

CONTENTS

<i>List of Figures</i>	<i>page vii</i>
<i>Acknowledgments</i>	<i>xi</i>
INTRODUCTION	1
1 THE ANCIENTS AND MIRRORS	5
2 LUCRETIVS	40
3 VITRUVIVS	61
4 PERSPECTIVE AT THE CENTER OF POWER	100
5 PERSPECTIVE IN THE AREA OF VESUVIVS	114
6 PTOLEMY	120
<i>Notes</i>	159
<i>Classical and Medieval Sources</i>	185
<i>Selected Bibliography</i>	187
<i>Index of Names</i>	193

# FIGURES

1	The Mirror and the Painting, 6
2	The Mirror 1, 8
3	The Mirror 2, 13
4	The Mirror, the Eye, a Point, 15
5	The Postulate of Distance, 17
6	The Concept of the Infinity Point, 18
7	Proposition I, 19
8	Proposition II, 20
9	Proposition VII, 21
10	The Inversion of the Sequences, 22
11	The Lengths Placed Transversally, 23
12	The Image of a Point 1, 25
13	The Image of a Point 2, 26
14	Surfaces Parallel to the Plane of the Mirror, 27
15	The Perspective by Means of Triangles, 29
16	Parthenon's Columns, 31
17	Parthenon's Façade 1, 32
18	Parthenon's Façade 2, 32
19	Theorem IV of <i>Optics</i> , 33
20	Theorem V of <i>Optics</i> , 33
21	Theorem VI of <i>Optics</i> , 34
22	Theorem VIII of <i>Optics</i> , 35
23	Theorems X, XI, and XII of <i>Optics</i> , 36
24	Geminus 1, 37
25	Geminus 2, 38
26	The Vision through a Door, 46
27	The Vision through a Mirror, 46
28	The Porticus Aemilia in Ancient Rome, 49

LIST OF FIGURES

29	A Portico with a Uniform Plan That Is Perpetually Supported by Equal Columns, 51
30	The “Pyramis Rotunda,” or the Cone, 53
31	The Portico Gradually Assumes the Slopes of a Delimited Cone, 54
32	The Horizon Line and the Vertical Vanishing Line 1, 55
33	The Horizon Line and the Vertical Vanishing Line 2, 56
34	The Horizon Line and the Vertical Vanishing Line 3, 57
35	The Horizon Line and the Vertical Vanishing Line 4, 58
36	The Scenography of the Architects, 63
37	Panofsky’s Spherical Projection of Objects, 65
38	A Man Placed Lying Flat on the Ground, 66
39	The Description of the Compass Card 1, 67
40	The Description of the Compass Card 2, 68
41	Panofsky’s Sphere Intersecting the Visual Rays, 71
42	The Temple’s Trabeation, 74
43	The Principle of Distance and the Diminution of Sizes, 75
44	Spherical Perspective and Plane Perspective Coincide 1, 78
45	Spherical Perspective and Plane Perspective Coincide 2, 79
46	Spherical Perspective and Plane Perspective Coincide 3, 79
47	The Projection of the Projection 1, 81
48	The Projection of the Projection 2, 82
49	The Projection of the Projection 3, 83
50	The Impossibility of Developing a Spherical Surface, 84
51	The Celestial Sphere in the Cavity of a Hemisphere, 84
52	The Celestial Sphere Correlated to the Terrestrial Sphere, 85
53	Sundials and the Measurement of Time: The Analemma 1, 86
54	Sundials and the Measurement of Time: The Analemma 2, 87
55	House of the Faun, Pompeii: A Wall of the First Style Subdivided in Panels, 92
56	House of Augustus, Rome: A Wall of the First Style Subdivided in Panels, 93
57	Mirror Panels of a Wall Indicating Three Areas: Upper, Middle, and Base (or Plinth), 96
58	A Spatial Projection of the Inherent Problems in “Scaenographia” of the Ancient World, 97
59	Frontal View When Objects Appear to Project Forward from the Panel, 99
60	Frontal View When Objects Appear to Recede within the Panel, 99
61	Room of the Masks, Rome: Walls Laid Down on the Page, 101
62	Room of the Masks, Rome: Wall A, General View, 102
63	Room of the Masks, Rome: Wall A, Upper Register, 102
64	Room of the Masks, Rome: Wall A, Middle Register, 103
65	Room of the Masks, Rome: Wall B, General View, 104
66	Room of the Masks, Rome: Wall B, Upper Register, 104
67	Room of the Masks, Rome: Wall B, Middle Register, 104

LIST OF FIGURES

68	Room of the Masks, Rome: Wall B, Middle Register, the Concurrence of the Lines, 105
69	Room of the Masks, Rome: Wall B, Inclined Views, 106
70	Room of the Masks, Rome: Wall C, Inclined Views, 107
71	Room of the Masks, Rome: Position of the Point of View for the Wall C, 108
72	Room of the Masks, Rome: Position of the Point of View for the Wall B, 109
73	Room of the Masks, Rome: Wall A, Eye Level of Augustus, 110
74	Room of the Masks, Rome: Wall B, Left-Side Wall, 112
75	Room of the Masks, Rome: Wall B, Right-Side Wall, as Reversal of Cartoon from the Left-Side Wall, 112
76	Room of the Masks, Rome: Wall B, Right-Side Wall, 113
77	Room of the Masks, Rome: Wall B, General View with Shadows, 113
78	Villa of Mysteries, Pompeii: <i>Cubiculum</i> of the Double Alcove, Upper Register, 116
79	Hall of the Peacocks, Oplontis: East Wall, General View, 116
80	Hall of the Peacocks, Oplontis: East Wall, Entire Left Half, 117
81	Villa of Boscoreale, Metropolitan Museum, New York: Alcove, Fourth Panel, Right Side upon Entering, 118
82	Villa of Boscoreale, Metropolitan Museum, New York: Alcove, Fourth Panel, Right Side upon Entering, Upper-Left Register, 119
83	The Science of Mirrors, 123
84	First Principle, 124
85	Second Principle, 125
86	Third Principle, 126
87	Third Principle, Illustrated on the Plane, 128
88	New Viewpoint Randomly Chosen, 129
89	The Eye and Its Proper Reflection, 131
90	A Double and Opposite View of the Object, 137
91	The Great Law of Reflection: The Order of the Sequences, 141
92	The Direct and the Reverse Seen in Space, 143
93	The Direct and the Reverse Seen on a Plane, 144
94	The Singularity of a Ray, 146
95	The Equality of Distances, 147
96	The Appearance of Lines Parallel to the Plane of the Mirror 1, 148
97	The Appearance of Lines Parallel to the Plane of the Mirror 2, 148
98	The Localization of the Images 1, 149
99	The Localization of the Images 2, 150
100	<i>Situs adversus</i> and Image of a Point, 151
101	<i>Situs adversus</i> and Image of a Polygon, 152
102	Ptolemy's Geography 1, 154
103	Ptolemy's Geography 2, 155
104	Ptolemy's Planisphere, 156
105	Ptolemy's Analemma 1, 157
106	Ptolemy's Analemma 2, 158