

EXPLORING THE

COLOR IMAGE

ABSORPTION

visual properties

spectrum

Kodak
Student
Filmmaker
Program

Kodak

Exploring The Color Image

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Eastman Kodak Company
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Exploring The Color Image

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This book is a derivative of *Color As Seen and Photographed* (E-74), published by Eastman Kodak Company in 1950 and later revised in 1972. Some content has also been taken from *An Introduction to Color* (H-12) and *EASTMAN Professional Motion Picture Films* (H-1), both published by Kodak in 1996 and 1994, respectively.

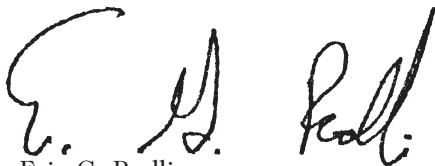
Other material added to the original text (page 44, 48 and 49 within the dotted lines) was written by Woody Omens, ASC.

**The Kodak Worldwide Student Program
of the
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*Gratefully Acknowledges The Contributions
of
Woody Omens, ASC
Dr. Rod Ryan
Bruce A. Block*

“Without your love of the color image and your dedicated work this publication would not have been possible. On behalf of Eastman Kodak Company, we thank you.”

“The future generations of filmmakers who read this publication and learn from it will all benefit from your contributions. Your work will help shape the future of The Color Image.”

A handwritten signature in black ink, appearing to read "Eric G. Rodli". The signature is fluid and cursive, with the first name "Eric" being the most prominent.

Eric G. Rodli
Eastman Kodak Company

If You Love Color, Read This

The book *Color As Seen and Photographed* has been a Kodak classic for more than 45 years. It has been a little gem of a resource. Its greatness resulted from its simplicity. And its simplicity was directly traceable to one man, Ralph Evans. In his lectures and writing, he took complex color ideas and made them understandable to everyone. The book was truly distinguished even among the heavyweight texts on the subject.

So, after years of being out of print, it was my dream to have *Color As Seen and Photographed* come back in a new edition. As we began to revise it, we realized that it would be wiser to let the classic be.

What you are about to read is not a revised edition. It is rather a selection of highlights from the original presented here with updates and clarifications to fit better into new technological times. But even here, in this modified form, it is still the quintessential Evans.

Of course, I never planned to be on the team which was to create this publication. But when Jim MacKay asked me to work on it, I could not refuse. As a cinematographer, I can say with conviction that what you are about to read will change how you see color, think about color, and use color in any creative work. The most advanced technologies cannot outdistance the principles laid down here. These are important principles of physics and perception.

Color is a sensation we experience. It may be pure information and it can generate emotion. It is language. It is a form of communication. It means so many things to so many people. It is red, white, and blue patriotism to Americans and to the French. It is the lifesaving red or green, stop/go of a traffic light. It is a complementary color mood of night: cool blue night air contrasted with warm red-orange campfire. It is the desaturated color of mental depression in the film *The Red Desert* or the garish saturated color in the film *Dick Tracy*.

After reading these pages, you will never take color for granted again. How we are able to detect it, how it works physically, and how perception of color is sometimes deceiving is to be found here in simplified terms. Perhaps this will encourage you to read more on color; but most of all, we hope you will explore and test color ideas yourself. It is even thought that color has healing properties. What do you think?

Every still you shoot, every film or video you make, every painting you create, every computer graphic image you invent are each playgrounds for exploring color. But you will not take color for granted again. Considering that it is so small a part of the electromagnetic spectrum, it is a miracle that we have the precise sensors in the retina to recognize such a micro-spectrum.

Color is a source for infinite invention. How you use it is your choice.

I wish to thank Dr. Rod Ryan and Bruce A. Block for working with me to make this publication possible. Rod is a former Kodak engineer and guru on the subject of color. Bruce is a film producer and adjunct professor at the University of Southern California School of Cinema-Television.

Eastman Kodak Company and James F. MacKay are to be congratulated for having heard my prayer and for deciding to publish this document as a gift to educators and students working in the vast array of imaging arts.

A handwritten signature in cursive script that reads "Woody Omens". The signature is written in dark ink and is positioned above the printed name.

Woody Omens, ASC

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INTRODUCTION

This publication is intended more as a connected discourse than as a reference work containing practical “how-to-do-it” information. It is a brief discussion of the tremendously complex subject of color from a single point of view, that of the photographer or cinematographer. The reader who wishes a more comprehensive treatment of the many other aspects of color is urged to consult *AN INTRODUCTION TO COLOR*, by Ralph M. Evans, John Wiley & Sons, Inc., New York, NY, 1948. Another book by the same author, *EYE, FILM, AND CAMERA IN COLOR PHOTOGRAPHY* Wiley, 1959, is an excellent guide to color photography as a creative medium.

Information on the history of color photography has been deliberately omitted from this edition. Instead, the space has been devoted to a more complete discussion of the principles underlying the practice of certain current processes which have proved in actual use to lie within commercial limits of skill, time, and expense. Other processes, including many which have failed to survive the test of time, are described in the following books:

PRINCIPLES OF COLOR PHOTOGRAPHY, *Ralph M. Evans, W. T. Hanson, Jr., and W. Lyle Brewer, John Wiley & Sons, Inc., New York, NY, 1953*
(Now out of print, but available in libraries for reference and sold in photocopy form by University Microfilms, Inc., Ann Arbor, MI 48107)

PHOTOGRAPHY, ITS MATERIALS AND PROCESSES, *C.B. Neblette and Collaborators, Litton Educational Publishing, 1977*
(The chapters on color photography, by Howard C. Colton, include brief descriptions of some of the historically important processes.)

HISTORY OF COLOR PHOTOGRAPHY, *Joseph S. Friedman, 1944;*
Focal Library reissue, Amphoto, New York, NY, 1968

THE HISTORY OF THREE-COLOR PHOTOGRAPHY, *E. J. Wall, 1925;*
Focal Library reissue, Amphoto, New York, NY, 1970