CONTENTS

Ι	The Image of the Environment Legibility, 2; Building the Image, 6; Structure and Identity, 8; Imageability, 9.	1
II	Three Cities Boston, 16; Jersey City, 25; Los Angeles, 32; Common Themes, 43.	14
III	The City Image and Its Elements Paths, 49; Edges, 62; Districts, 66; Nodes, 72; Landmarks, 78; Element Interrelations, 83; The Shifting Image, 85; Image Quality, 87.	46
IV	City Form Designing the Paths, 95; Design of Other Elements, 99; Form Qualities, 105; The Sense of the Whole, 108; Metropolitan Form, 112; The Process of Design, 115.	91
V	A New Scale	118
Арј	pendices	
A	Some References to Orientation Types of Reference Systems, 128; Formation of the Image, 131; The Role of Form, 133; Disadvantages of Imageability, 138.	123
В	The Use of the Method The Method as the Basis for Design, 155; Directions for Future Research, 156.	140
С	Two Examples of Analysis Beacon Hill, 160; Scollay Square, 173.	160
Bib	liography	182
Ind	ev	187

Acropolis, 124 Beacon Hill, transition zone, 168 Age contrasts, 45 (see also Contrast) views out, 168 Airports, 74 West End, continuum with, 64 Air travel, 113 Beverly Hills, 41 Albany, 136 Binet, M. A., 125 Aleuts, 132, 138 Birds, nesting territories of, 135 Alps, 132 Boston, 10, 14, 16-25 Apparency, 10 ambiguity of shape, 22 Arctic, 132 blank areas, 20 Arunta, 126, 127, 129, 130, 132, 134, character, 17 138, 139 distinctive elements, 147 Ashanti, 126, 134 districts (see Boston districts) Assam, 134 edges (see Boston edges) field analysis, 19, 147 Barriers, 47, 100 image difficulties, 15, 24 Beacon Hill, 17, 19, 50, 54, 63, 68, 69, image from interviews, 146 71, 72, 74, 145, 160-173 image from sketch maps, 146 as traffic obstacle, 172 image from street interviews, 153 intersections, 58 back side, 162, 167 commercial uses, 169 nodes (see Boston nodes) outline map, 18 connection to city structure, 172 differentiated characteristics, 172 paths (see Boston paths) peninsula, 17, 20, 57, 62 external visibility, 172 front side, 162, 167 structure, 19, 21 governmental area, 168 views, 18 interview descriptions, 162 vivid elements, 17 landmarks, 169, 171 Boston districts, 22, 69 Back Bay, 19, 22, 57, 60, 61, 63, 68, 69 location, 161 lower side, 168 Beacon Hill, 17, 19, 50, 54, 63, 68, 69, map, 161 71, 72, 74, 145, 160-173 (see also paths, 168 Beacon Hill) spatial form, 164, 164 Chinatown, 71 Common, 17, 19, 21, 23, 55, 56, 71, street interviews, 163 sub-areas, 167, 169 145, 171 thematic elements, 165, 166 Copps Hill, 172 thematic unit, 167 financial district, 51, 62, 85 "forgotten triangle," 20, 64 topography, 163, 164

Italicized page numbers refer to illustrations.

Boston districts, market district, 18, 70,	Charles Street, 50, 55, 57, 58, 65, 162, 168
North End, 18, 23, 64, 68, 71, 145	Chestnut Street, 165
North Station area, 145	Columbus Avenue, 61
Public Garden, 19, 50	Commercial Street, 23, 53
Scollay Square, 19, 44, 74, 76, 77, 85, 162, 173–181, 177 (see also Scollay	Commonwealth Avenue, 17, 19, 50, 51, 52, 53, 57, 58, 61, 68, 145
Square)	Cornhill Street, 178
South End, 52, 56, 61, 68, 69, 145	Court Street, 177, 178
West End, 64, 71, 145	Federal Street, 58
Boston edges, Charles River, 17, 19, 20,	Hanover Street, 23, 56, 64, 173
43, 50, 57, 62, 63, 66, 145, 172	Huntington Avenue, 19, 58
Harbor, 19, 57, 62	Joy Street, 162
Mystic River, 62	Longfellow Bridge, 52
South Bay, 63	Marlboro Street, 61
Boston landmarks, Court House, 81	Massachusetts Avenue, 19, 51, 56, 58
Custom House, 81, 82, 179	Mt. Vernon Street, 162
Faneuil Hall, 71, 79	Myrtle Street, 162
John Hancock Building, 80, 81, 84, 145	Nashua Street, 58
Old South Meeting House, 55	Newbury Street, 61
State House, 17, 79, 81, 86, 162, 168,	railways, elevated, 65
170	Shawmut Avenue, 52, 61
Symphony Hall, 55	South End streets, 56, 61
Telephone Building, 81	Storrow Drive, 23, 51, 58, 63
Boston nodes, Back Bay Station, 73	subways, 58, 59
Bowdoin Square, 173	Summer Street, 55, 77
Charles Street rotary, 19, 63, 73, 74	Tremont Street, 19, 21, 51, 52, 56, 59,
Church Green, 58 Copley Square, 18, 19, 58, 76	61, 145, 173, 177, 178 Washington Street, 17, 19, 50, 52, 54–
Dewey Square, 44, 78	56, 59, 60, 77, 173
Dock Square, 60, 71, 85	Boundaries, organization of, 111 (see also
Haymarket Square, 71	Edges, Nodes, Districts)
Jordan-Filene corner, 75	Brain injury, 125
Louisburg Square, 18, 76, 162, 168,	Brighton, 137
171	Brown, W., 125, 131
Park Square, 25, 58	
South Station, 74	"Canti," 130
subway stations, 74, 180	Caroline Islands, 133
Boston paths, 22	Change, environmental, 45, 112, 158
Arlington Street, 51, 57	Charles River, 17, 19, 20, 43, 50, 57, 62,
Atlantic Avenue, 18, 19, 23, 50, 51, 53,	63, 66, 145, 172
56, 57	Chicago, 10, 64, 66
Back Bay grid, 22, 57, 61	Chichester, 137
Beacon Street, 19, 50, 51, 52, 54, 55,	China, North, 128
57, 61, 65, 162	Chukchee, 128
Boylston Street, 21, 56, 58	City, design, 2, 115, 118, 159
Cambridge Street, 19, 50, 51, 52, 54,	imageability, 10, 93
57, 64, 65, 145, 162, 173, 177, 178	views, 44 (see also Space)
Causeway Street, 23, 53	Class distinctions, 45
Central Artery, 23, 24, 51, 56, 58, 63,	Clues, 12
64, 65	Combray, 128
Charles River Dam, 52	Compass directions, 128
	191

Complex, 85	Edges, as boundaries, 65, 70
Comprehensive plan, 116	as paths, 65
Concentrations, 47	continuity, 62, 99
Continuity, 106	contrast between, 100
Contrast, 45, 105, 109	directional differentiation, 66
Controls to achieve urban form, 117	disorganizing effects, 70
Cores, 48	disruptive power, 64
Cornetz, V., 134	end-from-end differentiation, 100
Correlations between composites of sketch	fragmentary, 63
maps and interviews, 144	inside-outside differentiation, 100
Curvature, perception of, 54	orientation to, 129
Curve, misleading, 56	overhead, 65
curre, misicacing, 70	penetration, 65
Design, urban (see City design)	termini, 100
Differentiation, directional, 106	types, 47
¹ 는데 가장 마이트 프랑스 이렇게 보면 없는데 가장 되면 되었다. 그 등에 가장 하는데 모든데 모든데 보다.	visibility, 100
reduces communication, 139	
Direction to base point, 129	Elements of city image, distinctive, 145,
Disorientation, 125, 134	147, 149, 151
Distance scale, 138	interrelationship, 85, 108
Districts, 47, 66–72, 84, 103–105, 130	overlap, 152
(see also Boston, Jersey City, Los	pairs, 83
Angeles districts)	ranking, 144
boundaries, 104	types, 43, 47, 154
hard or soft, 69	Emily Gap, 124
by radiation, 70, 103	Environment, change in, 45, 112 (see also
character, 67	Change)
confusion as clue to, 68	disadvantages of visible, 138
continuity, 103	exploration, 110
contrast between, 72	identification, 3
homogeneity of façade, 67	image, 4
identity, 68	perception, 12
internal homogeneity, 69	reshaping, 13
introvert, 71	symbolic nature, 119
linear, 50	Eskimo, 133, 134
mosaic, 72, 104	
names, 68	Field, analysis, 15, 143-144, 155
social connotations, 45, 68	Boston, 147
structure, 71, 104	Jersey City, 149
thematic continuity, 67	Los Angeles, 151
thematic unit, 68, 104	overlap with interviews, 152
varying importance, 67	Field trips, 154, 156
visibility, 104	Firth, R., 129
Dobu, 136	Flanagan, T., 119
Dominance, 106, 113	Florence, 92, 93, 126, 130
"Dream-time roads," 126, 137	Duomo, 82, 82, 92, 102
Dutch polders, 13	Foci, 129
	Forster, E. M., 138
Edges, 47, 62-66, 99-100 (see also	Form, qualities, 105-108
Boston, Jersey City edges)	role, 133, 136
accessibility, 100	
alignment, 63	Gatty, H., 132
as barriers, 47, 100	Gay, J., 136

Geoghegan, R. H., 138	Image(s), operating, 154
Geomantics, 139	organization, 132
Gill, E., 137	plasticity, 111
Gradients, 54, 97	positional structure, 88
Grave mounds of Australia, 129	process of formulation, 6-7
Grid, differentiated, 99	public, 7, 15, 46, 156
shifts in, 62	rigid structure, 89
	sequential, 89
Hackensack River, 64	shifts in, 48, 86
Halbwachs, M., 126–127	social role, 126
Hawaii, 95	
	structure, 88–89
Hierarchy, of metropolitan organization, 112	sufficiency, 9
	types, 157
of space, 51	useful, characteristics of, 9
Highways, 49	variation in organization, 110
Holland Tunnel, 49	vivid, 127
Holy areas, 124	Intersections, 75, 98 (see also Boston)
Holy mountain, 135	Interview, as method of analysis, 15
	Boston image derived from, 146
Identity, 6	in Boston street, 153
interrelationship with structure, 84	Jersey City image derived from, 148
of environmental image, 8	Los Angeles image derived from, 150
Imageability (see also Legibility, Visi-	mass, 155
bility, Apparency)	office, 140-142
definition, 9	overlaps in city images derived from,
values, 4–5	152
Image(s), abstract, 88	sidewalk, 142, 152
adaptable, 139	[11] [11] [11] [12] [12] [12] [12] [12]
	size and composition of sample, 152
as frame of reference, 126	Island groups, 132
as organizer, 126	
as total field, 158	Jaccard, P., 125, 129, 130, 133, 134, 136
coherence, 6	Jersey City, character, 29
communicability, 9, 139	distinctive elements, 149
components, 8	districts (see Jersey City districts)
concrete, 88	edges (see Jersey City edges)
continuity, 109	field analysis, 26, 27, 149
density, 87	gradients of use and repair, 32
descriptive, 154	image from interviews, 148
development, 86, 157	image from sketch maps, 148
distortion, 87	lack of imageability, 30, 32
economy, 9	landmarks (see Jersey City landmarks)
emotional role, 127	New York skyline, 26
encouraging exploration, 110	nodes (see Jersey City nodes)
environmental, 4	paths (see Jersey City paths)
flexible structure, 88	railways, elevated, 65
free structure, 88	street signs, 32
function, 124	views, 27, 31
group differences in, 154, 157	
hierarchical, 89	vivid elements, 26
	waterfront, 63
levels, 86	Jersey City districts, 29
metropolitan, 112	"Bergen Section," 26
open-ended, 9, 139	West Side Park, 32

Landscape, new, 115 Jersey City edges, 29 Hackensack River, 64 Langer, S., 113 "Leading lines," 135 Palisades, 25, 50 waterfront, 63 Legibility, 2, 3, 10 (see also Apparency, Jersey City landmarks, 29 Imageability, Visibility) Journal Square advertising signs, 32 Lewis, C. S., 124 New Jersey Medical Center, 26, 28, 32, Linear series, 129 Lhasa, 124 Jersey City nodes, 29 Locality, 85 Los Angeles, 15, 32-43, 154 Hamilton Park, 31, 32 Journal Square, 25, 26, 28, 44, 74, 76 age, 42 Tonnelle Avenue Circle, 30, 58, 59, 73 age gradient, 41 character, 40, 43 Van Vorst Park, 32 Jersey City paths, 29 class distinctions, 37 Bergen Boulevard, 60 color, 41 Communipaw-Grand, 26 cross streets, 38 Fairview Avenue, 31 decentralization, 33 Hudson Boulevard, 26, 52, 57, 60 directional differentiation, 39 distinctive elements, 151 Montgomery Avenue, 26 Newark Avenue, 26 districts (see Los Angeles districts) Non-convergence of three main streets, downtown approach, 41 end vistas, 38 Pulaski Skyway, 29 field analysis, 33, 151 West Side Boulevard, 60 grid, 33, 51, 56, 57, 61 highways, 42, 51, 54, 56, 59-60 Joints, clarity of, 106 Junctions, 47, 72-75 image from interviews, 150 image from sketch maps, 150 Kawaguchi, 135 landmarks (see Los Angeles land-Kilpatrick, F. P., 11 marks) Kinesthetic sense, 54 longitudinal streets, 38 nodes (see Los Angeles nodes) Labyrinth, 5 organization, general, 43 Lake Kholgyal, 135 paths (see Los Angeles paths) Lake Michigan, 66 smog, 41 Landmarks, 78-83, 100-102, 131, 154 structure, 34 (see also Boston, Jersey City, Los symbols, 43 Angeles landmarks) topography, 42 "bottomless," 81 vegetation, 42 clarity of form, 101 view from air, 34 Los Angeles districts, 36, 41 clusters, 101 distant, 48 Beverly Hills, 41 figure-background contrast, 79 Bunker Hill, 36, 38, 42, 71, 72 isolated, 83 Civic Center, 34, 35, 36, 40, 43 local, 48, 82 Little Tokyo, 36, 38 San Fernando Valley, 41 location at junctions, 101 meaning, 81 Skid Row, 35, 36 singularity, 78, 100 Spring Street financial district, 36 spatial contrast, 80 Transportation Row, 36, 37 sequences, 83, 102 Los Angeles landmarks, 35 Landscape, 94 Biltmore Hotel, 35, 37, 38 illegible, 5 Bullocks Department Store, 35 Italian, 94 City Hall, 35, 42, 79

Los Angeles landmarks, Federal Savings	Meshed, 124, 129
Building, 35	Metropolis, form of, 119
Hall of Records, 79	imageability, 94, 112
"little gray lady," 80, 81	total pattern of, 115
Philharmonic Auditorium, 35, 81	Micronesian voyagers, 128
Public Library, 35, 38	Migration, bird and insect, 135
Richfield Oil Building, 35, 42, 80	Minneapolis, 136
Robinsons Department Store, 35	Mississippi River pilots, 134
Statler Hotel, 35, 38, 55	Mobility, residential, 111
Union Depot, 35	Motion awareness, 107
- LL F - C - C - C - C - C - C - C - C -	Mt. Everest, 11
Los Angeles nodes, 37 Pershing Square, 34, 36, 36, 43, 75, 78	Mt. Reani, 134, 137
Plaza-Olvera Street, 34, 37, 39, 39, 42,	Mc. Ream, 194, 197
	Names of places 100 122
43	Names of places, 108, 123
Los Angeles paths, 37	Natural setting, 110
Alameda Street, 40	Navigators of the South Seas, 133, 134
Broadway, 34, 36, 37, 38, 43, 50, 53	Netsilik Eskimo, 127, 132
cross streets, 38	New York City, 67, 136
Figueroa Street, 65	skyline, 26
First Street, 38	Nodes, 47, 72-78, 102-103 (see also
Flower Street, 38	Boston, Jersey City, Los Angeles
Grand Street, 38	nodes)
grid, 33, 51, 56, 57, 61	boundaries, 77
Harbor Freeway, 35, 65	concentrations, 75–76
highways, 42, 51, 54, 56, 59-60	extroverted, 78
Hill Street, 52	identity, 102
Hollywood Freeway, 35, 40, 65	introverted, 77
Hope Street, 38, 52	jointing, 102
longitudinal streets, 38	junctions, 72–75
Los Angeles Street, 65	linkages, 103
Main Street, 35	organization, 111
Olive Street, 38, 52	relation to general structure, 103
Olvera Street, 39, 51, 75	spatial form, 102
Olympic Street, 65	
Seventh Street, 34, 36, 38, 43, 55	Order, open-ended, 6
Sixth Street, 38	Oregon Trail, 135
Spring Street, 35	Orientation, 129, 131
Sunset Boulevard, 53, 65	systems of, 7
Wilshire Boulevard, 43, 53	
Luritcha, 124, 127	Paiute, 131
Lyons, 125	Paris, 127
	Paths, 44, 47, 49-62, 84, 96-99, 130, 154
MacDonnell Ranges, 137	(see also Boston, Jersey City, Los
"Main" streets, 51	Angeles paths)
Malinowski, B., 126, 136	activity along, 50
Manhattan, 10	alignment, 56
Maori, 138	as an edge, 51
Maps, native, 132	branching, 58
Meaning, 108	continuity, 52, 96
of environmental image, 8	destination, 54, 97
Medjbed, 130	directional clarity, 96
Melodic series, 107	directional differentiation, 54, 55, 97

Paths, directional shifts, 56	San Fernando Valley, 41
directional signals on highways, 57	San Francisco, 10
façade characteristics, 51	approach to, 99
gridiron, 99	Sapir, E., 131
highway interchanges, 58	Scollay Square, 19, 44, 74, 76, 77, 85
identity, 50, 96	162, 173–181, 177
intersections, 57, 98	approaches to, 177
melodic organization, 99	as junction, 173
networks, 60, 99	at night, 175
one-way, 60	connections, 177-178
origins, 54	differentiated characteristics, 175
pavement texture, 51	exits from, 178
planting as reinforcement of image,	external visibility, 180
51	interview description, 174
scaling, 55, 97	location, 161
sense of motion, 97	map, 175
separation from rest of city, 56, 57	pedestrians, 180
spatial qualities, 51	potential role, 181
structure, 52, 59, 98	slopes, 173
visual exposure, 51, 98	spatial form, 175
visual hierarchy, 96	street interviews, 174
Perception, adaptation, 12, 132	traffic, 175, 180
extension, 12	uses, 175, 180
Perceptual learning, 11-12	views out, 179
Peterson, J., 136	visual elements, 179
Photographic recognition, 145	Seam, 47, 65, 100
Piazza San Marco, 78, 79	Sequence, 113
Pink, O. M., 130	counterpoint, 114
Place, 119	interruptibility, 114
Plasticity, 111	networks, 114
Porteus, S. D., 126	of movements, 131
Pratolini, V., 126	representation, 159
"Presence," 135	reversibility, 114
Proust, M., 128, 130	Seven Dials, London, 136
Public image, 7, 15, 46, 156	Shipton, E. E., 11
Puluwat, 124, 134	Simplicity of form, 105
	de Silva, H. R., 11
Railroads, 57	Singularity, 105
elevated, 65	Sketch maps, 144-145
stations, 73, 74	Boston image derived from, 146
Rasmussen, K. J. V., 132, 134	Jersey City derived from, 148
Rattray, R. S., 126	Los Angeles image derived from, 150
Reference systems, 128	overlaps, 152
Research in city design and perception,	structure in, 145
156–159	Sky reflection, 132
Residential distribution, 153	Social prestige, effects on image, 144 (se
Rome, 130	also Class distinctions)
6.1	South Seas, 133
Sahara, 130	Space, hierarchy, 51
Sailing directions, 133	impact, 43–44
Sailing formation, 134	Spatial regions, 105
Sandwich, New Hampshire, 94	Star groups, 132

Strauss, A. L., 128
Strehlow, C., 134, 139
Structure, of environmental images, 8
flexible, 88
free, 88
interrelationship with identity, 84
lack of, 125
positional, 88
rigid, 89

Stuart's Bluff Ranges, 137
Studies, comparative, 156
second-round, 156
Subway stations, 57, 75 (see also Boston nodes)
Symbolic diagram, 11, 158

Threshold, 144, 145 Tibet, 127 Holy Mountain, 135 Lake Kholgyal, 135 Lhasa, 124 Tikopia, 126, 129

Stefánsson, V., 132

Marae, 124 Mt. Reani, 134, 137 Time series, 107 Topography, 110, 131
Touareg, 133, 134
Traffic obstacles, 50
Training the observer, 11, 117, 120, 158

Trobriand Islands, 126, 136 Trowbridge, C. C., 136 Tunisia, 134 Twain, M., 134

Vegetation, 44 (see also Los Angeles) Venice, 10, 131, 138 Piazza San Marco, 78, 79 streets, 102 Visibility, 10 (see also Apparency, Legi-

bility, Imageability)
"Visual plan," 116
basis for, 155
Visual scope, 106

Waddell, L. A., 134 Water, 44 Witkin, H. A., 125 Wohl, R. R., 128

Yung, E., 132

Credits for Photographs

Nishan Bichajian:

Figs. 4, 6, 7, 11, 12, 13, 21, 22, 23, 26, 28, 29, 30, 52, 55, 58, 59, 61

Fairchild Aerial Surveys: Figs. 1, 9, 15, 24
Italian State Tourist Office: Figs. 31, 34

Gordon Sommers:

Figs. 16, 17, 18, 19, 20, 27, 32