

Colour and Colorimetry Multidisciplinary Contributions

Vol. XVII A

Edited by Andrea Siniscalco



www.gruppodelcolore.org

*Regular Member
AIC Association Internationale de la Couleur*

Colour and Colorimetry. Multidisciplinary Contributions. Vol. XVII A

Edited by Andrea Siniscalco

Published by Gruppo del Colore - Associazione Italiana Colore

Research Culture And Science Books series (RCASB), ISSN: 2785-115X

ISBN 978-88-99513-18-4

DOI: 10.23738/RCASB.006

© Copyright 2022 by Gruppo del Colore – Associazione Italiana Colore

Piazza C. Caneva, 4

20154 Milano

C.F. 97619430156

P.IVA: 09003610962

www.gruppodelcolore.it

e-mail: segreteria@gruppodelcolore.org

Translation rights, electronic storage, reproduction
and total or partial adaptation with any means reserved for all countries.

Published in the month of December 2022

**Colour and Colorimetry. Multidisciplinary Contributions
Vol. XVII A**

Proceedings of the 17th Color Conference.

Meeting in collaboration with:

Associação Portuguesa da Cor (PT)

Centre Français de la Couleur (FR)

Colour Group (GB)

Forum Farge (NO)

Suomen väriyhdistys SVY (FI)

Swedish Colour Centre Foundation (SE)

*“Nello Carrara” Institute of Applied Physics of the IFAC-CNR National Research Council
12-13 September 2022*

Chair

Andrea Siniscalco, Politecnico di Milano, IT

Programme Committee

Fabrizio Apollonio, Università di Bologna, IT
Gianluca Guarini, Politecnico di Milano, IT
Marcello Picollo, IFAC-CNR, IT

Organizing Secretariat

Albana Muco, Gruppo del Colore - Associazione Italiana Colore

Scientific Committee - Peer review

- Nuno Alão** | Lisbon School of Architecture, PT
Kine Angelo | Norwegian University of Science and Technology, NO
Fabrizio Apollonio | Università di Bologna, IT
John Barbur | City University London, UK
Laura Bellia | Università di Napoli Federico II, IT
Berit Bergstrom | Swedish Colour Centre Foundation, SE
Janet Best | Natick, GB
Marco Bevilacqua | Università di Pisa, IT
Carlo Bianchini | Sapienza Università di Roma, IT
Cristian Bonanomi | Konica Minolta Sensing Europe B.V., EU
Valérie Bonnardel | University of Winchester, GB
José Luis Caivano | Universidad de Buenos Aires, AR
Patrick Callet | École Centrale Paris, FR
Cristina Maria Caramelo Gomes | Universidade Lusitana de Lisboa, PT
Antonella Casoli | Università di Parma, IT
Céline Caumon | Université Toulouse2, FR
Filippo Cherubini | IFAC-CNR, IT
Vien Cheung | University of Leeds, UK
Emanuela Chiavoni | Sapienza Università di Roma, IT
Verónica Conte | University of Lisbon, PT
Paula Csillag | ESPM University, BR
Oswaldo Da Pos | Università di Padova, IT
Maria João Durão | Universidade de Lisboa, PT
Reiner Eschbach | NTNU, NO
Maria Linda Falcidieno | Università di Genova, IT
Christine Fernandez-Maloigne | University of Poitiers, FR
Davide Gadia | Università di Milano, IT
Margarida Gamito | University of Lisbon, PT
Martinia Glogar | University of Zagreb, HR
Yulia A. Griber | Smolensk State University, RU
Jon Hardeberg | Norwegian University of Science and Technology, NO
Francisco Imai | Apple Inc., US
Maria João Durão | Universidade de Lisboa, PT
Agata Kwiatkowska-Lubańska | Academy of Fine Arts, Kraków, PL
Mette L'Orange | University of Bergen, NO
Guy Lecerf | Université Toulouse2, FR
Simone Liberini | Freelance professional, IT
Carla Lobo | LIDA, School of Arts and Design, Polytechnic of Leiria
Maria Dulce Loução | Universidade Tecnica de Lisboa, PT
Veronica Marchiafava | Associazione Italiana Colore, IT
Anna Marotta | Politecnico di Torino IT
Luisa M. Martinez | UNIDCOM-IADE, Universidade Europeia, Lisboa, Portugal
Manuel Melgosa | Universidad de Granada, ES
Mario S. Ming Kong | CHAM – FCSH, Universidade NOVA de Lisboa | FAUL, Lisbon School of Architecture, Lisbon, PT
Lia Maria Papa | Università di Napoli Federico II, IT
Laurence Pauliac | Historienne de l'Art et de l'Architecture, Paris, FR
Giulia Pellegrini | Università di Genova, IT
João Pernão | Universidade de Lisboa, PT
Alice Plutino | Università degli Studi di Milano, IT
Marcello Picollo | IFAC-CNR, IT
Fernanda Prestileo | CNR-ISAC-Sezione di Roma, IT
Barbara Radaelli-Muuronen | Helsinki Art Museum, FI
Alessandro Rizzi | Università di Milano, IT
Maurizio Rossi | Politecnico di Milano, IT
Michele Russo | Sapienza Università di Roma, IT
Joana Perry Saes | CIAUD-Faculdade de Arquitectura de Lisboa, Universidade de Lisboa, PT
Paolo Salonia | ITABC-CNR, IT
Miguel Sanches | Instituto Politécnico de Tomar, PT
Gabriele Simone | Renesas Electronics Europe GmbH, DE
Andrea Siniscalco | Politecnico di Milano, IT
Gennaro Spada | Università di Napoli Federico II, IT
Roberta Spallone | Politecnico di Torino, IT
Ferenc Szabó | LightingLab Laboratory, HU
Elza Tantcheva | Colour Group, GB
Justyna Tarajko-Kowalska | Cracow University of Technology, PL
Mari Uusküla | Tallinn University, EE
Francesca Valan | Studio Valan, IT
Eva Maria Valero Benito | University of Granada, ES
Ralf Weber | Technische Universität Dresden, DE

Organizers



Sponsor



KONICA MINOLTA

With the patronage of

AIAr - Associazione Italiana di Archeometria

AIDI - Associazione Italiana di Illuminazione

IGIIC - Gruppo Italiano International Institute for Conservation

AIC - International Colour Association

SID - Italian Design Society

SIOF - Italian Society for Optics and Photonics

Index

1. Color and Measurement/Instrumentation	10
Evaluation of color alterations due to Ag-functionalized nanocrystalline cellulose on Whatman and Amalfi paper	11
<i>Laura Bellia, Francesca Fragliasso, Claudia Graiff, Mariagioia Petratretti, Antonino Pollio, Marianna Potenza</i>	
Simultaneous contrast in screen printed patterns	19
<i>Marijana Tkalec, Martinia Glogar, Ana Sutlović, Frane Šoša</i>	
Effects of tinted lenses on chromatic sensitivity: changes in colour vision assessed with the CAD test, a preliminary study	27
<i>Lucia Natali, Alessandro Farini, Elisabetta Baldanzi, John Barbur</i>	
2. Color and Digital	32
Color consistency in BIM systems and in the visualization of the project in Real Time - An overview of possible solutions	33
<i>Gianluca Guarini, Maurizio Rossi</i>	
3. Color and Lighting	41
A possible new method for Forensic Document examination: Plasmonic colors	42
<i>Kazim Hilmi Or</i>	
Twilight Spatial Experiments	45
<i>Birgit Schulz</i>	
The open issue of color management in circadian interior design between the practice of lighting and color design	52
<i>Maurizio Rossi</i>	
Colorimetric analysis and color rendering performance of a small-scale glazing system with thin monolithic aerogel in the interspace	59
<i>Costanza V. Fiorini, Francesca Merli, Elisa Belloni, Ann M. Anderson, Mary K. Carroll, Cinzia Buratti</i>	
4. Color and Physiology	70
The gray side of Ishihara bubbles	71
<i>Reiner Eschbach, Alice Plutino, Luca Armellin, Alessandro Rizzi</i>	
Can “blue blocking” eye glasses be clinically really effective?	76
<i>Kazim Hilmi Or</i>	
Online games for colour deficiency data collection	79
<i>Luca Armellin, Alice Plutino, Alessandro Rizzi</i>	
Loss of colour and flicker sensitivity in subjects at risk of developing diabetes	87
<i>Marisa Rodriguez Carmona, Qais Bastaki1, John L Barbur</i>	
Subclinical changes detected in diabetes mellitus using high resolution retinal imaging and colour vision assessment	91
<i>Megan Vaughan, Nicole Tay, Thomas Kane, Angelos Kalitzeos, Nav Singh, Adrian Zheng, Bishwanath Pal, Ranjan Rajendram, Konstantinos Balaskas, M. Pilar Martin Gutierrez, Jose Carlo Artiaga, Hanan Nussinovitch, Khadra Adan, Marisa Rodriguez-Carmona, John L. Barbur, Michel Michaelides, Emily J. Patterson</i>	

Foveal cone structure in patients with blue cone monochromacy	94
<i>Emily Patterson, Angelos Kalitzeos, Thomas Kane, Navjit Singh, Mark Pennesi, Alison Hardcastle, Jay Neitz, Maureen Neitz, Michel Michaelides, Joseph Carroll</i>	
Changes in the ‘conspicuity’ of coloured objects caused by coloured lenses and / or pre-receptor filters in the eye.....	95
<i>John L Barbur, Benjamin EW Evans, Marisa Rodriguez-Carmona, Elisabetta Baldanzi, Regina Comparetto, Alessia Fava, Alessandro Farini</i>	
A leap in the dark! How understanding horses’ color perception improves their performance and welfare in show jumping.....	97
<i>Francesca Valan, Chiara Scopa</i>	
Do color and light affect physiology and psychology in proportional ways?.....	105
<i>Andrea Siniscalco, Alessandro Bortolotti, Maurizio Rossi</i>	
The value of colour in clinical diagnostic dilemmas.....	111
<i>Benjamin E W Evans, Gordon Plant, John L Barbur</i>	
5. Color and Production	113
Colour fading of aged knitted materials for swimsuits.....	114
<i>Katarina Krstović, Martinia Ira Glogar, Veronika Lovreškov, Vesna Marija Potočić Matković</i>	
6. Color and Restoration	120
A piece of New Zealand Heritage: Colour Design and Conservation of Grey Lynn Library.....	121
<i>Julian Rennie I, Alessandro Premier</i>	
Colorimetric and spectroscopic analysis of a 19th-century impressionist painting with reflectance hyperspectral imaging.....	129
<i>Alice Pertica, Andrea Casini, Costanza Cucci, Marcello Picollo, Lorenzo Stefani, Muriel Vervat</i>	
Colors in computer heritage: investigation of "Graphite" and "Indigo" Apple iBooks from the Deutsches Museum.....	137
<i>Eva Mariasole Angelin, Marisa Pamplona</i>	
Between West and East: a non-invasive study of colourants on Syriac manuscripts.....	143
<i>Maurizio Aceto, Angelo Agostino, Maria Labate, François Pacha-Miran</i>	
Color = Shape = Space: Sol LeWitt’s Wall Drawing #736 “Rectangles of color”.....	150
<i>Renata Pintus</i>	
7. Color and Environment	151
Colouring in Architecture: problems involving nocturnal representation.....	152
<i>Emanuela Chiavoni</i>	
Colors in Architecture: Matter and Communication Tool.....	160
<i>Vittoria Umani</i>	
Exploring the colors used in renovation of interior space: a survey on post-use of higher educational classrooms.....	168
<i>Zhang Dongqing, Eletta Naldi, Liu Linding</i>	
Experience of place: colour and lighting design methods in the process of inclusive housing projects....	176
<i>Lorrain Caumon, Georges Zissis, Céline Caumon</i>	
Eidomatic experimentations on alteration of spatial perception by using colours.....	184
<i>Luca Martelli, Laura Carnevali, and Fabio Lanfranchi</i>	

Felting wool dyed with natural dyes	192
<i>Ana Sutlović, Martinia Ira Glogar, Vedrana Gašpić</i>	
UrbanCroma, Chromatic Methodology, the results of a post-Doctoral research	200
<i>Margarida Gamito, Fernando Moreira da Silva</i>	
Plants out of place? A design-driven investigation of colour and material possibilities within a group of “invasive alien plant species” in a Norwegian context.	206
<i>Siren Elise Wilhelmsen</i>	
Colour Composition and Visual Tectonics in Facades; Adapting Colour Teaching to Current Architectural Practice	214
<i>Kine Angelo, Alex Booker</i>	
The Face of Molde High Street	222
<i>Mette L’orange, Bent Erik Myrvoll</i>	
Colours of a Northern city in past and present - tradition and current practices of facade colour in the historical architecture of Trondheim, Norway	230
<i>Mette Bye</i>	
On different approaches to Environmental Colour Design	238
<i>Verena M. Schindler</i>	
8. Color and Design	239
Fly in color. A chromatic “model” for the cabin of a commercial aircraft	240
<i>Germak Claudio, Gabbatore Stefano</i>	
Chromatic identity of the urban tile panels: the scenario of Lisbon subway stations.	248
<i>Cristina Caramelo Gomes, Margarida Gamito</i>	
Research on Colour in Industrial Design: Brief History, Overview of Methods and Stories of Successful Products	257
<i>Agata Kwiatkowska-Lubańska</i>	
Color Communication in Home Interior Design: and analysis of Architectural Digest covers from the 1980s, 1990s and 2000s	263
<i>Rebecka Pires</i>	
Color and light in the photography of contemporary architecture.	270
<i>Ahmed Motie Daiche, Safa Daich, Mohamed Yacine Saadi</i>	
The Colours of Sustainability: how materials CMF Design can guide sustainable perceptions and behaviours	277
<i>Sossini Lia, Santi Romina, Del Curto Barbara</i>	
Chromatic Vocabulary: the color design research according to Gianfranco Ferré	285
<i>Valentina Cognini, Federica Vacca</i>	
9. Color and Culture	294
Colour Harmony in Design and Architecture: theory, practice, education	295
<i>Larissa Noury</i>	
The “Pink Mask Affair”: Why did Italian police refuse to wear pink FFP2 masks?	298
<i>Kévin Bideaux</i>	
Grey Zones: On Photography & Progress	306
<i>Hannah A. Matangos</i>	

Reversal film transparencies and their colours: examining the medium of an era.....	310
<i>Nicholas Lourantos</i>	
Serial and geopoetic architecture of the territory, indexed color at the service of enhancing a vernacular heritage.....	320
<i>Xavière Ollier</i>	
Quantifying color in culture:color trends in Italy (1960 to 2020) through album covers.....	328
<i>Marcello Di Gregorio, Martin Bellander</i>	
Book of Patterns - an ongoing project.....	336
<i>Birgit Schulz, Judith Augustinovič, Nayari Castillo-Rutz</i>	
Colours and Daguerrotypes: how to forget colours? «La couleur y est traduite avec tant de vérité qu'on oublie son absence».....	342
<i>Annie-Dominique Denhez</i>	
Compound words with colour terms in Albanian.....	351
<i>Albana Muco</i>	
10. Color and Education _____	352
When a student asks: Was ist Black auf Deutsch?.....	353
<i>Anna Piotti</i>	
A New Paradigm for the Definition and Universe of Static Colors and Dynamic Colors.....	362
<i>Rui Pessoa Vaz de Figueiredo Vasquese, António José Macedo Coutinho da Cruz Rodrigues, Diamantino S. Abreu</i>	
11. Color and Communication/Marketing _____	371
The psychological association between product's color and consumer's color preference in marketing.....	372
<i>Alessandro Bortolotti, Loreta Cannito, Stefano Anzani, Riccardo Palumbo</i>	
Cultural-aesthetic parameters of color in advertising communications.....	380
<i>Svitlana Pryshchenko</i>	
Go Somewhere Glossies: Experiential Color in Magazine Design.....	386
<i>Jada Schumacher</i>	
12. SPECIAL SESSION: Color for beauty, cosmetic and hairstyle _____	394
Mineral pigments in make-up products: classification, formulation and sensorial properties.....	395
<i>Hélène de Clermont-Gallerande</i>	
Assessment of base color influence on the chromatic appearance of hair colorants.....	403
<i>Simone Liberini, Roberta Suardi, Alessandro Rizzi, Giannantonio Negretti</i>	
Hair-dye experience at home using a customer journey map.....	410
<i>Sumin Park, Boram Kim, Hyun Choi, Moonha Kim, Hyeon-Jeong Suk</i>	
The color changes of face after a makeup for Shanghai Women.....	417
<i>Boram Kim, Juhyun Lee, Sungmi Park, Hyeon-Jeong Suk</i>	
Course of Color Technician in the Cosmetic Industry.....	423
<i>Daniele Fusari, Michele Scisci</i>	

Colouring in Architecture: problems involving nocturnal representation

Emanuela Chiavoni

Dipartimento di Storia, Disegno e Restauro dell'Architettura, Università Sapienza Roma
emanuela.chiavoni@uniroma1.it

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.

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



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).

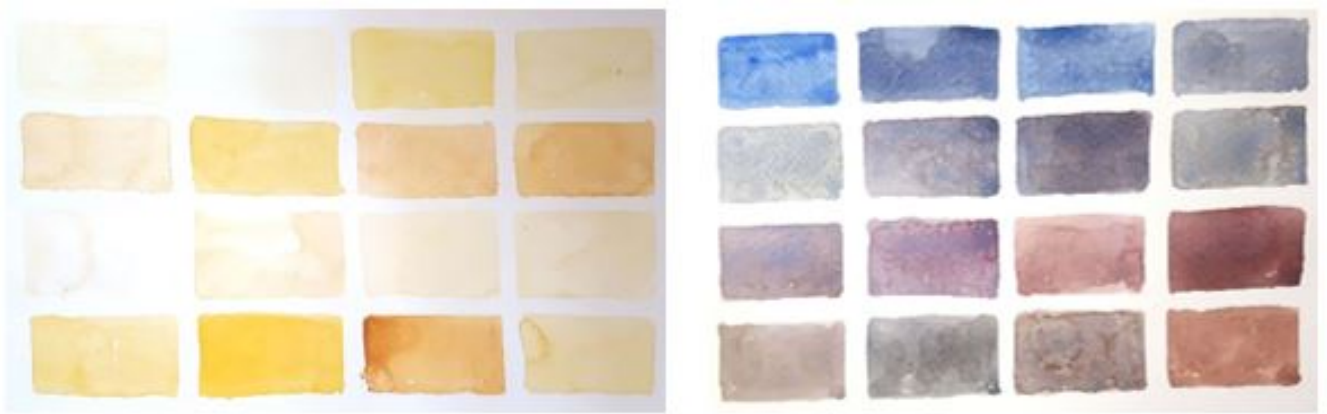


Fig. 6 – Colours for nocturnal representation: natural and artificial lights

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)

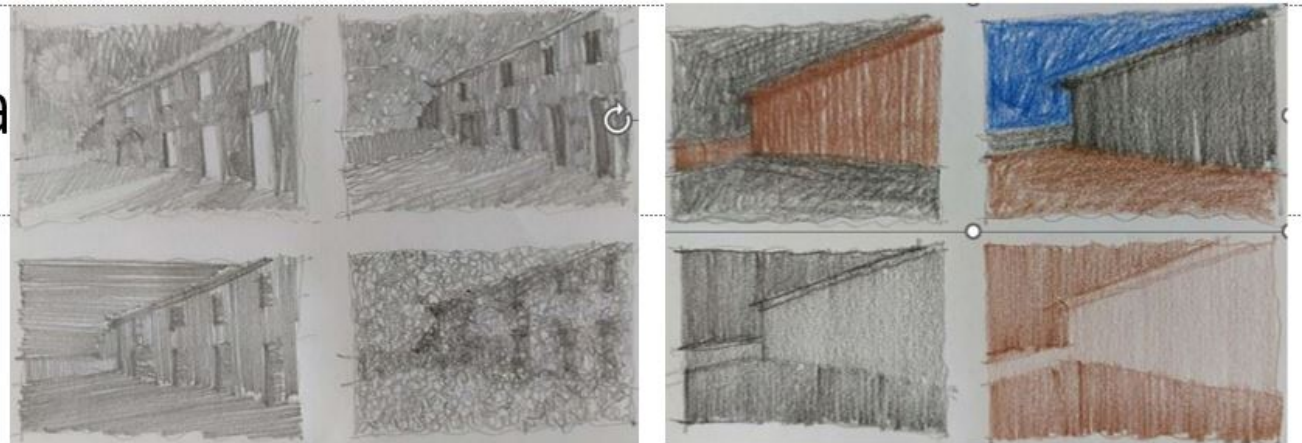


Fig. 7 – The Farmhouse in Titignano, Orvieto, Umbria. Studies on the effects of light

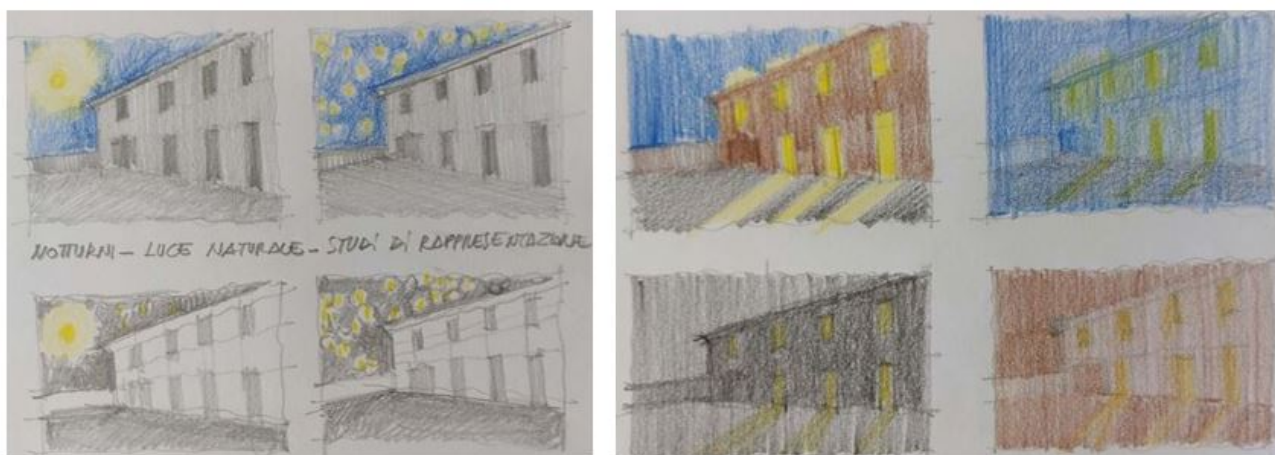


Fig. 8 – The Farmhouse in Titignano, Orvieto, Umbria. Studies on the effects of light

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)



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.