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INVISIBLE BUILDINGS OR A PAINTER'S PERSPECTIVE ON COLOUR IN ARCHITECTURE

NIEWIDZIALNE BUDYNKI, CZYLI MALARSKIE SPOJRZENIE NA BARWĘ W ARCHITEKTURZE

Abstract

My day-to-day observations made me reflect on whether the role of colour in architecture today is properly understood and whether it has not been pushed into the background. In this paper, I intend to show that painting classes in architectural schools aim at filling a certain gap. Using multiple examples and selected tasks, I hope to demonstrate the inseparability of the colour from the form, the influence of an appropriately selected colour on the architectural shape and the importance of combining colours depending on the form, space and light, as well as the way such combinations effect the perception of the shape and colour itself. This last variable inevitably makes us realise the significance of the so-called local colour. To conclude, the understanding of space, form, colour and light begins with practising the skills of "seeing".

Keywords: colour, light, architecture

Streszczenie

Przemyślenia oparte na obserwacji skłoniły mnie do postawienia pytania, czy rola barwy w architekturze jest obecnie dostatecznie rozumiana i czy nie została zepchnięta na daleki plan. W artykule pokazuję, że zajęcia malarskie w szkołach architektonicznych mają na celu wypełnienie luki. Na podstawie przykładów oraz wybranych zadań, staram się pokazać nierozłączność barwy z formą, wpływ odpowiednio dobranej barwy na bryłę. Ważkość zestawiania kolorów w zależności od takich czynników jak forma, przestrzeń oraz światło i to, jaki jest jego wpływ na odbieranie kształtów oraz samej barwy. Ostatni z wymienionych czynników zmusza do zauważenia zjawiska koloru lokalnego. Punktem wyjścia do zrozumienia przestrzeni, formy, barwy i światła jest ćwiczenie umiejętności "patrzenia".

Słowa kluczowe: kolor, światło, architektura

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"What is colour? The nature of colour has intrigued human minds and sensitivity since antiquity. As early as in ancient Greece people wondered whether colour was an objective, constant feature of a given object, or just a sensation. Today, we know that colour is not only a physical and physical-chemical phenomenon, but also a physiological-psychological one. Attempts to grasp its nature and classify it in a coherent system have been undertaken since time immemorial by philosophers, artists and scientists alike. Colour has been studied from many perspectives and approached from many different angles, just as its multifaceted nature requires. This multitude of ways in which colour is analysed is still justified today; the study of colour is split among various disciplines. For a physicist, colour is measurable, it is an element of optical radiation with a specific wavelength carrying a certain energy load. For a physiologist, it is created by a series of stimuli captured by the eye and processed as sensory input by the brain. A psychologist studies the influence of colour on human behaviour and mental structure" - this short characteristic of colour, being a mere introduction to a two-volume essay on the topic, shows how broad a concept we are dealing with. If we extend our discussion of colour to architecture, our task becomes even more complex and complicated.

Architecture is an inherent feature of the surrounding space. It dominates everyday experience or at least supplements it in a very visible way. Its many shapes and sizes are always inextricably linked to materials and, naturally, colours. Leaving aside the different aspects of architecture, as they are not the topic of this paper, it is light that supplements the visual perception: natural or artificial, sharp and clear or soft, focused or dispersed, warm or cool, shed from different angles or emitted from a single constant source. Light, especially its natural variation, which can be extremely dynamic, changing along with the weather, day times and seasons.

This brief summary of the basic features of light, its overlapping and permeating layers, shows how truly important it is for modifying our perceptions of shapes and colours, and how it can be intentionally applied or consciously taken into consideration.

A seemingly transparent task, which is nonetheless far from easy. It seems that the real obstacle is not so much an incomplete knowledge about the combined effect of colour, light and form as it is the inability to "see". There is no point arguing that seeing is not one of our individual predispositions and sensitivities. Yet by appreciating the skill of "seeing" and by honing it in a conscious way, we can gradually become proficient in using our sight.

The following tasks focusing on the interactions between light, colours and shapes may help us identify and illuminate the problem as well as "see" several all too often unnoticed interrelations which also seem to be considered less important.

The first task, the purpose of which is to simplify the composition observed, involves a still life depicting objects representing a full range of colours. To simplify, in this case, means to limit oneself to six colours (three primary colours: yellow, red and blue, and three secondary colours: green, purple and orange) without mixing them, so that no accidental colours are derived. Paradoxically, it is through simplification that this synthesis, coupled with the courage to use certain colours, which results from attempting to select from a limited

¹ Rzepińska, Maria, Historia koloru w dziejach malarstwa europejskiego (The history of colour in European painting), Arkady, 1989.

range of available colours in a given situation, demonstrates the capacity of the primary colours, providing more room for manoeuvre while selecting them.

The next composition, which builds on the previous one, is a still life composed of a green material with green vegetables and fruit placed upon the fabric. Such an arrangement, seemingly homogenous in terms of colour, forces the observer to notice as many hues of green, a very complex colour, as possible. As a secondary colour, green is basically derived from blue and yellow; yet different proportions of these two elements ensure an enormous "quality" spectrum of the resulting colour green (not to mention further implications). Combined with red and achromatic colours, the diversity of green has no limits. If we focus and observe the above composition very closely, our sight will allow us to notice the richness of this colour all around us.

The third and the most demanding task involves a composition which presents the role of light as a factor of decisive importance to the perception of shapes and colours. The study objects are two "snow-white" busts, of which the first is illuminated with a single clear source of cool-coloured light, while the second is exposed to exceptionally warm light. This simple variation enables us to observe what happens to white, achromatic matter depending on the colour temperature of the light. In addition, it reveals, in an evocative way, the principle of colour complementarity as well as the differences in perception of the same form depending on the intensity and angle of the light shed on a particular shape. As a result, it also illuminates the question of local colour, which is influenced, among many other factors, by the specificity of the given light.

To conclude, bearing in mind that they form a part of a broader spectrum, the awareness of the role of light and colour significantly broadens the range of possible ways of influencing the variety of architectural shapes and of interpreting them through the lens of colour, which is shaped, to varying degrees, by specific external factors. It is therefore worth asking whether it would not be advisable to devote more attention to the study of colour and light, clearly pointing to studies of this subject based on careful observation.

References

- [1] Rzepińska M., Studia z historii teorii koloru (Studies on the theory of colour), Wydawnictwo Literackie, Kraków 1996.
- [2] Rzepińska M., Historia koloru w dziejach malarstwa europejskiego (The history of colour in European painting), Arkady, 1989.
- [3] Taranienko Z., Dialogi o Sztuce (Dialogues on art), PIW, Warszawa 2004.
- [4] Orzechowski M., Rysunek zmysł architektury (Drawing an architectural sense), Blubird, Warszawa 2014.