IX CONGRESO NACIONAL DEL COLOR ALICANTE 2010

Alicante, 29 y 30 de Junio, i y 2 de Julio de 2010 Universidad de Alicante





PUBLICACIONES

UNIVERSIDAD DE ALICANTE

Este libro ha sido debidamente examinado y valorado por evaluadores ajenos a la Universidad de Alicante, con el fin de garantizar la calidad científica del mismo.

Publicaciones de la Universidad de Alicante Campus de San Vicente s/n 03690 San Vicente del Raspeig Publicaciones@ua.es http://publicaciones.ua.es Teléfono: 965903480 Fax: 965909445

© Varios autores, 2010 © de la presente edición: Universidad de Alicante

ISBN: 978-84-9717-144-1

Diseño de portada: candelaInk

El IX Congreso Nacional de Color cuenta con el apoyo de las siguientes entidades:





























































IX CONGRESO NACIONAL DE COLOR ALICANTE, 29 y 30 de Junio, 1 y 2 de Julio Universidad de Alicante

Departamento de Óptica, Farmacología y Anatomía
Facultad de Ciencias
Instituto Universitario de Física Aplicada a las Ciencias y las Tecnologías (IUFACyT)
Universidad de Alicante

COMITÉ ORGANIZADOR

Presidente Francisco M. Martínez Verdú Universidad de Alicante

Eduardo Gilabert Pérez Universidad Politécnica de Valencia Vicepresidente I

Vicepresidente II Joaquín Campos Acosta IFA-CSIC

Secretaria Científica **Esther Perales Romero** Universidad de Alicante Secretaria Administrativa **Olimpia Mas Martínez** Universidad de Alicante Secretaria Técnica Universidad de Alicante Sabrina Dal Pont Tesorero Valentín Viqueira Pérez Universidad de Alicante Universidad de Alicante Vocal Elísabet Chorro Calderón Verónica Marchante Universidad de Alicante Vocal Vocal Bárbara Micó Vicent Universidad de Alicante Elena Marchante Universidad de Alicante Vocal Universidad de Alicante Vocal Ernesto R. Baena Murillo

COMITÉ CIENTÍFICO

Instituto de Óptica, Color e Imagen, AIDO Natividad Alcón Gargallo

Instituto de Física Aplicada CSIC Joaquín Campos Acosta

Pascual Capilla Perea Universidad de Valencia

Universidad Politécnica de Valencia Ángela García Codoner Eduardo Gilabert Pérez Universidad Politécnica de Valencia José Mª González Cuasante Universidad Complutense de Madrid

Francisco José Heredia Mira Universidad de Sevilla Universidad de Granada **Enrique Hita Villaverde** Luís Jiménez del Barco Jaldo Universidad de Granada

Julio Antonio Lillo Jover Universidad Complutense de Madrid

Francisco M. Martínez Verdú Universidad de Alicante Universidad de Granada **Manuel Melgosa Latorre** Universidad de Zaragoza **Angel Ignacio Negueruela**

Instituto de Óptica, Color e Imagen, AIDO Susana Otero Belmar

Universidad Politécnica de Cataluña

Universidad Politécnica de Cataluña Jaume Pujol Ramo

Universidad de Granada **Javier Romero Mora** Universidad de Extremadura

M^a Isabel Suero López

Meritxell Vilaseca Ricart

THE COLOUR SCENARIO. AN INTERDISCIPLINARY ANALYSIS FOR A INTERDISCIPLINARY TOPIC

Valentina Vezzani¹, Mario Bisson²

1,2 Dipartimento INDACO – Laboratorio Colore – Politecnico di Milano.

www.labcolore.polimi.it, valentina.vezzani@mail.polimi.it

Abstract:

The topic of this research is about the exploration of the actual colour scenario, from an Italian perspective analysis to an international one, with the aim to understand the characteristics and the needs of a complex system of disciplines and relationships that depends on the interdisciplinary character of the matter. The understanding of the colour scenario, then representing it, is the first step to understand and promote a common colour knowledge, comprehensible and useful for all those actors involved in the scenario. Design represent the method, the tool to analyze and to manage the complexity of this system that today should be more synergic.

Keywords: Interdisciplinarity, Colour scenario, Design methods

INTRODUCTION

The colour world is so large and diversified that, to be understood requires an exploration and a study from multiple points of view because of the complexity and the articulation of the argument "colour" too.

Colour is primarily a physical phenomenon, when it is considered as a set of light radiations (electromagnetic waves) that interacts with the matter and our visual apparatus, but it is also a physiological phenomenon since it is a stimulus that reaches the eye and is transformed into neural signal. Colour is a sensation and, as such, its action on humans, as Itten affirmed, must be felt and understood as a fact, not only optical but also psychological and symbolic; psychophysics, visual perception, symbolism, history, art, sociology, anthropology, aesthetics, semiotics are just some of the disciplines through which is possible to study and design it. Talking about it in terms of chemistry and physics of materials is possible too, sometimes referring also to the world of biology and natural sciences, because colour appears thanks to the molecular compositions (natural or synthetic pigments) or some chemical and physical reactions. The representations and the encodings of many hues and shades through many geometric and alphanumeric identification codes models show that a role in the world of color is also given to mathematics.

This brief exploration of the theme suggests the complexity of a scenario characterized, especially today, by the numerous contaminations that exist among the different fields of colour research, colour design and colour production thanks to the scientific discoveries, then to the increasingly development of advanced technologies.

The term "colour scenario" means the whole of the disciplines that study colour, of the areas in which it develops, of the productive sectors in which it is the protagonist, of the regulations and the instruments that allow its management and encoding, and above all of the materials and methods that allow to produce and to apply it.

The research project "The colour scenario", developed by Laboratorio Colore, Indaco Department of Politecnico di Milano, by order of AICC – Associazione Italiana Coil Coating (May 2007 - September 2008), permitted to analyze the actual Italian colour scenario, read also by an international perspective, making a better exam of the elements and the factors that actually rule the different approaches to the complex and flowing colour world. The analysis permitted to

determine and to forecast the gaps and the needs of a scenario that, being linked to a particular socio-cultural context, lives a constant development both thanks to the scientific discoveries and also to the market demands.

The "colour scenario" research purpose consisted in promoting the development of a colour culture that should consider the matter in a less sectorial way, making it comprehensible, accessible and visible to all people that study, produce and plan colour, naturally from the point of view of the most different disciplines and sectors that concern it. This purpose could be reached necessarily by arranging services and instruments that can support the communication and the sharing of information and knowledge about the theme.

MATERIALS AND METHODS

By this purpose the research was based on the mapping of those disciplinary fields that are linked to the colour matter and it started from the collection of significant information, to restore a realistic background knowledge.

The first collected information was organized in some file cards in which different keywords helped to classify and reveal the relationships and the differences among them. The information was obtained through the literature study, through a huge web research, through some interviews and some different exhibition materials. Thanks to these file cards the first mapping of colour scenario was realized: six macro areas, production, project, dissemination, rules, research, colour management, are connected by a more or less infinitive number of line, the relationships, that demonstrate that complexity and articulation of the scenario also based on the participation of numerous actors like professionals, public and private structures as paint applicators, associations, companies, private and public research centers, consultants, paint distributors, discussion groups, public institutions, designers/planners and professional studios, researchers and finally schools and colleges.

The wide colour world can be explored in many ways because the subject is interdisciplinary. Then by this main property the idea of analyzing and mapping the "colour scenario" through an interdisciplinary approach showing the need to search and organize the information in a functional and strategic way. In fact the research doesn't want to be a simple collection of information, but a structured system in which the aims and the functions should be clear and useful for those people that refer to colour and its scenario.

The "colour scenario" research is actually a macro analysis, not based on specific thematic areas; at this point it needs to be characterized in a different way to be spent in many fields for more practical uses. But the analysis is sufficiently useful to understand the increase, during the last years, of the interest in colour matter even if according to a sector-based approach. The encyclopedic nature of colour and the resultant inability to address the topic as a whole have so far allowed the development of a unique methodology for all disciplines that study it, favoring instead a growing sector-based process of research in areas, however, not always in communication with each other.

Then the main interest and visibility for colour in Italy refers to the production field, especially for the power and the configuration of a market characterized by many middle-small paint companies that search for exchanging and learning moments with other fields and brands for their own development in a more and more competitive context. On the contrary the fields of scientific research and design of colour still struggle to make themselves visible in the scenario; as affirmed by Oleari: "Today, in Italy, there isn't any culture of colour, despite the significant artistic tradition. Officially, colour is not the subject of teaching and even of research".

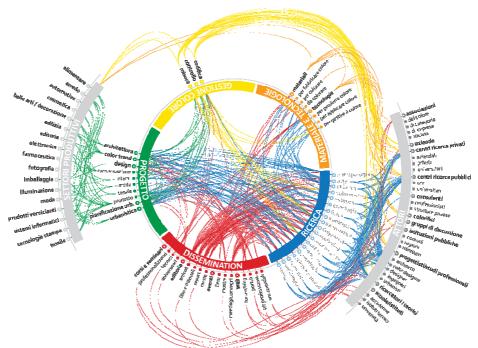


Figura 1. Visual representation of the colour scenario complexity.

RESULTS

One of the main problems resulted by the colour scenario analysis is related to the lack of tools and "places" in which different disciplines, actors and languages can meet. From this point of view, then by considering the interdisciplinarity of colour, a service design project, inspired by the "colour scenario" research too, is in a phase of development and it is called COLORET. With the aim of favoring the communication then improving the exchange of knowledge and information about colour, facilitating contaminations, this service, based on a collaborative social network that looks at the active participation of colour scenario actors, will create more and more collaborations among different partners (companies and international universities).

Creating a colour knowledge and new strategic synergies among the different disciplinary fields and figures is the actual activity of many international colour associations (i.e. AIC-International Colour Association); this demonstrates their will of meeting and sharing, but without finding any solution to the problem of communication. Fridell Anter, Billger and Ronchi also wrote for AIC 2008 meeting: "Inside each discipline we use our own concepts and methods to describe and analyze different aspects of colour. [...] As a result, our scientific exchange risks to become a Babel where we can't understand each other, in spite of our common theme".

CONCLUSIONS

By the necessity of articulating the colour scenario in a way useful and strategic for something and someone, declaring that mapping all the scenario in a univocal way is not possible, now the research focus should organize the collected information and data in a strategic structure useful for people and realities involved in the colour scenario.

For this reason the colour scenario analysis will continue on one side looking at the active participation of different actors to the COLORET platform, on the other side, through new microanalysis in each field and issue with the final aim of defining some pilot models more disposable for the interdisciplinary research and approach to colour.

Finally thanks to design as a research and action tool, this research about a complex scenario will permit to create an exportable model in other interdisciplinary fields, always putting

together different people and disciplinary aspects, with the objective to build new systems of multidisciplinary/interdisciplinary relationships and search fields.

REFERENCES

- [1] N. Cross, "Designerly ways of knowing", Design Studies, No. 3, 221-227.
- [2] P. Green-Armytage, "The value of knowledge for colour design", *Color Research & Application*, Vol. 4, No. 31, 253-269 (2006).
- [3] K. Fridell Anter, M.Billger, L. R. Ronchi, "Suggestion for promoting transdisciplinary understanding", AIC 2008 Interim Meeting, Colour Effects & Affects, n.177 (2008).
- [4] W. Backhaus, R. Kliegl, J.S. Werner, *Color Vision. Perspective from different disciplines* (De Gruyter: Berlin,1998).
- [5] G. Di Napoli, *Il colore dipinto* (Einaudi: Torino, 2006).
- [6] J. Itten, *L'arte del colore. Esperienza soggettiva e conoscenza oggettiva come vie per l'arte*, edizione ridotta (il Saggiatore: Milano, 1982).
- [7] J. T. Klein, *Crossing boundaries: knowledge, disciplinarities and interdisciplinarities* (University Press of Virginia: Charlottesville, 1996).
- [8] C. Oleari, *Misurare il colore. Spettrofotometria, fotometria e colorimetria. Fisiologia e percezione* (Ulrico Hoepli: Milano, 1998).
- [9] H. Zollinger, Color. A multidisciplinary approach (Verlag Helvetica Chimica Acta: Zurich, 1999).
- [10] L. Proserpio, V.Vezzani, "Lo scenario del colore", *Lo scenario del colore*, 11-26 (Aracne Editrice: Roma, 2009).
- [11] COLORET is a research project in phase of developing thanks to the work of the team composed by Prof. Mario Bisson, Dott.ssa Cristina Boeri, Dott. Luigi Proserpio, Ing. Giorgio Vignati at Laboratorio Colore Dipartimento INDACO of Politecnico di Milano, "Labcolore", www.labcolore.polimi.it (February, 2010).