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Colouring in Architecture: problems involving nocturnal representation

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Abstract

The visibility of an architecture changes enormously throughout the day depending on whether the light source is diurnal, nocturnal, natural, artificial or mixed.
Since perception of the same building changes, we always need to experiment with suitable representation systems in order to convey these changes in colour.
Several methods can be used to understand these effects; they include photography and all kinds of drawings, be they analogical or digital.
The big difference in architectural representations is the contrast between light and shadow, the absence of colour, the use of black and white, and the descriptions of the different colour intensities and tones.
Since daytime representations have been studied the most, even by me, my contribution will focus on the nocturnal representation of architecture, a topic that still needs to be examined in-depth by anyone involved with drawing.
I have chosen several subjects which I will draw at a certain time of night: the castle on the island of Patmos (Greece), the castle in the city of Blanca (Mursia region, Spain), and the Cathedral in Orbetello (Tuscany): my goal is to try and represent on paper the many phenomena of light and colour which are always a priority compared to the form and intangible narrative of the architecture.
Instead to express colour differences during the night, I have chosen just one building that I can access more easily: a farmhouse in the hamlet of Titignano (Orvieto, Umbria).

Keywords: nocturnal representation, colouring architecture, perception, fruition.

Introduction

When analysing built heritage, it is important to identify and represent the chromatic values that materials assume during the day and at night in order to convey the tangible and intangible essence of architectural reality.
In fact, the chromatic variations of an architecture during the day depend on many factors; they include the seasons, (spring, summer, autumn and winter), the time of day or night, and the weather (sunny, cloudy, dull, windy, rainy, foggy, etc.). These factors modify the perception of the architecture and the intensity of its shadows, thus altering the way we see the object and producing a cultural recognisability that always varies.
Although the colour of an architecture is an objective colour, it is also, inevitably, subjective and emotional; when identified by expert and sensitive researchers it paves the way for critical representations/interpretations that can be used to monitor the lifecycle of the object.
I believe that architecture is influenced by the type of light source, especially at night.
When materials are lit by natural light, i.e., only by the moon, the stars and/or the bright night sky, the reflections on the material façades of buildings are primarily opaque, but when artificial light is involved the results are generally more brilliant.
That said, we can describe an architecture as luminous when light comes from inside the building, while an illuminated building is an architecture that is lit by the light provided by its urban context.
The internal lighting in public luminous architectures (i.e., museums, churches, castles and buildings) has usually been carefully designed, while private buildings tend to have different kinds of light sources with very diverse luminous intensities, thus creating heterogeneous compositions.
Instead illuminated architecture is often dependent on the rationale behind the design of the visibility and safety of the road or square where the artefact is located.

Since various factors make the perception of nocturnal urban reality extremely diverse and changeable, we have to constantly experiment with different dynamic representation methods since the latter can highlight the cultural identity values that our architectural heritage always conveys, even at night.
The issues regarding perception of the nocturnal variability of architecture were also inspired by the artistic and pictorial studies by the French artist Claude Monet when he drew the Cathedral in Rouen (Normandy) between 1892 and 1893 (Fig. 1).

Fig. 1 – Claude Monet's series of graphic representations of the Cathedral in Rouen in Normandy (1892-1893)

The double life of architecture
Architecture therefore has a double life; a mercurial diurnal and nocturnal dimension that perceptively alters its features.
Performing numerous experiments with the students of the Faculty of Architecture of Rome, the graduates enrolled in the PhD course in History, Drawing and Restoration of Architecture, the postgraduate students of the School of Specialisation in Architectural Heritage and the Landscape, and after organising numerous Higher Education workshops on this subject, I have for many years continued to research the different ways in which the nocturnal colours of architecture can be portrayed.
The drawings presented here unavoidably merge my knowledge of techniques, materials, geometric values and the theory of shadows with my artistic sensitivity, thus producing accurate, harmonious graphic narrations that represent and enhance our nocturnal heritage, be it real or ephemeral.
Critical nocturnal graphic representations are crucial not only because they make it possible to present new and different chromatic values of buildings, compared to the ones perceived during the day, but above all because they can be used as basic study material when embarking on design and enhancement processes or projects with broader objectives involving the buildings in question.
These drawings can also be used to highlight the possible alterations caused by fierce illumination that can distort visibility (especially as regards public buildings) due to the strong, phosphorescent and/or very brilliant colours used to light the buildings, thus preventing perception of their architectural value. In fact, the urban lighting in some cities around the world is used in an improper and insensitive manner, making those cities look like fun fairs.

The night as a performance. Graphic experimentation.
The effects produced by luminous and illuminated architecture are always spectacular and unique. We could say that architecture has a nocturnal personality, highlighted by perception. Night-time architectures can be considered big, multifaceted nocturnal stage sets, but also experiences, symbols and events that are important in order to make the late-night landscape recognisable.
Reference points in space are different during the day and at night; they are not always equivalent and this depends on the diverse characteristics of the light sources.

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The artefacts I have chosen all differ in shape, type, period of production, and function; my objective was to test a common representation method by personally producing a watercolour drawing of a nocturnal scene because it captures and records shimmers, transparencies, effects, and vibrations in a direct, intuitive, simple, and immediate manner. The castle on the island of Patmos (Greece), the castle in the city of Blanca (Mursia region, Spain), and the Cathedral in Orbetello (Tuscany) were all drawn at the same time at night (11pm). My goal was to try and transcribe on paper the many effects of light and colour that always take priority over the form and narration of an architecture. The three buildings are located in different countries and have different surroundings: an island, a small Spanish town overlooking a river, and the lagoon landscape of a town in Tuscany. However, although the settings are very diverse due to the conformation of the territory and the atmosphere of the sites, the drawings try and capture the essence, nature, and character of buildings vis-à-vis their specific location.
The use of saturated colours (blue, black, yellow, ochre) made it possible to represent the luminous chromatic contrasts that were the most important when interpreting the buildings, including in relation to the white piece of paper. The dark sky at night, albeit with diverse chromatic variations, sharply outlined their shape, highlighting the different spatial conformations and simplifying their volumes. (Figs. 2, 3, 4).

Fig. 2 – The castle on the Island of Patmos, Greece. Nocturnal effects, watercolour

Fig. 3 – The castle in the city of Blanca, Mursia, Spain. Nocturnal effects, watercolour

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Fig. 4 – The Cathedral in Orbetello, Tuscany. Nocturnal effects, watercolour

Instead to illustrate colour changes during the night I am presenting a series of nocturnal graphic variations of a castle in Umbria; these watercolours, painted in August 2022, all portray a building from the same viewpoint. The changes in the chromatic values of these perspectives depend on the kind of light (natural, artificial, or sometimes even mixed) reflected on the material façade. I chose not to paint a traditional view (i.e., an elevation), but used a corner perspective so as to place it in its natural setting (Fig. 5).

Fig. 5 – The Farmhouse in Titignano, Orvieto, Umbria. Watercolour.

As in music, where it is possible to compose an infinite number of variations on a theme, numerous grammatical diversifications can be invented when writing. Likewise, nocturnal architectural representations can be graphically expressed by an endless number of variables: tones, colours, luminosity and atmospheric effects (Fig. 6).

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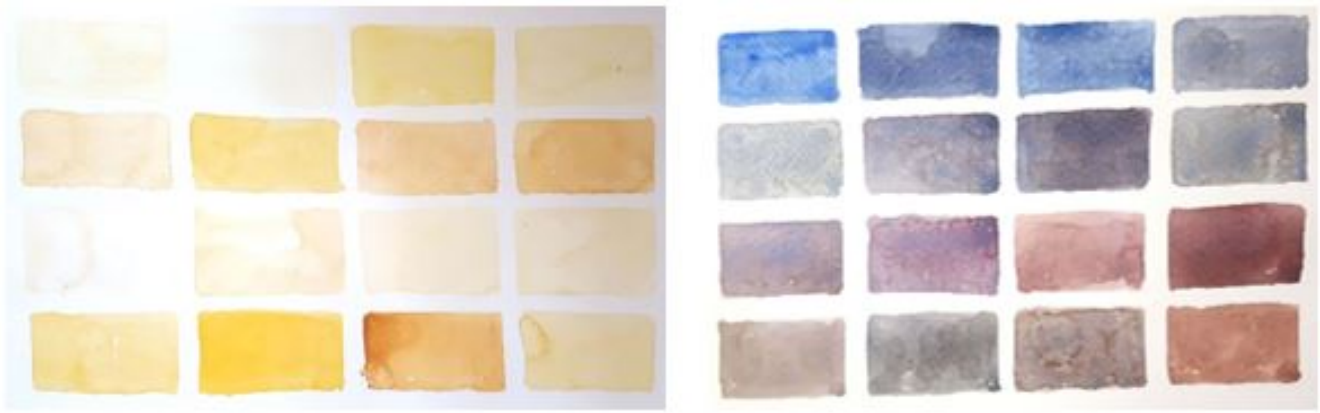

Fig. 6 – Colours for nocturnal representation: natural and artificial lights

This allowed me to study and examine what the architecture looked like depending on the time of day, the weather, the season, and different atmospheric conditions. It demonstrated how, thanks to light and colour, a building - whatever its type and shape – can generate visual stimuli and spatial emotions that are always new and interesting. (Figs. 7,8)

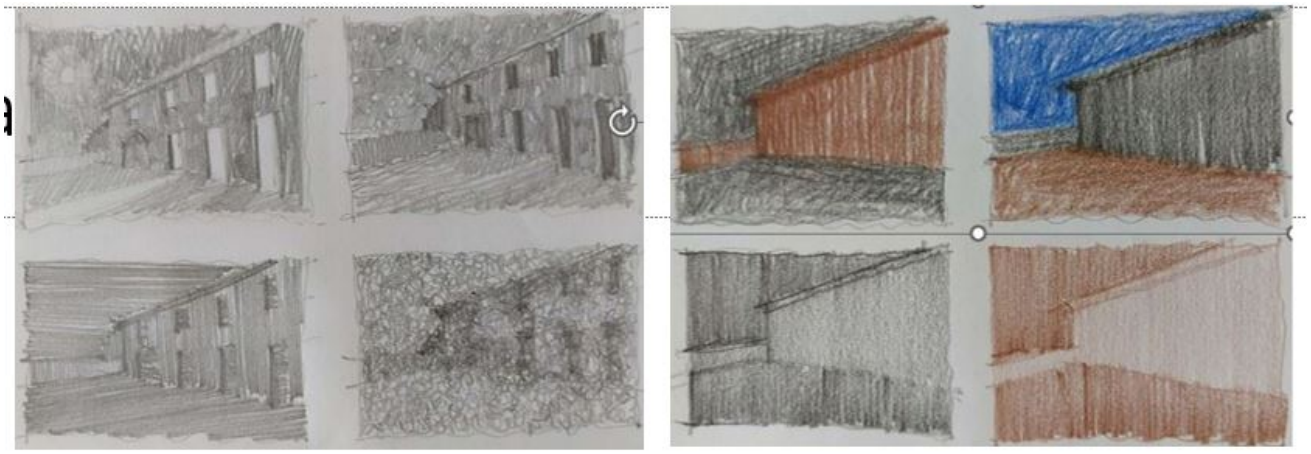

Fig. 7 – The Farmhouse in Titignano, Orvieto, Umbria. Studies on the effects of light

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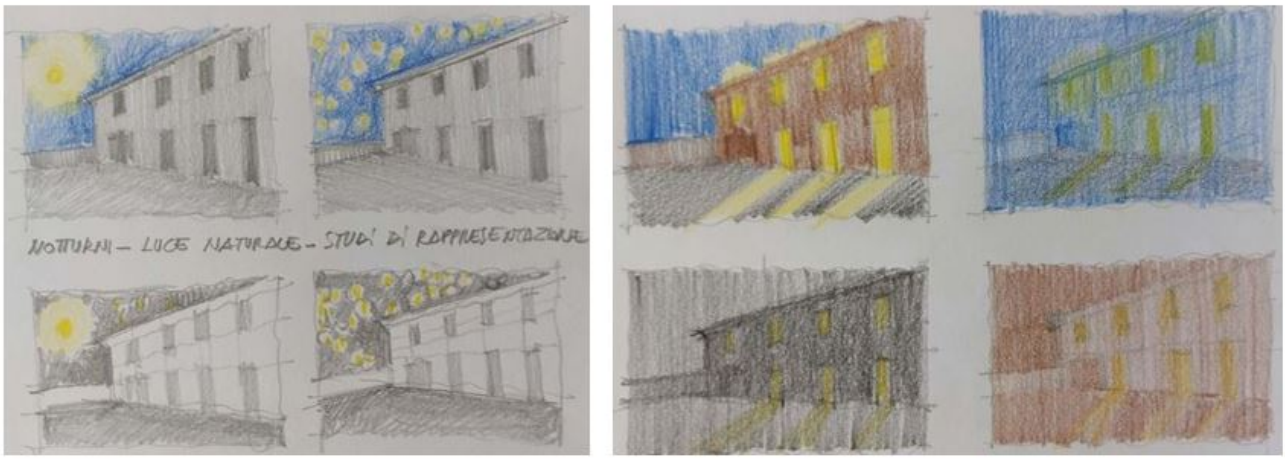

Fig. 8 – The Farmhouse in Titignano, Orvieto, Umbria. Studies on the effects of light

This sequence of nocturnal representations was executed at different times, starting with the early evening and ending at midnight; my intention was to highlight the different chromatic expressions that can be perceived as the night passes and also capture what the architecture conveys when there are changes in the intensity of the light (Figs. 9,10,11,12).

Fig. 9 – The Farmhouse in Titignano, Orvieto, Umbria. Light effects after sunset, watercolour (6 August 2022, 8.00pm and 9.00pm)

Fig. 10 – The Farmhouse in Titignano, Orvieto, Umbria. Light effects, watercolour (7 August 2022, 10.00pm and 11.00pm)

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Fig. 11 – The Farmhouse in Titignano, Orvieto, Umbria. Light effects, watercolour (8 August 2022, midnight and 1.00am)

Fig. 12 – The Farmhouse in Titignano, Orvieto, Umbria. Light effects, watercolour (9 August 2022, 2.00am and 3.00am)
Artificial and natural lights

It is not easy to take explorative graphic notes at night because, in practice, a small light source is needed to shed light on the piece of paper without disturbing the drawer and without contrasting the natural and/or artificial luminous tones that are present (small reading lights that can be attached to the piece of paper are very efficient). Maximum concentration and maximum control over the graphic composition are essential because when you raise your eyes from the faintly lit piece of paper and look into the dark, you need to continually force yourself not to miss some of the luminous vibrations and effects.
It is crucial to be quick, just as it is when drawing or painting during the day, because the intensity of the light varies after a few minutes and changes the visual perception of the whole scene.
In this case, two main elements were the focus of the graphic representation: the background (the sky and vegetation of the surroundings woods) and the unique characteristics of the architectural structure.
The chromatic values created by observing the sky are more opaque, in contrast with the bright values produced by the artificial light inside the farmhouse. In fact, the lights that seep through the windows and doors come from specific light sources and create effects that are constantly changing; sometimes they merge with the surroundings or spread out in a circular pattern on the façade.
Sometimes, when the strong artificial light from inside the farmhouse is combined with the moonlight it almost completely cancels out the vegetation, replacing it with very dark shadow areas. The different chromatic intensities always have to be balanced so that the representations convey a harmonious image of reality at night.

Conclusions

There are many ways to graphically represent the nocturnal values of our architectural heritage. This graphic experiment using watercolours painted on site is just one option - an option that made it possible to intuitively and emotionally capture the effects of nocturnal light on a material. The critical interpretation that takes place during a drawing from life experiment not only increases our

awareness of the architecture in question, but also documents crucial material and immaterial data; the latter help us understand that it is important to focus on them, both in the city and in natural landscapes, so as to ensure their enhancement.
Wassily Kandinsky, the late-nineteenth-century, enlightened Russian painter, maintained that colour is directly related to our emotions and that we can successfully use representation to express it. In fact, when we experience a place at night, the buildings and spaces convey spatial emotions that stimulate our senses.
In addition, when we graphically monitor an architecture at night we are able to appreciate hidden parts, elements and characteristics which, sometimes, in certain cases, may go unnoticed.
Today, the digital technologies used to create numerous ephemeral architectural representations render the latter dynamic and interactive. Instead the night provides different images of our contemporary nocturnal landscape, sometimes sharper and sometimes more blurred; these images express the social and cultural identity of the specific historical period to which they refer.
I should not fail to mention the proliferation of digital façades that redefine architecture as a numerical landscape (cit. Introduction Marc Armengaud, Matthias Armengaud, Alessandra Cianchetta). Indeed, all over the world we see gigantic temporal installations that during the night change colour depending on who is sponsoring the evening's event. They produce many different effects which, now and again, are interesting and respectful, but at times are also visually a little aggressive. They become a social, cultural, economic and political landscape that still remains rather unexplored as a new perceptive frontier.
To graphically interpret an architecture and its landscape using all the analogical and digital systems available, including integrated systems, is just one of the methods we can exploit to develop and design their enhancement in a more sensitive, mindful and informed manner.

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