Contents

List of figures viii
List of tables xvii
List of contributors xviii
Foreword by Steven K. Shevell xxi

Part I Introduction
1 Introduction and overview 3
   Andrew J. Elliot, Mark D. Fairchild, and Anna Franklin

Part II Foundations: basics of color science
2 Color models and systems 9
   Mark D. Fairchild
3 Fundamentals of color vision I: color processing in the eye 27
   Andrew Stockman and David H. Brainard
4 Fundamentals of color vision II: higher-order color processing 70
   Karl R. Gegenfurtner and Robert Ennis
5 Evolution of color vision and its reflections in contemporary mammals 110
   Gerald H. Jacobs
6 Some philosophical questions about color 131
   Don Dedrick

Part III Development of and differences in color vision
7 Emergence and early development of color vision and color perception 149
   Marc H. Bornstein
8 Color vision changes in normal aging 180
   John L. Barbur and Marisa Rodriguez-Carmona
9 Individual differences in color vision 197
   Michael A. Webster
10 Color vision deficiencies 216
   Neil R. A. Parry
## Part IV Color categorization

11 Universality of color categorization 245  
**Paul Kay**

12 Color categorization across cultures 259  
**Jules Davidoff**

13 Development of color categorization 279  
**Anna Franklin**

14 The meaning of color words in a cross-linguistic perspective 295  
**Anna Wierzbicka**

## Part V Color symbolism and association

15 Early color symbolism 319  
**Ian Watts**

16 Symbolic use of color in ritual, tradition, and folklore 340  
**John B. Hutchings**

17 Color in camouflage, mimicry, and warning signals 357  
**Martin Stevens, Lina María Arenas, and Alice E. Lown**

18 Use of color in warnings 377  
**Michael S. Wogalter, Christopher B. Mayhorn, and Olga A. Zielinska**

19 Color emotion and color harmony 401  
**Li-Chen Ou**

20 Do metaphors color our perception of social life? 419  
**Brian P. Meier**

## Part VI Color preferences

21 Ecological aspects of color preference 435  
**Karen B. Schloss and Stephen E. Palmer**

22 Biological, cultural, and developmental influences on color preferences 454  
**Anyá Hurlbert and Angela Owen**

## Part VII Color effects on psychological and biological functioning

23 The role of color in the voluntary and involuntary guidance of selective attention 481  
**Charles L. Folk**

24 Color and mate choice in non-human animals 502  
**James P. Higham and Sandra Winters**
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Color in romantic contexts in humans</td>
<td>531</td>
</tr>
<tr>
<td></td>
<td>Adam D. Pazda and Tobias Greitemeyer</td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Color in competition contexts in non-human animals</td>
<td>546</td>
</tr>
<tr>
<td></td>
<td>Joanna M. Setchell</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Color in achievement contexts in humans</td>
<td>568</td>
</tr>
<tr>
<td></td>
<td>Markus A. Maier, Russell A. Hill, Andrew J. Elliot,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and Robert A. Barton</td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>Color and face perception</td>
<td>585</td>
</tr>
<tr>
<td></td>
<td>Ian D. Stephen and David I. Perrett</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Eating with our eyes: on the color of flavor</td>
<td>603</td>
</tr>
<tr>
<td></td>
<td>Charles Spence</td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>Non-visual effects of colored light</td>
<td>619</td>
</tr>
<tr>
<td></td>
<td>Mark S. Rea and Mariana G. Figueiro</td>
<td></td>
</tr>
</tbody>
</table>

**Part VIII Psychological effects on color perception**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>31</td>
<td>Memory effects on color perception</td>
<td>641</td>
</tr>
<tr>
<td></td>
<td>Christoph Witzel and Thorsten Hansen</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Affect-related influences on color perception</td>
<td>660</td>
</tr>
<tr>
<td></td>
<td>Michael D. Robinson, Tianwei Liu, and Jessica L. Bair</td>
<td></td>
</tr>
</tbody>
</table>

**Part IX Color phenomena**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>Color appearance phenomena and visual illusions</td>
<td>679</td>
</tr>
<tr>
<td></td>
<td>Garrett M. Johnson</td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>Synesthetic experiences of color</td>
<td>703</td>
</tr>
<tr>
<td></td>
<td>Jamie Ward</td>
<td></td>
</tr>
</tbody>
</table>

**Index**

715