

Role and functions of colour in the drawings of Portuguese architects

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ABSTRACT

Drawings made by architects have been the object of several studies and publications, however, usually focused on themes that encompass skills, methods, conventions, or representations. This paper addresses drawings done by Portuguese architects, from a completely different standpoint: an enquiry directed to the role of colour. It is generally accepted that colour is a very significant tool and a powerful means of expression, operating at many perceptive levels that can add information and meaning to an image. However, specifically when related to drawings made during the development of an architectural project, how significant is colour in the actual ‘making of the drawing’ and what meanings are attached to it when part of a range of steps and different stages of this complex process? These were the leading research questions that initiated an ongoing investigation within a PhD program in Fine Arts – specialization in Drawing that responds to more overarching issues such as how colour triggers the imagination and thinking process. From the analysis of drawings and discussion with their authors, significant functions and uses of colour began to emerge. Some applications of colour are more straightforward and illustrative in essence than other more personal interpretations and explorations of colour. In fact, this research demonstrates how colour is used for conceptualization of the architectural project; the extent to which colour can operate as an organizational tool; how it can complement the use of only one colour such as black; or even how colour helps disentangle the drawing, as Le Corbusier put it.

1. INTRODUCTION

The use of drawing as a design tool has been subject of several studies but rarely focusing on the use of colour. Even when drawing’s graphic or expressive qualities are concerned, colour is diminished as the quality of an instrument and dismissed to the last phases of the design process to illustration or depictive drawings.

In this paper we aim to shift the spotlight towards colour, regarding the way it is used as a visual element with operative functions, important in decision making and also as a complex and subjective way to give meaning to a drawing. We will do so through the study of drawings made by Portuguese architects and their own thoughts and experiences in the field, collected through interviews, and interactively analysed within the scope of theories that embrace colour.

2. CASE STUDY PROCEDURES

As part of the adopted methodological procedure which includes case studies, drawings have been categorized according to a conceptual framework grounded in interviews with the respective author/architect. The interviews were such as to allow for the input of the

experience of architects, regarding the design process and specifically how they used colour in handmade drawings.

All the gathered material was subject to analysis under the premise that handmade drawing is a privileged tool within the design process that extends its action to creative thinking, materializing ideas and concepts of the author, responding to cognitive and communicative functions. Drawing as such results from the personal abilities but also from learned skills taken together with the medium qualities and the way we perceive and think.

Colour is also regarded as a multidisciplinary phenomenon that needs to be read under the domain of several disciplines that include psychology, anthropology, neurology or art. Psychology, especially in the domain of perception, helps understand how colour affects the individual and explain how the eye and the brain perceives colour. Anthropology can explain why and how we establish meaning to colour, we relate and use it under cultural and social influence and shared knowledge. Neuroscience can explain how we make sense of the world and we can see or appreciate a drawing, even if our eyes only respond to wavelengths of light or our brain to electrical stimulus. Art has been a fertile territory where colour has been fully embraced and the most interesting challenges have been placed. Being aware of such developments can help understand the way we relate today to this complex phenomenon.

Through these procedures we observed several expressive and operative functions of the use of colour in freehand drawings: colour in illustration; colour as an organizational tool or colour as an architectural theme.

3. COLOUR IN ILLUSTRATION

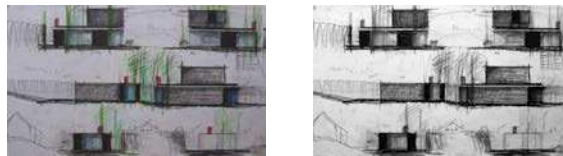


Figure 1: Nuno Brandão Costa, “Casa de Afife”, private collection.

Architect Nuno Brandão Costa made this drawing (Figure 1) for “Casa de Afife” (also presented in grayscale). It is an illustration of the project, in this type of drawings no problems or conflicts are resolved, instead, the author visualizes and makes sure of his choices or solutions. It helps to visualize the project and easily communicate all this information, establishing an emphatic relation with the observer through the addition of colour and using a less abstract graphic representation. Here the author explains to some extent the chosen materials, light, transparencies, implantation among other important aspects of the project.

In grayscale it is not easy to discriminate as clearly and as fast the different elements that are represented showing how colour helps to depict forms and determine the materials of the house and its surroundings. Green is used for vegetation, blue for glass, red for the chimney and black or gray for the walls. This strategy is especially effective for object recognition of vegetation helping to identify lines with no distinguishable shape as trees. In fact, several studies have shown that especially natural objects are colour-based.

This use of colour explores a straightforward relationship with colour associating the normal and more direct way we relate an object with a given colour. All the colours, except one, use the optical relations between the material and respective colour, the red in the

chimney is the exception, by exploring a more synaesthetic relation to colour such as temperature.

4. COLOUR AS THEME

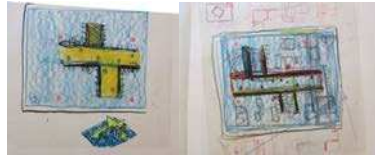


Figure 2: Ricardo Bak Gordon, Portugal Pavilion, private collection.

From the collected data it was possible to observe that when a colour is chosen to be a theme in architecture it is used in the drawings, and from the very beginning, i.e. right from the first sketches.

For São Paulo Biennale of Architecture Portuguese Pavilion (Figure 2), its author, Architect Ricardo Bak Gordon chose the colour blue, specifically Klein blue¹, seeking to incorporate in his work the strong meanings that we usually associated with this hue. Colour has a strong impact in the built environment affecting space perception, enhancing form or built elements, transforming the image or the experience of an architectural space. Once settled that blue was the colour to be used in this project it seems only logical to use that same colour when drawing. Using this colour helps to acknowledge the effects or qualities that it has on the author's perception or on his collaborators.

In this drawing colour also has an illustrative function even when form are not definite and still being worked in sketches. Still colour is an important illustrative function that enables an emphatic relation between the observer and the subject, engaging the gaze and offering a seductive experience that can preview some sensations common to those when inhabiting the built space.

5. COLOUR AS TOOL

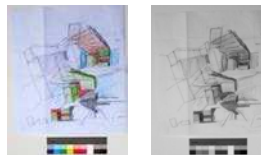


Figure 3: Egas José Vieira, private collection.

When the use of colour in the drawing does not correspond to the colour used in the built space it can assume different roles, as in the work of the architect Egas José Vieira. In this drawing (Figure 3) also reproduced in grayscale, colour relations or contrasts are used as an organizational tool. Red and green are a special pair of complementary colours that create dynamic relations. Through colour the author organized hierarchically the architectural elements and this helps to read the drawing in an organized way, accordingly.

¹ International Klein Blue was developed by the French Artist Yves Klein with collaboration of the French pharmaceutical company Rhône Poulenc. In 1960 this colour was patented not to guarantee any commercial outcome but to validate the metaphysical idea that this colour represents and to make it impossible for others to corrupt the authenticity of his creation.

Contrast between colours is of a double nature: contrast of tone (chroma) and of value. The tone contrast is used to classify different materials used and the value contrast-between light or dark green- establishes directions, e.g. front or side planes: “*There is only gradation when there is the same material in diferent planes*”². Colour is used to organize different materials and also different directions of the volume surfaces. Colours are the same in these representations, changing only in size or shape, helping to understand what we see and to relate it with other images. So colour can work also as a code to relate different views or projective systems used.

The same colour can be read as a complete form even when several colours are used and superimposed, so even when the drawing is very complex and full with information we can still make sense of all of it. This visual organization through colour corresponds to a visual disposition of the elements that may clarify the interpretation of the drawing and manage the communication of a great deal of information.

6. CONCLUSIONS

Colour can respond to the organization of information or it can add new levels of information to the drawing without loss of integrity or understanding of what is presented. These drawing strategies are possible because of the intrinsic qualities of colour and for the way we see and interpret the information received by our senses. Colour is especially complex because of its synaesthetic dimension, and extends associations to different contexts and meanings that can unleash our memories, individually and culturally built.

Even if colour has not been observed when studying drawing in the design process it seems relevant as a complement or alternative to different graphic or expressive solutions. As we have seen it can be used in different functions, operative or communicative, particular to an author or as common ground. This diversity reveals a need to look closer to more drawings and authors, seeking for a platform of similarities or particularities.

Colour is a complex phenomenon and as such it amplifies the possibilities of its use in the design process. It proves fundamental to understand the role it plays so we can explore new applications for this visual, symbolic or expressive resource not only in architectural drawings but also in other creative activities.

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² From the original: “Só existe gradação quando existe o mesmo material com planos diferentes”, extract from the interview with Architect Egas José Vieira (18th July 2011).

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