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ANVUR Agenzia Nazionale Valutazione sistema Universitario e Ricerca
APeJ Academic Publications eJournal
BASE Bielefeld Academic Search Engine
DBH Database for statistikk om høyere utdanning
DOAJ Directory of Open Access Journals
EZB Elektronische Zeitschriftenbibliothek Regensburg
JURN Search tool for open access content
ROAD Directory of Open Access scholarly Resources
SCOPUS
ZDB Zeitschriftendatenbank

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PEER REVIEW PROCESS
All articles submitted to the Color Culture and Science Journal are peer-reviewed according to the following procedure:

First review level
The Associate Editors evaluate each article to determine if the topic and content are of interest to the journal. Once the article passes the initial review, the Associate Editors select several reviewers from the Editorial Board based on their expertise in a particular subject area or topic.

Second review level
Two or three experts review each article with a blind peer-review process where the reviewers are kept anonymous. Reviewers are asked to evaluate the manuscript based on the following criteria:

- Originality
- Relevance to journal's aims and scope
- Technical merit and/or validity
- Soundness of methodology
- Completeness of the reported work
- Conclusions supported by the data
- Correct acknowledgment of the work of others through reference
- Effectiveness of the manuscript (organization and writing)
- Clarity of tables, graphs, and illustrations
- Importance to color researchers
- Relevance to color practices

If the article is accepted with major revisions, the author(s) are asked to improve the article according to the reviewers' suggestions. The revised article will then be submitted for further review.After collecting the reviewers' reports, the Associate Editors recommend the acceptability of the article to the Editor-in-Chief.

TOPICS
The CCSJ accept papers on a wide range of topics on color, including and not limited to the following:

1. Color and Measurement/Instrumentation. Colorimetry, photometry and color atlas: method, theory and instrumentation; quality control and food coloring, dyes, organic and sustainable color.
2. Color and Digital. Reproduction, management, digital color correction, image processing, graphics, photography, film and video production, printmaking and 3D print, artificial vision, virtual reality, multispectral imaging, data visualization. Light field imaging. Multi-sensor fusion. Color localization, recognition, HDR imaging, ADAS systems.
3. Color and Lighting. Metamerism, color rendering, adaptation, color constancy, appearance, illusions, color memory and perception, color in extra-atmospheric environments, lighting design, lighting technologies, visual comfort.
4. Color and Physiology. Mechanisms of vision in their experimental and theoretical aspects, color vision and color appearance, deficiencies, abnormalities, clinical and biological aspects, synesthesia, health, well-being.
5. Color and Psychology. Phenomenology of colors, color harmonies, color & form, perceptive, emotional, aesthetic, and diagnostic aspects.
6. Color and Production. Food and beverages, agriculture, textiles, plastic materials, ceramics, paints, gemology, color in the food industry.
7. Color and Restoration. Archaeometry, painting materials, diagnostics, and conservation techniques, restoration, and enhancement of cultural heritage.
8. Color and Environment. Representation and drawing, urban planning, the project of color, architecture, interior design, landscapes & horticulture, color and architectural syntax, territorial identities, biodiversity.
9. Color and Design. Furniture, CMF design, fashion, textiles, textures, cosmetics, food design, museography.
10. Color and Culture. Arts and crafts, history, philosophy, aesthetics, ethno-anthropology, graffiti, geology, sociology, lexicology, semantics, anthropology of vision, food culture and heritage, color naming.
11. Color and Education. Pedagogy, didactics of color, aesthetic education, artistic education.
12. Color and Communication/Marketing. Graphics, communication, packaging, lettering, exposure, advertising.

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Editorial. Color Dynamics in Cultural Heritage: Scientific Perspectives and Insights

Dear readers,

The vibrant field of color science in cultural heritage, spanning materials analysis, color perception, and conservation strategies, enriches our understanding of cultural heritage and its degradation processes due to their intrinsic properties and the influence of environmental parameters. In this special issue titled Color Dynamics in Cultural Heritage: Scientific Perspectives and Insights, a collection of diverse, methodologically rigorous studies uncovers the many facets of color's role in interpreting and preserving cultural heritage. This compilation brings together case studies, technical studies, and the development of innovative imaging techniques, presenting both theoretical and practical advancements that bridge art history, materials science, and conservation.

In this issue, several themes emerge, each shedding light on different aspects of color in heritage conservation. For instance, studies on architectural heritage explore how environmental factors and material degradation impact color stability in buildings and monuments. These papers emphasize the importance of contextual sensitivity in preserving immovable heritage, as colors in architectural elements often face unique challenges due to prolonged exposure to sunlight, pollution, and moisture. Techniques such as colorimetry and visible spectroscopy are applied to monitor and analyze color stability, providing insights into how environmental conditions affect color perception over time. In contrast, a second group of papers focus on movable heritage often examining color in terms of more contained environments, such as museums or controlled storage conditions.

In the first paper, **Lhi and Choi**'s study on the Ten Symbols of Longevity in Korea's late Joseon Dynasty presents a compelling picture of socio-political influences on artistic color choices. Here, the transition from traditional to Western synthetic pigments reflects shifting Confucian values toward a more vivid color palette, allowing new interpretations of cultural identity through color. This case provides a historical grounding for the transformations explored throughout the issue, illustrating the societal impact on materials and pigment selection.

Reichold and colleagues delve into the influence of varnish on color perception through a comprehensive study of Vasari's Resurrection of Christ and Saints. Their investigation on varnish deterioration emphasizes how subtle environmental factors can significantly alter the original appearance of artworks over time. This precise, non-invasive approach in monitoring varnish brings forth challenges relevant to the studies on long-term color change and preservation in historical artifacts. This is related to the goal of the paper by **Thickett et al**., which presents an examination of the effects of natural light aging on actual museum objects. The authors propose a methodology that combines light levels monitoring in exhibition spaces together with spectrocolorimetric mesurements conducted on cultural heritage objects over a large time span of up to 70 years depending on the type of object evaluated.

Llácer-Peiró et al.'s optical analysis of cobalt blue pigment in oil painting aligns well with the detailed case of grisaille glazing by the same research team, which examines how underlying grayscale layers influence the final appearance of painted glazes. Together, these studies reveal the technical nuances in creating and conserving multilayered paint systems, with the microscopic analysis of aging pigments shedding light on how artists used color layering to achieve depth and luminosity. This is a theme echoed in **Perondi**'s paper on the chromatic image method. Perondi's method offers a novel tool for visualizing subtle hues, enhancing

conservators' capacity to understand cultural heritage objects, while allowing to capture essential details for making informed conservation treatments. The author demonstrates that the method is effective in revealing details in shadowed areas, enhancing the readability of drawings, and aiding in the identification of damage areas.

Moving beyond traditional conservation, **Pylypchuk**'s study addresses color perception in interior spaces, exploring how color choices affect the ambiance and functionality of designed spaces. The author defined three levels of color perception, namely maximum, intermediate, and minimum. They depend on various factors such as degree of color contrast, combinations and connections of colors, and signs of associative color scheme. The developed method serves to create a balance between the color of art objects and the interior space. This approach contrasts with **Odetti and co-authors**' research on chromatic interventions in public spaces, which focuses on the role of color as a cultural unifier and identity marker in urban heritage conservation. These studies underscore how color theory and perception extend from object-focused heritage to broader spatial and social applications, further integrating community and conservation.

The paper by **Muñoz-Alcocer et al**. explores color matching in polychrome wooden ceilings through the combination of scientific analysis and hands-on conservation, offering an approach for matching historical colors using the sottotono technique. This sensitive approach respects the historical integrity of Spanish colonial art while addressing the complexities of color fidelity and variation—a theme that finds resonance in **Medeiros and da Silva**'s work on colorimetry in heritage tile conservation. By applying rigorous colorimetry standards, Medeiros and da Silva demonstrate the effectiveness of scientific collaboration in conserving architectural elements, echoing the emphasis on color consistency and respect for original hues.

Finally, **Catella**'s analysis of polychrome surfaces in Apulia highlights color's symbolic role in architectural identity. Through the evolution of neo-medievalism, color emerges not only as an aesthetic choice, but also as a vehicle for regional and national identity. This ideological role of color in heritage resonates with Odetti et al.'s work in urban revaluation, both studies affirming how chromatic choices influence collective memory and historical interpretation.

In summary, Color Dynamics in Cultural Heritage presents a comprehensive view of how color is studied, preserved, and interpreted within the diverse context of cultural heritage. By examining both movable and immovable objects, this issue emphasizes the shared challenges and distinct approaches in the conservation and preservation of color. The articles collectively demonstrate the importance of scientific precision in monitoring color changes, while also addressing the interpretive role of color in engaging audiences with cultural heritage objects. Through these contributions, the issue underscores the vital role of color in preserving cultural continuity, inspiring ongoing research that bridges art, conservation, science, and heritage for future generations.

We extend our gratitude to the researchers and conservation professionals whose work graces this special issue, advancing our collective understanding of color in cultural heritage. Through their studies, we gain a more nuanced appreciation of the ways color preservation supports our cultural continuum, safeguarding the stories and memories that color brings to life.

Sincerely,

November 2024

Julio M. del Hoyo-Meléndez[1] and Marcello Picollo[2]

[1] Head of the Laboratory of Analysis and Non-Destructive Investigation of Heritage Objects
The National Museum in Krakow
30-062 Krakow, Poland
jdelhoyo@mnk.pl
[2] Senior Researcher at the Istituto di Fisica Applicata "Nello Carrara" del Consiglio Nazionale delle Ricerche
50019 Sesto Fiorentino, Florence, Italy
m.picollo@ifac.cnr.it