

Expanding the Senses of Drawing Through Colour

Natacha Antão Moutinho¹, Maria João Durão²

¹ Escola de Arquitectura da Universidade do Minho

² Faculdade de Arquitectura da Universidade Técnica de Lisboa

Abstract — By equating the creative use of colour with the disciplinary boundaries of architecture, this paper integrates observations, reflections and insights on a variety of alternative graphic strategies, and also expands the meanings attached to a drawing when the significance of colour is highlighted within the creative process of architectural design. Through the observations of numerous drawings from Portuguese architects we have already detected several functions or uses of colour in the design process. Colour can be used in a more straightforward way as a graphic element that can add meaning to a drawing. However, the plethora of meanings include, but do not exhaust, such functions as the exploration of a tool for operative modes or the expression of subjectivity attached to the project, as well as to the author, through complex arrays of colour meanings and expressions.

Index Terms — Colour; drawing; process; design; architecture.

I. INTRODUCTION

Architects use drawing as a tool for their practice as creators. It is through drawing that architects think and communicate ideas, intentions or visions to others as well as to themselves. Drawing has been subject of analysis and scrutiny but usually focused on themes that encompass skills, methods, conventions, and so forth. This paper addresses drawings by 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 significance to an image.

Yet, we are looking into drawings when they are made specifically during the design stage of an architectural project, and therefore as to how significant colour is in the actual 'making of the drawing' as well as what meanings and functions it serves in the design process?; what is the role of colour in drawings by architects?; how do design processes integrate colour? These were also some of the leading research questions that initiated an ongoing investigation within

a PhD program in Fine Arts – specialization in Drawing. The research problem embraces more overarching issues such as how colour triggers the imagination and processual thinking. The aim of this paper is to show some different strategies used by architects during the design process that can be observed in freehand drawings.

II. METHODOLOGY

The adopted methodological procedure used for this research includes iconographic data (drawings) organized according to a conceptual framework grounded in data acquired in interviews, observation techniques and literature review.

Several Portuguese architects were contacted for interviews and generously gave permission to include and use their work in this study. These drawings were subjected to examination and photographed for further analysis.

In each drawing we examined the type of drawing, establishing connections between the phase of the project and the objectives of the drawing, cataloging each as conceptual, formal or illustration drawing. In each drawing the use of colour is observed considering its representational values and the colour dimensions that are explored in the graphic process.

The overall assumption is that freehand drawings are a privileged means to establish and develop a visual investigation in any project based design such as architecture. It allows the architect to explore, visualize, idealize, test or communicate solutions or visions. In design, drawing can aid thought and communication of ideas or instructions to others, insofar as drawing responds to cognitive and communicative functions.

Drawing media such as charcoal, graphite or painting can promote different perceptions of the design and offer tactile, kinesthetic stimuli for thought [1]. The same phenomena can occur with the use of colour: it can evoke complexity and association to memories, and offer synesthetic experiences such as taste, tactile sensations and other, varying throughout the drawing process as well as within the overall architectural design process. But colour is a more complex and multidisciplinary phenomenon that involves the study of different disciplines for its understanding. Colour can be used and explored without any theoretical knowledge, only through the pleasure and experience of our physiological and perceptual responses, among other. However, study of colour embraces semantics, psychology, anthropology, colour theory and art.

III. COLOUR ORGANIZER

Usually architects fill pages with overlapping sketches in a web of information as a result of an intensive work or during a collective discussion of the project with the architect's collaborators. These images are not used to present their work to clients but they are the visual outcome of an ongoing design research. Such drawings offer an insight to the understanding of architectural design strategies. Architects can draw without any obvious organization on the page and just sketch through all the available space, over other drawings, in altered scales or articulating varied projections. In this case colour can take an active role helping to organize or disentangle the information [2], as Le Corbusier put it.



Fig. 1 and 2. Egas José Vieira. Private collection.

In Fig.1 one observes that different drawings are physically overlapping each other but it is still easy to read each one individually. We perceive visual information in distinct levels, because of the perceptual laws of visual distinctness, wherein elements such as colour, movement or form have a strong pop-out effect [6]. If we attend to the coloured drawn elements we may easily distinguish them from the background. The author also used the same colours in separate drawings: pink in the back plane; green for the big volumes; blue for the walls, for example. The use of the same colour tones in different drawings helps us link them as altered representations of the same shapes or forms. If it were all drawn in the same colour, like black, it would be very difficult to interpret the visual elements. This drawing is clarified and disentangled due to the use of colour. Colours distinguish information drawn, from a messy background, and it is able to articulate different overlapping projections, such as perspective or orthogonal projections.

In Fig.2 colour is used as a pop-out element to differentiate a particular section that is being subject of further scrutiny. This enables the organization of visual information in a specific hierarchy that establishes an importance of value to the represented element in red, so that in fact, colour adopts the function of classification.

IV. COLOUR ILLUSTRATION

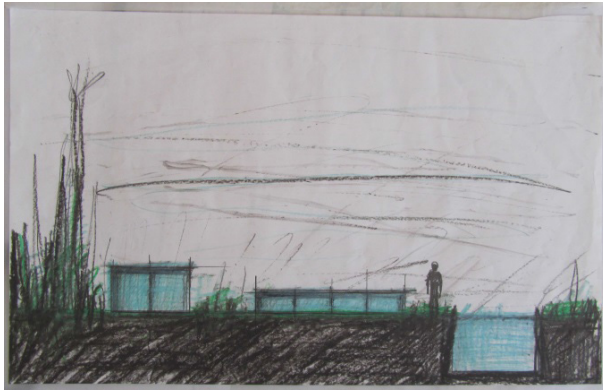


Fig. 3. Nuno Brandão Costa, Shelter, Friestas, Valença do Minho, 2001. Elevation/section, 26x41cm. Private collection.

Colour is culturally associated to objects, mostly to organic ones, such as trees, water, fruits and so on, because colour is one of the visual attributes we use for object recognition [5]. This connotative association with colour is used to characterize the colour of materials or other represented elements.

In this illustration drawing (Fig.3) the author has already decided most of the project, so it is not in a state of work in progress but functions as presentation of the project, or eventually, a confirmation of the final aspect of the future architectural buildings and space. The author uses some colour to distinguish different features such as: grass, trees or water, through a rudimentary, almost pictographic, representation of the elements.

Colour can distinguish and recognize represented elements and materials. The use of colour can add interest to the image more interesting and offer more detailed information about the work, increasing our involvement with the mood of the project.

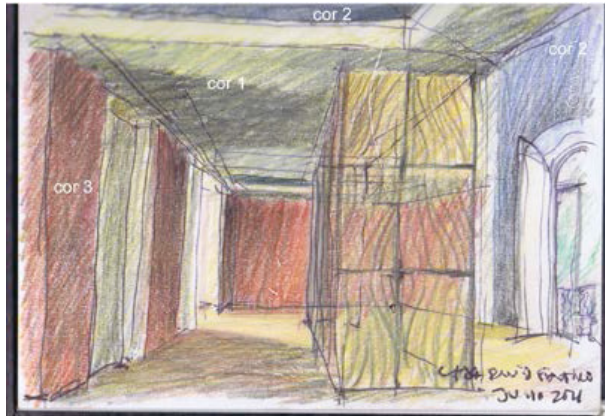


Fig. 4. João Pernão, House David Faustino. Colour Study. Private collection.

In Fig.4 colour is used to identify and characterize different materials - representation through colour. Furthermore, in this work we recognize a more complex use of colour from someone that understands the paramount relation between colour and light. We could consider this drawing as an illustration because it is common to see such strong exploration of colour in final presenting graphic work. But this drawing does more than illustrate a work, it studies the way colour and light transforms space, and shows different colour alterations under different light. Colour is a representation of complex visual phenomena.

V. COLOUR EXPRESSION

Drawings made by architects during the design process are usually not considered artistic, but are viewed as a means to achieve an end. Drawing is considered a specialized tool which can be learned and improved; that can be used to explore solutions; and achieve the aimed final product. Architectural drawings are valued as the pure expression of architectural thought [4].

As we have seen above, drawing is used to think about a problem, visualize solutions and also to communicate information to others, thus: colour can help to organize information; and elaborate that information in a more emphatic or detailed way. Through this research we have also came upon some uses of colour that don't fit this established organization. Colour is used for something else, less rational and more subjective.

In a drawing when line is used it corresponds to the limit or the edges of a form, when colour is used, not only as the colour of the instrument but as a graphic element with visual value it

shows something else. When line is used the focus is on measures, size, metric information. When colour is used the optical aspects are valued, explaining the visual aspect of a form or material, establishing a code to attribute meaning to the represented shapes, as previously addressed.

In a freehand drawing done during a creative process, if the space organization is an issue, if the metric considerations are paramount, there is no need for colour. So, if colour is used what is its role?

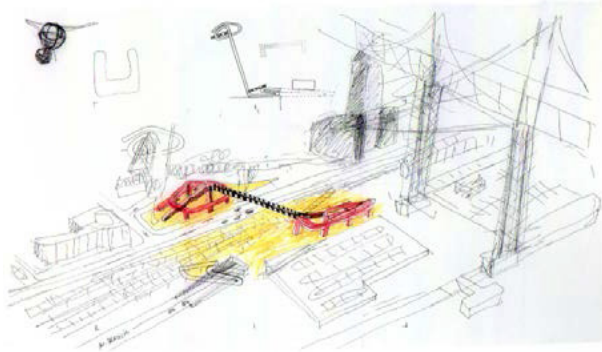


Fig. 5. Egas José Vieira, Footbridge, Santo Amaro, Lisboa, 1999. Perspective representation, 45x80cm. Private collection.

This drawing (fig.5) is an illustration of the project, according to the explanation provided by the architect. In this case all decisions were matured and the architect was in the mood for drawing. The drawing was reworked and illuminated with colour, not specifically representing the colour of the space but enhancing the elements represented. This drawing resulted from a craving for drawing, only for the pleasure of doing it. In this example we can observe that when all the design problems are accomplished there is room to explore other ideas or desire, such as the pleasure of drawing with colour.

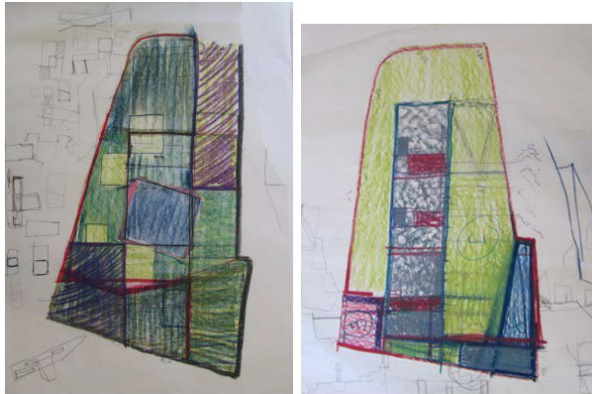


Fig. 6 and 7. Ricardo Bak Gordon, House in Estoril, Private Client, Cascais, 2004-2005.
Sketches, 75x83cm. Private Collection

Fig. 6 and 7 represent different possibilities in space organization of a house; they represent the plan and the house implantation. In both cases we can consider that colour organizes information, separating spaces that have different functions. But couldn't these issues be represented with line only?

This author uses colour in most of his drawings, colours are used in articulation with a big scale transparent paper support, usually larger than A2. The drawing instruments are soft pastel that slide through the paper leaving a sharp and strong colour.

Colour can offer a more complex relation with the working process offering more stimuli and a more rewarding method of drawing. For him, this method of work is more “fun”. Not only is he working his way through an architectural problem, he is also enjoying drawing: “*With drawings this scale we don't stick with black and white, right?*”¹ (RBG).

Architects need to be aware of several and complex technical and constructive aspects of the work, observe legislation and rules and at the same time have their work approved by the client or the jury of a competition. So can the working process be less constrained by using colour? Can the use of colour reveal more artistic expressions?

Colour can be considered the less constricted aspect in the design process because it

1 From the original “RBG - *Com desenhos deste tamanho não se fica só pelo preto e branco, não é?*” extract from the interview with Architect Ricardo Bak Gordon (10th October 2011)

is not limited to the constructive or technical aspects of the architectural project. Colour is not subject to rules and regular codes, its uses are flexible and subjective, and fit individual needs. As so colours allow free expression in these drawings.

Colour is visually stimulating and it has been shown that it affects the observer psychological and even physically. Colour awakens memories and contains symbolic meanings. We have seen that colour can be more than a complex graphic element in a drawing. It offers a subjective interest and working pleasure that provides space for artistic expression.

VI. CONCLUSION

As we have observed colour can be used as a graphic and expressive element complexifying the different graphic or methodological solutions explored through drawing, during the design process. Drawing is used as a two way tool: to think and to communicate information. Colour upgrades the quality of information and also affects the working method, by organizing or transforming the meaning of that which is depicted and represented. Colour can be used cognitively, helping organize information visually, adopting a communicative function by adding quality and meaning to the presented elements such as material or objects. By doing so, it expands the possibilities and meanings in drawing.

We read colour through our cultural and personal background, experiences and relations that have marked our perceptual understanding. We can add meaning to it or just feel the pleasure of seeing colour on paper. Colour has this personal side that is not easily explained but moves from the technical aspects included in a design process. Although colour may appear in drawings without any other reason than the pleasure of using it, colour interpretation is a significant research tool.

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