### CONTENTS

# PREFACE TO THE NEW VERSION INTRODUCTION

ix

1

IO

#### I. BALANCE

The hidden structure of a square, 10. What are perceptual forces? 16. Two disks in a square, 18. Psychological and physical balance, 19. Why balance? 20. Weight, 23. Direction, 26. Patterns of balance, 29. Top and bottom, 30. Right and left, 33. Balance and the human mind, 36. Madame Cézanne in a yellow chair, 37.

#### II. SHAPE

42

Vision as active exploration, 42. Grasping the essentials, 43. Perceptual concepts, 44. What is shape? 47. The influence of the past, 48. Seeing shape, 51. Simplicity, 55. Simplification demonstrated, 63. Leveling and sharpening, 66. A whole maintains itself, 67. Subdivision, 69. Why the eyes often tell the truth, 73. Subdivision in the arts, 74. What is a part? 76. Similarity and difference, 79. Examples from art, 88. The structural skeleton, 92.

### III. FORM

96

Orientation in space, 98. Projections, 103. Which aspect is best? 106. The Egyptian method, 112. Foreshortening, 116. Overlapping, 120. What good does overlapping do? 123. Interplay of plane and depth, 127. Competing aspects, 130. Realism and reality, 134. What looks lifelike? 136. Form as invention, 139. Levels of abstraction, 144. La source, 152. Visual information, 156.

### IV. GROWTH

162

Why do children draw that way? 163. The intellectualistic theory, 164. They draw what they see, 167. Representational concepts, 169. Drawing as motion, 171. The primordial circle, 174. The law of differentiation, 179. Verticle and horizontal, 182. Obliqueness, 187. The fusion of parts, 191. Size, 195. The misnamed tadpoles, 197. Translation into two dimensions, 199. Educational consequences, 203. The birth of form in sculpture, 208. Sticks and slabs, 209. The cube and the round, 215.

## V. SPACE

218

Line and contour, 219. Contour rivalry, 223. Figure and ground, 227. Depth levels, 233. Application to painting, 234. Frames and windows, 239. Concavity in sculpture, 241. Why do we see depth? 245. Depth by overlapping, 248. Transparency, 253. Deformations create space, 258. Boxes in three dimensions, 261. Help from physical space, 269. Simple rather than truthful, 271. Gradients create depth, 275. Toward a convergence of space, 280. The two roots of central perspective, 283. Not a faithful projection, 285. Pyramidal space, 287. The symbolism of a focused world, 294. Centrality and infinity, 297. Playing with the rules, 298.

# VI. LIGHT

303

The experience of light, 303. Relative brightness, 305. Illumination, 309. Light creates space, 311. Shadows, 315. Painting without lighting, 320. The symbolism of light, 324.

# VII. COLOR

330

From light to color, 330. Shape and color, 332. How colors come about, 337. The generative primaries, 339. Addition and subtraction, 341. Generative complementaries, 342. A capricious medium, 344. The quest for harmony, 346. The elements of the scale, 350. Syntax of combinations, 353. The fundamental complementaries, 357. Interaction of color, 362. Matisse and El Greco, 364. Reactions to color, 368. Warm and cold, 369.

## VIII. MOVEMENT

372

Happenings and time, 372. Simultaneity and sequence, 375. When do we see motion? 378. Direction, 382. The revelations of speed,

384. Stroboscopic movement, 387. Some problems of film editing, 392. Visible motor forces, 394. A scale of complexity, 398. The body as instrument, 403. The kinesthetic body image, 406.

	D	VN	JA	M	IC	S
TY	1		ATE	***		_

410

Simplicity is not enough, 410. Dynamics and its traditional interpretations, 412. A diagram of forces, 416. Experiments on directed tension, 419. Immobile motion, 423. The dynamics of obliqueness, 424. Tension in deformation, 428. Dynamic composition, 432. Stroboscopic effects, 434. How does dynamics come about? 437. Examples from art, 440.

# X. EXPRESSION

444

Traditional theories, 445. Expression embedded in structure, 449. The priority of expression, 454. Symbolism in art, 457.

NOTES	46
BIBLIOGRAPHY	48
INDEX	50