

Special issue on colour theory

Robert Hirschler

Study Group on Colour Education, International Colour Association (AIC)

Email: robert@hirschler.hu



*Many are averse to use theoretical principles in the study of art, **science**, it is said, may be learned by **theories**, but **art** only by **practice**.*

J. Bacon 1866 [1]

Color theory is the result of a search for information about the human visual experience of color and an attempt to formulate relationships between this experience and its causes.

Sanford Wurmfeld 1985 [2]

[Colour theory is] the large volume of ideas concerning the nature of colour, what it is and how it is perceived as expounded by experts in a wide range of disciplines including philosophers, scientist, theorists, artists, psychologists, designers and colorists.

Ian Paterson 2004 [3]

*The term **colour theory** can, misleadingly, evoke a more or less unified corpus of knowledge rather like linguistics, mathematics or the theory of music. With colour the situation is different; the knowledge is spread in divers disciplines, each with their peculiar vocabulary and way of thinking.*

Harald Arnkil 2013 [4]

"The objective of a scientific theory of color is to understand and explain the different chromatic phenomena from the point of view of their physical, physiological mechanisms, etc. The goal of an artistic theory of color, whether or not based on a scientific theory, is to provide artists with a set of principles, rules, conceptions, formulas, or "laws."

Georges Roque 2017 [5]



We could continue listing the definitions of "colour theory", because it can be defined in countless ways, and because it means so many different things to those who bother to think about it at all. There are dozens of books in print (not to mention the internet sites) carrying the title "colour theory", but "theory" in most of them only means the description of one or other part of the "the large volume of ideas concerning the nature of colour".

The idea of this special issue on colour theory has emerged during numerous discussions within the Colour Literacy Project (CLP) [6]. Although the project focuses on new approaches to colour education, discussions on the nature, and indeed the modern view on colour theory has kept popping up in the team meetings, very often provoking fierce debate. *A Contemporary Analysis of Traditional Colour Theory*, reflecting the majority view of the CLP team, was presented at the AIC 2022 Midterm Meeting in Toronto [7].

This special issue opens with an article on **Colour theory: Definition, fields and interrelations** by George Roque. He argues that “*colour theory should be an important part of art theories, but a quick survey on textbooks devoted to theories of modern art shows that it is not the case.*” He then proposes a ‘strong’ definition of colour theory: *a set of concepts, general ideas and principles related to colour which in principle (but not always) should be derived or deduced from practice, experiments, or facts.*

Roy Osborne’s article, **Teaching colour in art and design: A documented history**, gives us an overview of what has been taught about colour from the mid-sixteenth to the mid-twentieth century, primarily to students of art, design and crafts. The article concludes with a proposal of how investigation of colour in relation to form might offer a pathway for the future teaching of colour in the visual arts.

Traditional Colour Theory is burdened by the “Hue Paradigm [8], i.e. by the common misconceptions that:

- a single simple hue circle or “colour wheel” is all that is needed to illustrate all colour relationships;
- there are simple rules to establish harmonious colour combinations (based just on hue relationships); and
- using vague colour categories or simple hue names are sufficient to attach meaning and effect to colours (“red is arousing, blue is calming”).

A brief discussion on the modern view in respect of these misconceptions was published in [7].

Two articles in this Special Issue treat the problem of the “Hue Paradigm” in a somewhat different way. **Traditional colour theory in design context: A focus on value** by Zena O’Connor gives a survey of colour theories relating to the attribute of tonal value. From both a praxis and design education perspective value-related colour strategies are considered to play an important role in colour application by contributing to differentiation, enhanced legibility, and environmental visual literacy as well as perceptions relating to mood, atmosphere, and ambience across applied design and design of the built environment.

Ellen Divers in **The compass and the map: Colour meaning and the colour design process** takes a different approach. She created a tool for designers, the “Evidence-based Colour Compass” to be used in establishing a direction regarding colour meaning. She acknowledges that *it will take some time for the prevailing Hue Paradigm to loosen its hold over the collective psyche; it has very deep roots that have developed over its long history. Until then, however, tools such as the Colour Compass can help point the way forward.*

Contemporary teaching materials on colour theory in Germany: Eckhard Bendin’s Kreiselscheiben zur Farbenlehre (2010) by Chiaki Yamane-Saihoji describes the experience with a practical tool (spinning disks) to help explaining many aspects of colour theory, way beyond simply demonstrating partitive mixing. Educators would find the practical, hands-on approach and extensive examples very helpful in lesson planning.

The last article in this special issue takes us to a very different area of the colour theory field. **The Kubelka-Munk model of full-gamut oil colour mixing** by Daniel W. Dichter describes interesting research into the application of standard optical theory to mixing oil paints. If you are familiar with computerised paint formulation this article may give you some hints to simplify your preparatory work or making your formulations more accurate.

The wide scope of the submitted articles to this JAIC Special Issue on Colour Theory reflects the complexity of the subject. As many of the concepts related to colour are still open to debate, often to controversies even among the most experienced professionals, we would like to encourage you, dear readers, to express your views on the subject, or send comments on one or other detail in the articles. **Letters to the editor** are more than welcome and will be published later in the [JAIC issues webpage](#) along with this special issue.

Robert Hirschler

Chair of the Study Group on Colour Education (Guest Editor)

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