



# 2000

## color combinations

for graphic, textile, and craft designers

Garth Lewis

# **2000**

## **color combinations**

for graphic, textile, and craft designers

Garth Lewis

**BARRON'S**

## Acknowledgements

I would thank my collaborators on related color projects, Dr Ferdy Carabott and Hao Dam. Central Saint Martins, University of the Arts, London for funding my research in Color, Painting, and Computing and Cressida, Olivia, and Orlando Lewis for their love and tolerance.

I dedicate this book to the memory of my color mentor at Queens College, City University of New York, Professor Herb Aach.

First Published in the U.S. and Canada in 2009 by Barron's Educational Series, Inc.

First published in the United Kingdom in 2009 by  
Batsford  
10 Southcombe Street  
London W14 0RA

An imprint of Anova Books Company Ltd

Copyright © Batsford 2009  
Text © Garth Lewis 2009

The moral right of the author has been asserted.

All rights reserved. No part of this book may be reproduced in  
any form or any means without the written permission of the copyright owner.

All inquiries should be addressed to:  
Barron's Educational Series, Inc.  
250 Wireless Boulevard  
Hauppauge, New York 11788  
**[www.barronseduc.com](http://www.barronseduc.com)**

ISBN-13: 978-0-7641-4220-8  
ISBN-10: 0-7641-4220-8

Library of Congress Control Number: 2008935520

Reproduction by Dot Gradations Ltd, London  
Printed in China by SNP Leefung Printers Ltd

9 8 7 6 5 4 3 2 1

# contents

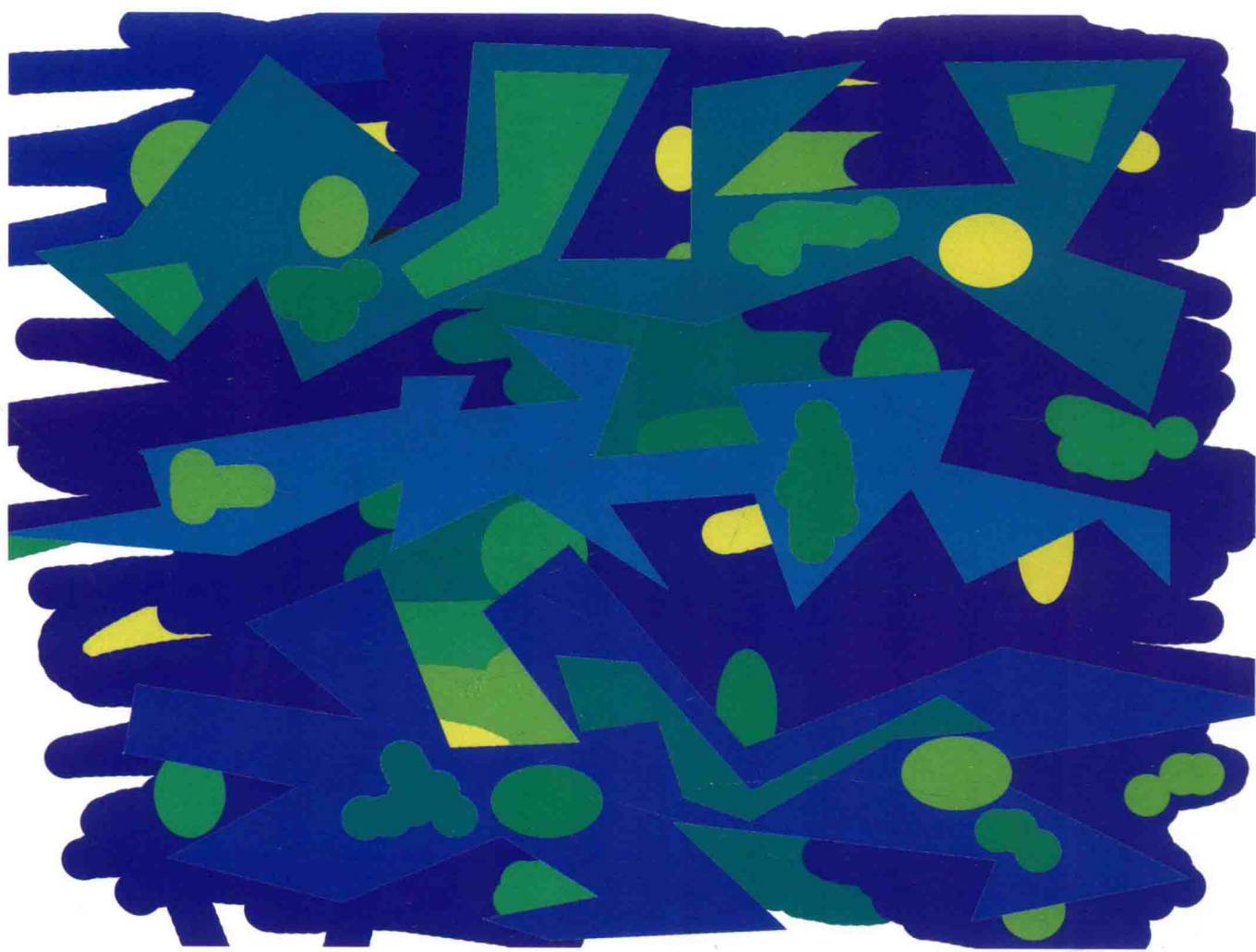
Introduction	6
About Color	16
Color Palettes	52
Color Illusion	222



Virtual and Material Color	250
Color in the World	260
Color Choices	292
Glossary	336

# **2000**

## **color combinations**



# **2000**

## **color combinations**

for graphic, textile, and craft designers

Garth Lewis

**BARRON'S**

## Acknowledgements

I would thank my collaborators on related color projects, Dr Ferdy Carabott and Hao Dam. Central Saint Martins, University of the Arts, London for funding my research in Color, Painting, and Computing and Cressida, Olivia, and Orlando Lewis for their love and tolerance.

I dedicate this book to the memory of my color mentor at Queens College, City University of New York, Professor Herb Aach.

First Published in the U.S. and Canada in 2009 by Barron's Educational Series, Inc.

First published in the United Kingdom in 2009 by  
Batsford  
10 Southcombe Street  
London W14 0RA

An imprint of Anova Books Company Ltd

Copyright © Batsford 2009  
Text © Garth Lewis 2009

The moral right of the author has been asserted.

All rights reserved. No part of this book may be reproduced in  
any form or any means without the written permission of the copyright owner.

All inquiries should be addressed to:  
Barron's Educational Series, Inc.  
250 Wireless Boulevard  
Hauppauge, New York 11788  
**[www.barronseduc.com](http://www.barronseduc.com)**

ISBN-13: 978-0-7641-4220-8  
ISBN-10: 0-7641-4220-8

Library of Congress Control Number: 2008935520

Reproduction by Dot Gradations Ltd, London  
Printed in China by SNP Leefung Printers Ltd

9 8 7 6 5 4 3 2 1



# contents

Introduction	6
About Color	16
Color Palettes	52
Color Illusion	222



Virtual and Material Color	250
Color in the World	260
Color Choices	292
Glossary	336

# INTRODUCTION

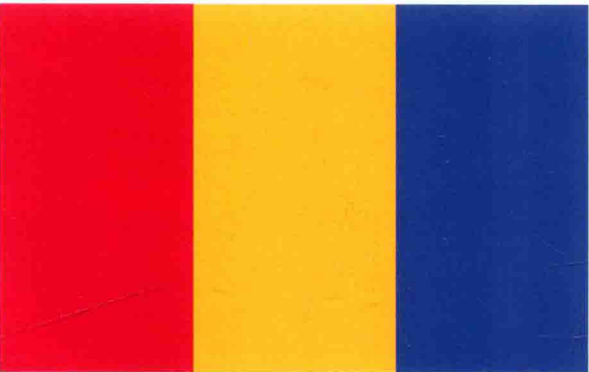
This book is intended as an inspirational reference for artists and designers who have an interest in both digital and analog color. It takes into account the diversity of practitioners who use the computer as part of their creative process but are not necessarily dedicated “multimedia designers.”







It is a reference book of over 2000 color combinations, reflecting a wealth of knowledge, experiment, and experience from the history and theory of colors and diverse creative and natural sources, together with the independent contributions of professional artists and designers. The color combinations and color relationships explored are flat and opaque whether on the computer screen, the printed page, or as painted swatches.

The examples are presented in neutral, elemental formats that demonstrate color relationships independent of a specific medium or a particular design outcome.

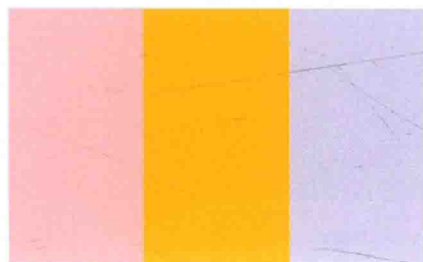
The color combinations are selected hues (red, green, blue, etc.) that vary in brightness, saturation, and physical proportion within the color format.

To begin, the primary colors red, yellow, and blue are used to illustrate the basic model or visual narrative for generating the 2000 color combinations and to show the possible variations within a given color set. A triad is a set of three colors spaced 120 degrees apart on the color wheel. Below is a primary color triad.



CMYK				
	007C	090M	067Y	001K
	000C	020M	095Y	000K
	094C	054M	016Y	002K
RGB				
	190R	054G	064B	
	240R	201G	026B	
	052R	100G	153B	

In each of the following triads the values of the primaries are adjusted to match the pure yellow, red, and blue.

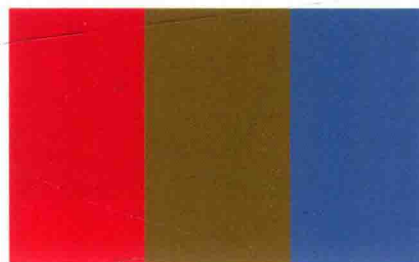


#### CMYK

002C	028M	015Y	000K
000C	020M	095Y	000K
024C	013M	008Y	000K

#### RGB

231R	197G	198B
240R	201G	026B
203R	211G	223B



#### CMYK

000C	082M	066Y	000K
026C	044M	075Y	020K
078C	013M	005Y	00K

#### RGB

246R	021G	049B
147R	121G	035B
000R	127G	213B



#### CMYK

023C	080M	069Y	015K
039C	047M	067Y	034K
083C	026M	015Y	017K

#### RGB

165R	043G	045B
102R	088G	045B
000R	092G	153B

Here, progressively lighter versions of red, yellow, and blue are shown.



#### CMYK

000C	069M	048Y	000K
000C	028M	065Y	000K
082C	022M	004Y	002K

#### RGB

255R	067G	080B
252R	206G	052B
000R	107G	202B



#### CMYK

001C	046M	012Y	000K
002C	020M	042Y	000K
062C	005M	003Y	001K

#### RGB

255R	067G	080B
248R	219G	124B
075R	161G	234B



#### CMYK

003C	027M	007Y	000K
003C	016M	032Y	000K
031C	006M	005Y	000K


#### RGB

251R	185G	199B
246R	224G	152B
070R	200G	231B




The following triads show darkened versions of the same hues, but different values of red, yellow, and blue.



#### CMYK




	016C	083M	073Y	005K
	004C	036M	075Y	001K
	091C	040M	013Y	015K

#### RGB




	197R	037G	043B
	236R	184G	013B
	000R	068G	146B



#### CMYK

	027C	070M	057Y	036K
	022C	044M	079Y	018K
	088C	037M	020Y	034K

#### RGB




	120R	049G	047B
	158R	126G	022B
	000R	062G	108B



#### CMYK

	049C	058M	050Y	053K
	038C	050M	076Y	040K
	065C	048M	047Y	059K




#### RGB

	068R	044G	044B
	095R	079G	030B
	037R	044G	047B




Here, red, yellow, and blue become progressively less saturated, changing chroma (that is the quality of hue, plus saturation), but maintaining the same values.



#### CMYK

	018C	072M	047Y	005K
	003C	029M	064Y	000K
	079C	029M	022Y	021K

#### RGB




	197R	061G	078B
	242R	200G	059B
	028R	091G	133B

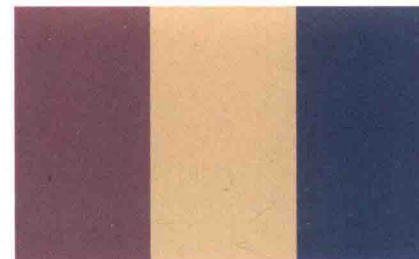


#### CMYK

	023C	059M	036Y	014K
	007C	026M	051Y	001K
	073C	032M	028Y	024K

#### RGB

	171R	083G	094B
	232R	201G	097B
	048R	090G	118B



#### CMYK

	033	048	033	015
	012	021	035	001
	063	036	034	026

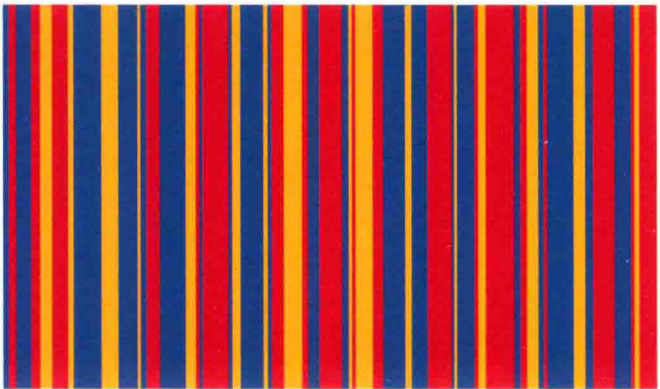
#### RGB




	149	101	107
	220	202	142
	069	090	104

# Color Proportion

The following examples demonstrate the effect of proportion and color dominance within a set of variations for red, yellow, and blue. The second and third sets of stripes (pages 10–11) differ in chromatic intensity, and the fourth set (page 12) combines different colors from the preceding examples. All the colors used match the previous samples, where CMYK and RGB readings are provided. The examples represent a fraction of the possibilities for one color triad.




Below, red, yellow, and blue are used in three studies where one color is dominant, and in a fourth example where the colors are judged to be visually equal.



CMYK				RGB		
	000C	082M	066Y	000K	246R	021G 049B
	000C	030M	074Y	000K	255R	199G 011B
	083C	026M	015Y	017K	000R	092G 153B

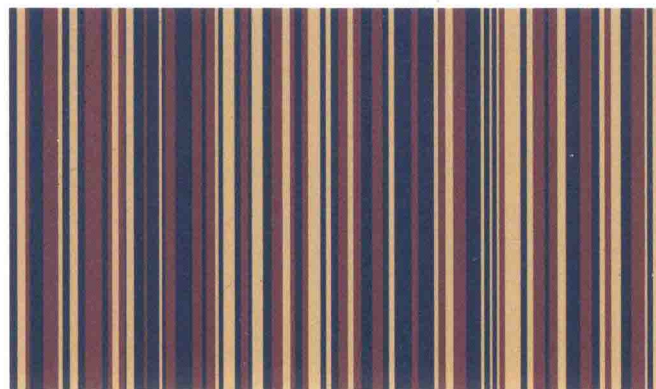
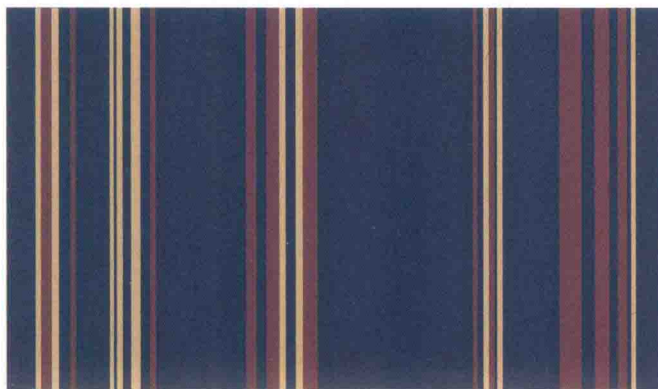
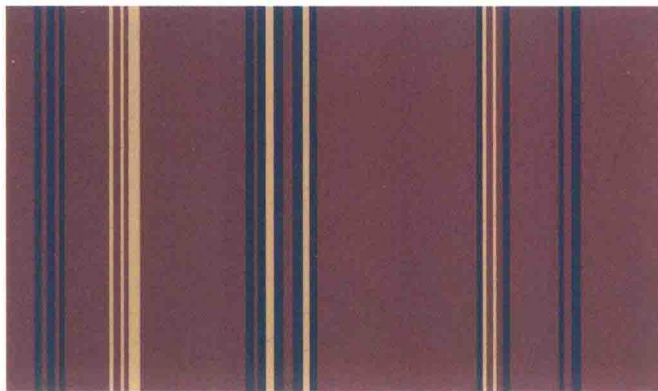
Here, red, yellow, and blue are less saturated, so a change of proportion will reflect the new balance of colors. Color relationships can be easily compared within the ample visual proportions of a stripe format.



CMYK					RGB		
	021C	065M	041Y	010K	182R	074G	088B
	005C	028M	059Y	001K	237R	200G	074B
	079C	029M	023Y	022K	028R	090G	131B



Below, red, yellow, and blue are reduced in chroma, towards near neutrality (grayness). The colors are closer, but are now more dramatically separated by value differences. The narrowing of the color stripes diminishes the saturation.



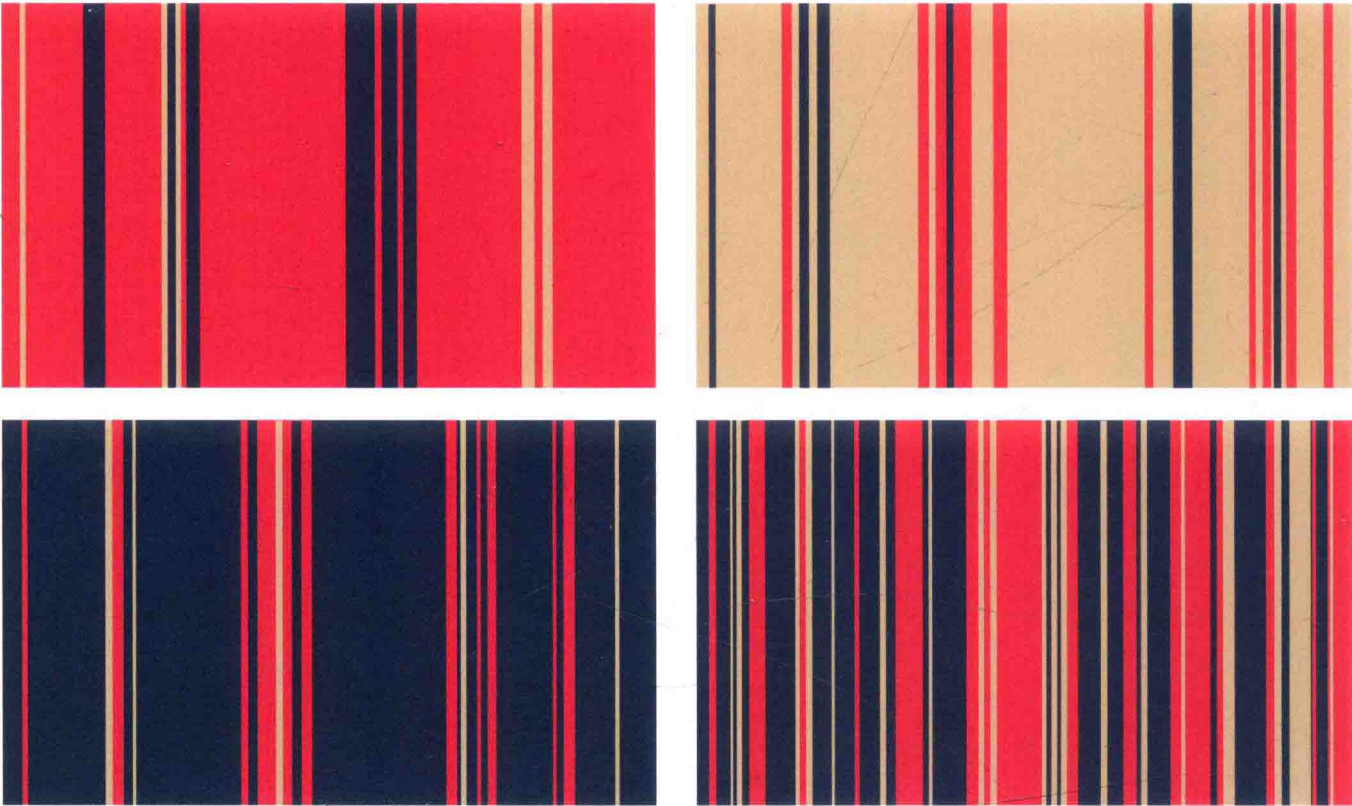
#### CMYK

040C	041M	033Y	014K
015C	018M	028Y	001K
064C	036M	034Y	027K

#### RGB

136R	113G	116B
214R	202G	162B
066R	088G	102B

Here, different versions of red, yellow, and blue are chosen from the previous studies: a low chroma red, pure yellow, and near-neutral blue. This initiates a process of comparing colors in a simple format that can involve many different materials and apply to diverse design outcomes.



**CMYK**

■	012C	080M	056Y	001K
■	018C	017M	041Y	000K
■	081C	061M	051Y	036K

**RGB**

198R	089G	097B
210R	201G	161B
060R	074G	084B



These palettes include three chroma steps and three lighter values of red, yellow, and blue used together in the same formats. The stepped gradations appear as “film” color, creating a transparent light effect from closely related colors.

