of the facade are made of flat, rectangular glass panels. Illusions that we can experience in architecture or in graphics, i.e. optical illusions are conditioned by the perspective with which we look at given objects / spaces. The depth that can produce a given graphical scheme can be broken down only thanks to the ability to receive space in a different orientation to a given plane (object, image). It is the optical illusions, conditioned by various plastic and technical treatments, that cheat our brain and eyes about the unreal image. According to the authors, this is a very good example that not always methods of traditional measurements, regardless of the measurement techniques used, can meet in design. Graphic elements and art can not be measured

by any method. The depth of space and the atmosphere of the place remain the subjective feeling of the observer. This two things can not be measured using measurements.

### V. LANDART AS AN EXAMPLE OF INTUITIVE OPERATION

Landscaping can be a creative process, regardless of whether it occurs as a result of natural changes (growth, erosion, variability, influence of seasons) or is the result of the artist's conscious action. Action understood as an artistic manifesto, a way to change the perception of the recipient of open, micro and macro-scale space. Both processes are characterized by similar characteristics, namely independence of action, sometimes an unintended end result.

Such images of the intellectual independence of the artistic message in shaping landscape space can be examples of realized outdoor assumptions such as Dutch landscapes. The space shaped by designers brings not only the expression of the landscape and its visual effect, but more important is the message that artists give to future recipients. Scale is a conventional concept, often equivalent to the value of an idea that has no measurable dimension, allowing to classify a creative idea in relation to the material context or cultural values. This aspect of immeasurability, without scaling, releases the potential for creation and reception. Landscape can imitate the real proportions of the object, such as a landart imitating the Gothic cathedral of Reim in France. The artist created a defect in the forest thicket in the shape of the contour of this cathedral. Then on a flat field next to it reflected, through the arrangement of trees, the projection of the Cathedral. Another example of free manipulation of the scale is the openwork figure of steel bars, which symbolizes the observer of the landscape changes of the Dutch polders. In the form, proportions are kept in line with human proportions, but the effect that has the message of artistic vision is only possible from a distance of several kilometers, where the scale of the other elements of the landscape is completely disturbed. On the other hand, the scale of the sculpture itself for the observer standing in its vicinity triggers completely different emotions, it delights but also overwhelms. Only these two selected examples of activities of illusory landscape shaping show in a perfect way that the scale of reception in space is often distorted, distorted, depending on the expected effects. Also in these cases we can use the concept of "intuitive metrology". The presented objects have the scale assumed by their creators, however the real scale is not used for real collection and has a symbolic meaning. Sitting "man" on the headland in the context of open polder fields and the vast water space surrounding him from three sides of the bay evokes the nostalgic feelings that arise in anyone observing the vast landscape. The real size of the created sculpture, its scale,

the material used does not matter at this moment, but the value of the message that it carries in the landscape becomes important. The scale becomes conventional and is an added value that does not affect the value of the work. As in the concept creation phase, scale is an added value that often does not affect the ideological value of a work. Thus, the concept introduced by the authors of "intuitive metrology" does not only refer to the illusion of objects or assumptions, but has a broader meaning and directly refers to the immeasurability of an idea whose measurement may limit or destroy the value of its message.



Fig.1. Miniatur Park – Vatican



Fig.3. The illusionistic perspective of Andrea Pozzo's *trompe-l'oeil* dome at Sant'Ignazio(1685)



Fig 2. Vatican – real dimensions

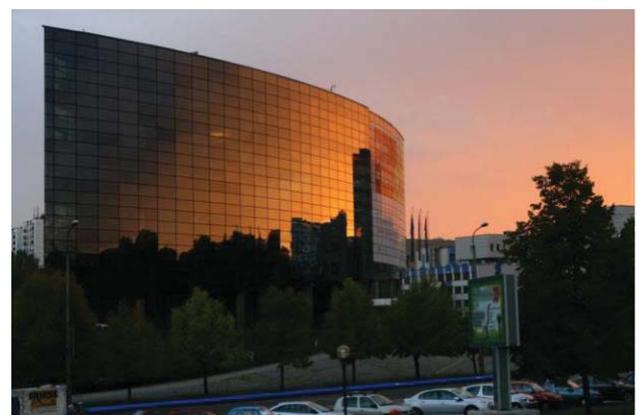


Fig. 4. BRE Bank, Katowice, Poland



Fig. 5. BRE Bank, Katowice, Pola



Fig.8 Exposure (2010) Antony Gormley



Fig. 6. Utrecht, Project: UN Studio



Fig.9 Exposure (2010) Antony Gormley



Fig. 7. Utrecht, Project: UN Studio Offices



Fig.10 Marinus Boezem: "The Green Cathedral"

## V. CONCLUSION

The article is a kind of attempt to open a discussion on the role of intuitive metrology in landscape archeology, in the context of, among others, the examples presented above. It is worth recalling at this moment words from a written work entitled "Social past attempt to conceptualize":

*"[...] The term archeology of the landscape became archaeological in the seventies of the last century and meant an attempt to go beyond the traditional study of archaeological sites and analyze the impact of chronologically accumulated landscapes cultures on the human community. However, the proper development of landscape archeology understood as specialized thematic archeology falls into the early nineties of the twentieth century as separate fields of activity. Landscape archeology is situated within the currents of process and postprocessuline archeology. [...] Landscape archeology rejects the Newtonian concept of absolute space as a kind of general container or room for all objects and objects, replacing it with the relational concept of space (ie the relative positioning of objects and objects in relation to each other)"[3]*

Therefore, let us note that the landscape refers to a diverse environment. It has not only a material layer, measurable metrology, but also an intangible one - studied by intuitive metrology. When researching the landscape, it is worth paying attention to the relationship between him and the people living in the area. These are the relations of mutual coexistence, extremely important according to the authors, while discussing the issue of landscape archeology. The surrounding space / landscape / is the image of life, in other words, studying space allows to describe the understanding of the spatiality of various human and social groups in prehistory.

## REFERENCES

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