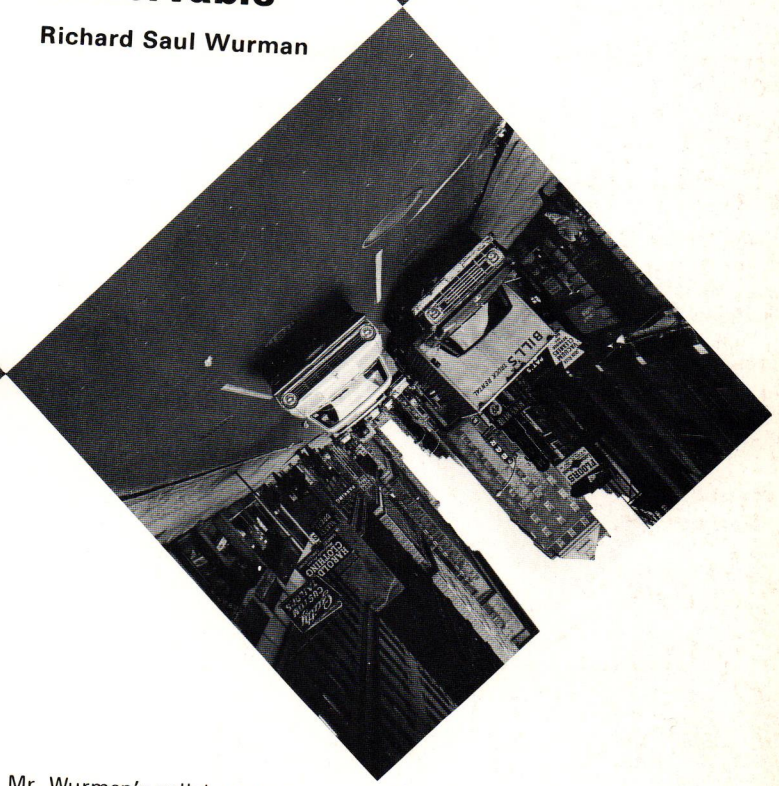
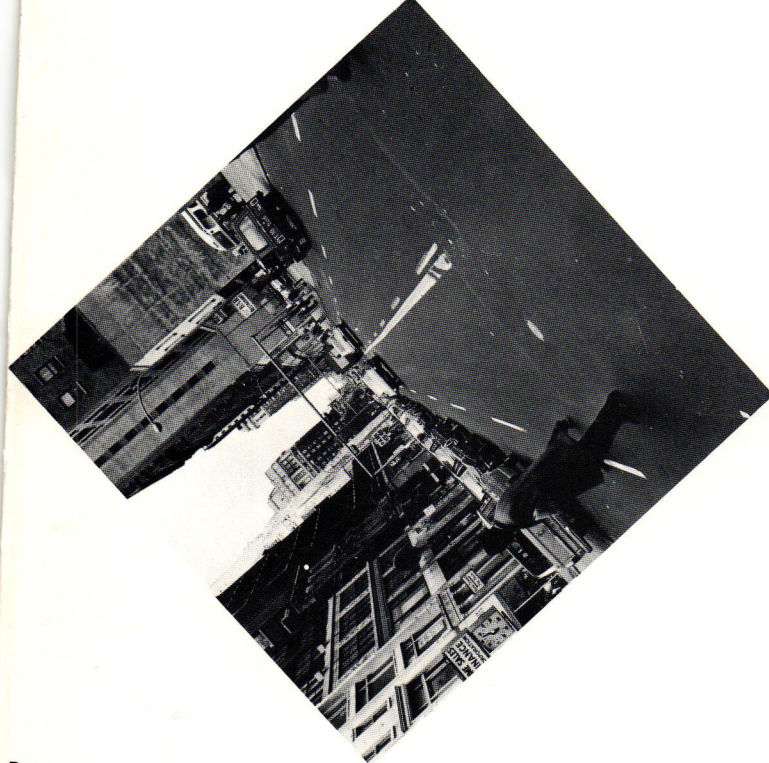


**DQ80**

**Making  
the City  
Observable**

Richard Saul Wurman



Published by  
Walker Art Center  
Minneapolis, Minnesota  
and  
The MIT Press  
Cambridge, Massachusetts  
and London, England

Richard Saul Wurman is the  
third specialist to participate  
in the Walker Art Center/Graham  
Foundation program in design  
criticism.

Mr. Wurman's collaborators:  
Don Moyer  
Ephraim Matthew Miller  
Nancy Donovan

Four photographs from the cen-  
ter of the intersection at 13th  
and Arch Streets in Philadelphia,  
looking north, east, south and  
west. The set is part of a series of  
photographs documenting inter-  
sections.

copyright 1971  
Walker Art Center



"How'd yuh know deh was such a place," I says, "if yuh neveh been deh befoeh?"

"Oh," he says, "I got a map."

"A map?" I says.

"Sure," he says, "I got a map dat tells me about all dese places. I take it wit me every time I come out heah," he says.

And Jesus! Wit dat, he pulls it out of his pocket, an' so help me, but he's got it — he's tellin' duh troot — a big map of duh whole f—— place with all duh different pahts mahked out. You know — Canarsie an' East Noo Yawk an' Flatbush, Bensonhoist, Sout' Brooklyn, suh Heights, Bay Ridge, Greenpernt — duh whole goddam layout, he's got it right deh on duh map.

So den duh guy begins to ast me all kinds of nutty questions: how big was Brooklyn an' could I find my way aroun' in it, an' how long would it take a guy to know duh place.

"Listen!" I says, "You get dat idea outa yoeh head right now," I says. "You ain't neveh gonna get to know Brooklyn," I says, "an I don't even know all deh is to know about it, so how do you expect to know duh town," I says, "when you don't even live heah?"

"Yes," he says, "but I got a map to help me find my way about."

"Map or no map," I says, "yuh ain't gonna get to know Brooklyn wit no map," I says.

Wolfe, Thomas, **From Death to Morning**, New York, Charles Scribner's Sons, 1963, p. 93, 95. "Only the Dead Know Brooklyn".

#### Design Quarterly 80

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**Note**  
 Quotation marks indicate descriptive material has been taken from the cited publications.

Mr. Wurman's comments are set in italics.

Editor's  
notes

This issue of Design Quarterly explores some of the existing data systems which describe, in visual terms, various urban entities: transportation systems, roadways, public buildings, land patterns, historical structures, as well as some new methods for developing physical information that will be widely used in the future. Through these means the individual acquires information about his surroundings.

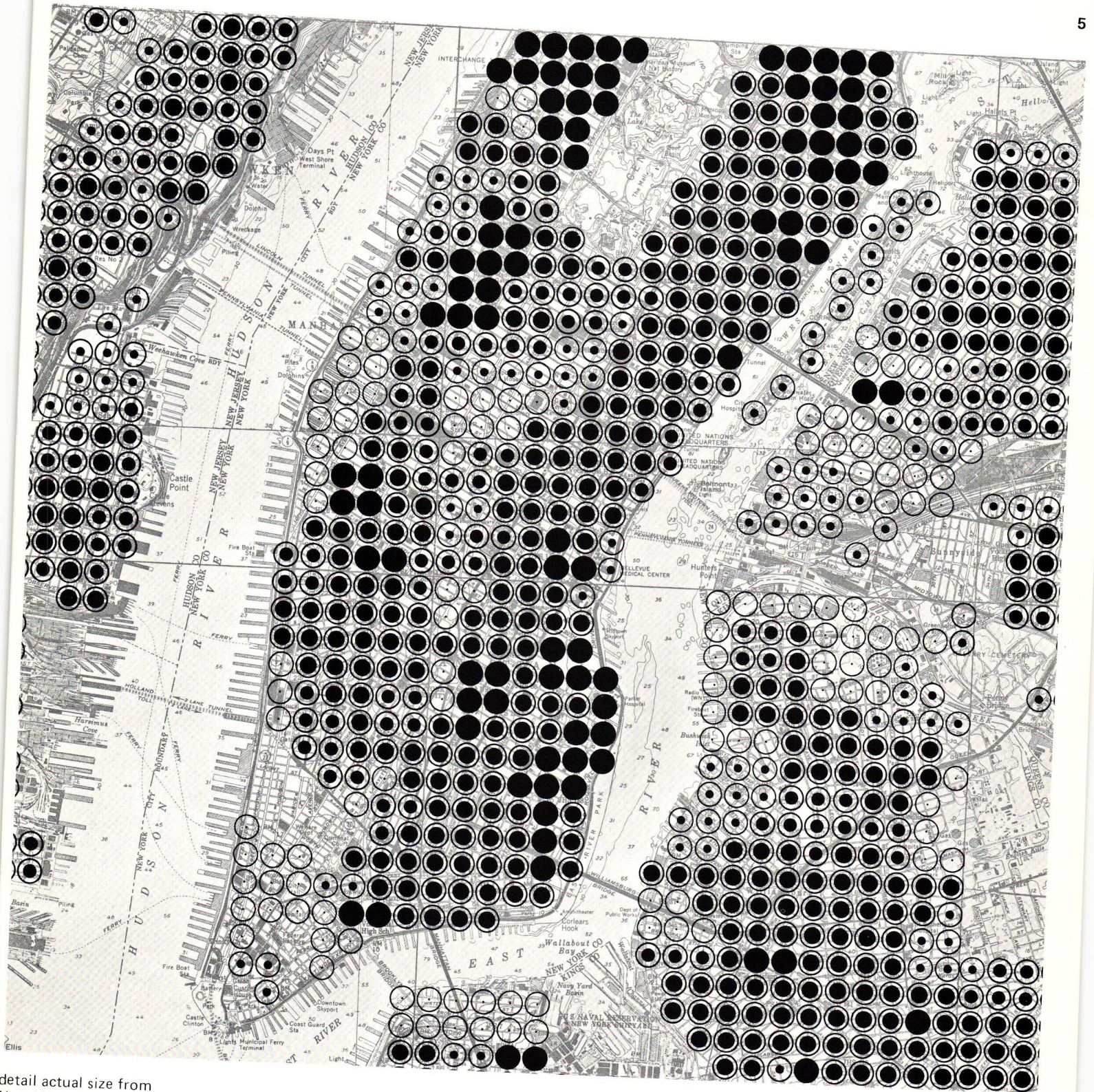
A citizen who understands the highway system and its relationship to the other urban systems—housing, transportation, business, schools—has a basis for making decisions regarding highway expansion, elimination of cars from core areas, and linkage of the highway system to various means of public transportation. Where do people live relative to their work, to nature, to leisure time activities? Is our city protecting and using its natural resources in an intelligent way? How does the park system relate to the schools, to residential cores, to the larger geographical complex? This issue of Design Quarterly contains some of the materials designed to elucidate the city and examines the possibilities of enlarging the scope and increasing the availability of public information. The material shown here is, of necessity, only an initial look

at what is available; it is in no sense meant to be exhaustive.

Similar materials could be the basis, in every city, for the development of what Richard Wurman calls an "urban data center," for the dissemination of information related to the public environment. To dispense information on a day to day basis, one might begin, with a school-based facility, to develop pertinent data on local surroundings. This small system could be linked to a large central information core that would gather material from localized centers and combine all available material into an information system to describe the total area on a large scale, thus creating an "urban observatory."

Design Quarterly is grateful to the many publishers and individuals who lent materials for reproduction here; they are all designated along with the materials described. We are indebted to Don Moyer, of Murphy Levy Wurman, who gathered and prepared the information along with Mr. Wurman. The generous assistance and interest of Mr. Michael Connolly, Editorial Director of The M.I.T. Press, has made it possible to enlarge this issue to its present size and scope.

MSF



detail actual size from  
New York City The Urban  
Atlas see pp 24-25

Author's introduction

Public information should be made public.

Information about our urban environment should be made understandable.

Architects, planners and designers should commit themselves to making their ideas immediately comprehensible.

p 68 Making the city observable implies allowing the city to become an environment for learning. The city can be made observable by developing a school curriculum about our man-made environment, by designing a clear subway map or by producing a ballot that people can understand and use intelligently.

p 33 p 54 p 83 Some approaches that clarify the urban scene: The New York Times illustrated the moon landing of Apollo 14 with maps and diagrams clearer than any ever used to describe the location of a new highway on earth.

Burlington Industries invites the public to see a capsule version of all their activities in their Avenue of the Americas offices in New York.

CBS-TV in New York City has a new program, "The Urbanites," that gives specific information about what is happening in the city.

ABC took a full page ad to translate an election ballot into understandable English.

p 22 The book, **Cosmic View, The Universe in Forty Jumps**, shows the universe minified and magnified in scale changes to the power of ten, and provided the basis for Charles Eames' remarkable film, **The Powers of Ten**. Both book and film attempt to show the scale relationships among elements we perceive and among those we only conceive of.

In the 17th Century Jan Blaeu drew maps of all the towns in

the Netherlands locating each house clearly and accurately.

Mayor John Lindsay has proposed a special zoning district for Fifth Avenue; he suggests that at least the first two floors of each building be retail or public service spaces, instead of allowing the invasion of the ground floor by anonymous, uninteresting office buildings and banks.

In contrast to the above:

We talk in numbers we can't comprehend and about sizes we can't visualize. p 85

Artists' renderings, rather than measured performances and relationships, are used to explain proposed environmental changes.

A twelve year old child gets lost downtown.

A visitor speaking a foreign tongue feels helpless in the subway. p 54

A voter votes for bond issues to finance unexplained projects.

A school board spends millions and incurs endless debts building new schools to house an educational system which they all agree to be increasingly unworkable, hostile and irrelevant to the world around it.

A local transit authority is losing money yet it cuts back service and raises fares, insuring fiscal disaster. The emperor has no clothes!

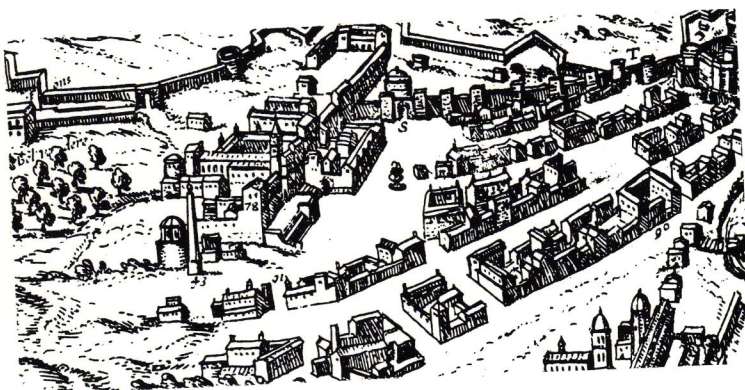
Why don't we have chartbooks and understandable data describing our cities? p 62

An urban **The Way Things Work**. p 61

Why doesn't every community have a community map? p 77

Why can't there be pocket guides to every city?

Why not paint the streets in a way that will make the city a life-sized route map? p 88



Actual size detail from **Civitates Orbis Terrarum** plan of Rome

p 84 Why don't industries intimately involved with our cities use their advertising to educate the public in the areas of their concern?

p 66 Why isn't the city a schoolhouse?

Why does a young student learn Latin and logarithms by rote instead of learning to understand his environment through direct experience?

p 74 Why don't we use the tops of our tall buildings for observing the city and educating our young?

p 82 Why don't in-flight films orient you to your destination?

Why can't TV news programs report daily happenings in the streets, focusing attention on the publicly owned sector of our cities?

Why are we unable to discern the patterns of the movement systems we are immersed in continuously?

How do we describe spaces and places?

How do we describe and notate paths, directions and routes?

How can each of us articulate our ideas and encourage the expression of the demands and ideas of others?

DQ 80 is a collection of gestures toward solutions.

I've included those projects that are close to my particular experience. Many come from books in my library or from people I know. The projects represent both ideas and dreams as yet unfulfilled as well as items available on local newsstands and bookstores. Most are visual. Many contain the spin-off of ideas and techniques applicable to the educational and political problems that engulf us.

Everything we do is education. The city is education but the architecture of education rarely has much to do with the building of schools. The city should

be a schoolhouse and its ground floor can be both bulletin board and library. If we can make our urban environment comprehensible, observable and understandable we will have classrooms with unlimited windows on the world.

The city should offer students experts who share their concerns, and diverse, free and exciting spaces and places in which to have learning experiences. There are many ways to make the city observable. A walk through the city's ground floor should be a continuous learning experience.

As we are all students we should be concerned about real experiences and situations independent of books, classrooms and school buildings.

We should develop skills and abilities for communicating information about the environment both verbally and visually.

We should create the kind of confidence in a student that will enable him to judge and develop criteria that might be used in the evaluation or creation of his own environments.

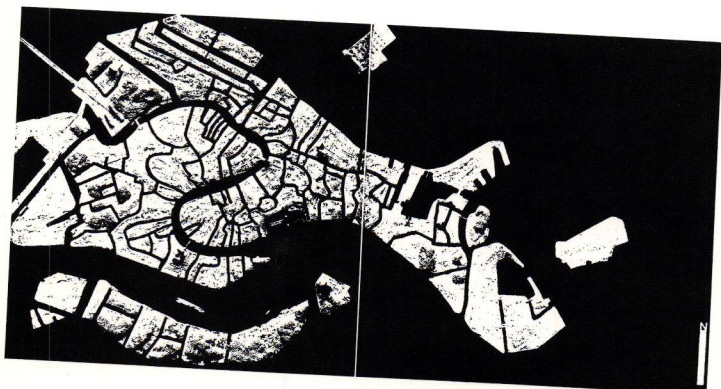
We should understand that ecology includes the total physical environment, public and private, not simply the problems of water and air pollution.

We own one-half of the land in our cities yet our concern is only with the appearance, not even the performance of the other half.

Architects and planners have been participating in a marathon contest to expand the physical form of our cities—pitting one extruded building against another—gaining support for highly styled packages that misrepresent their contents and ignore their neighbors.

Most experts in city signage somehow never discuss communications, only graphics.

p 91



Detail of  
The city of Venice model  
from **City Form and Intent**

Transportation engineers talk of movement in terms of actual speed, rather than of psychological time, comfort, safety, orientation and information.

In our race to invent facades we have overlooked the need to make clear our performance goals. Designers have become urban beauticians applying mascara and calling it beautification, building urban Edsels and calling them street furniture.

The limited amenities an individual can afford when he lives in isolation are multiplied by thousands when he lives in a community where collective amenities are possible, including facilities for:

free and convenient movement of all kinds, the opportunity to purchase goods and services, protection and shelter, orientation, learning and guidance.

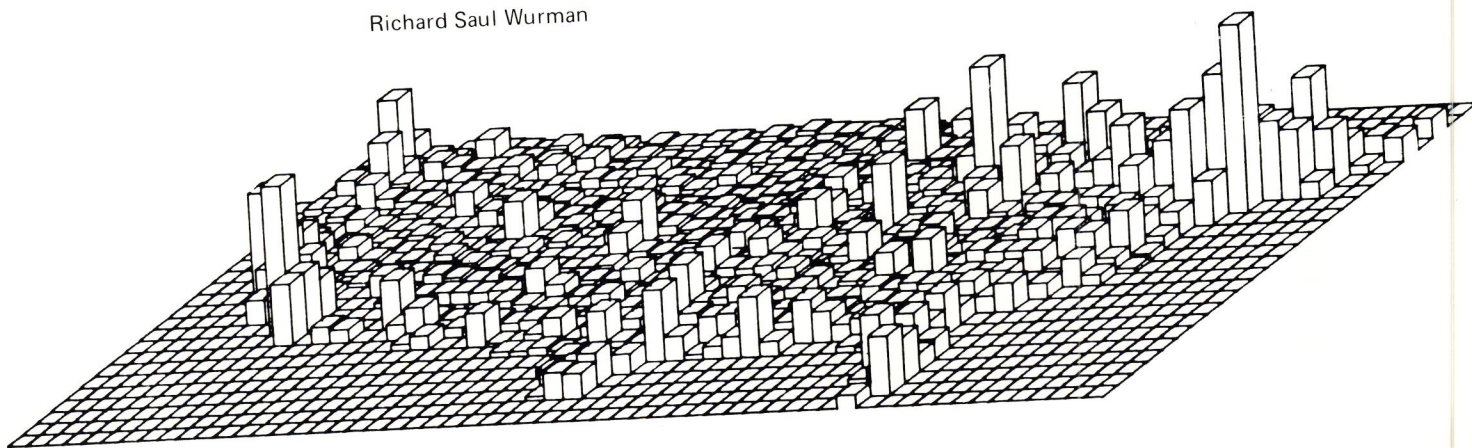
If the patterning, disposition and performance of these facilities are made clear, the city is then observable.

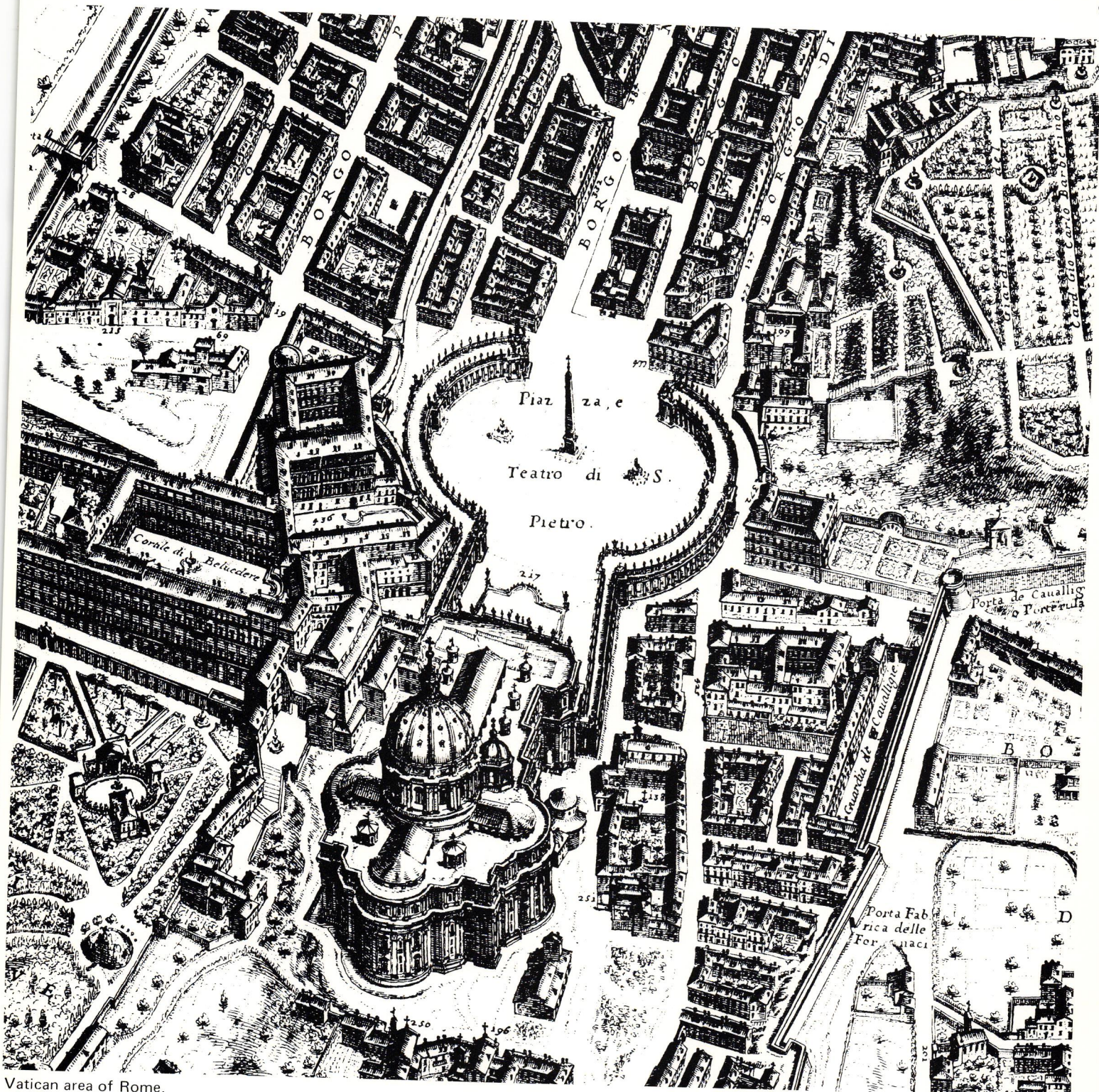
**Making the City Observable** is a catalogue of projects, ideas, books, guides, maps, advertisements, and curricula that offer some means to a better understanding of the environment. Making the city observable means making the plethora of public information public.

This issue of Design Quarterly is about education. Education is about communication, and communication at its best is both an art and an entertainment. A catalogue gives a provocative hint of items and ideas available. This catalogue attempts, through the juxtaposition of some eighty projects, to outline a syllabus for urban communication.

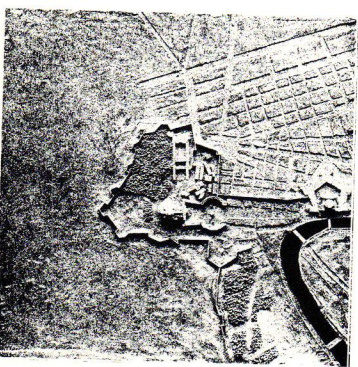
Richard Saul Wurman

Population Graph—Map, U.S.A.  
Laboratory for Computer  
Graphics and Spatial Analysis





Vatican area of Rome.



The 12 page Falda Plan of Rome was drawn and incised on copper by Giovanni Battista Falda in 1676 with revisions added in 1756 and 1864. The original materials are preserved in archives in Rome.

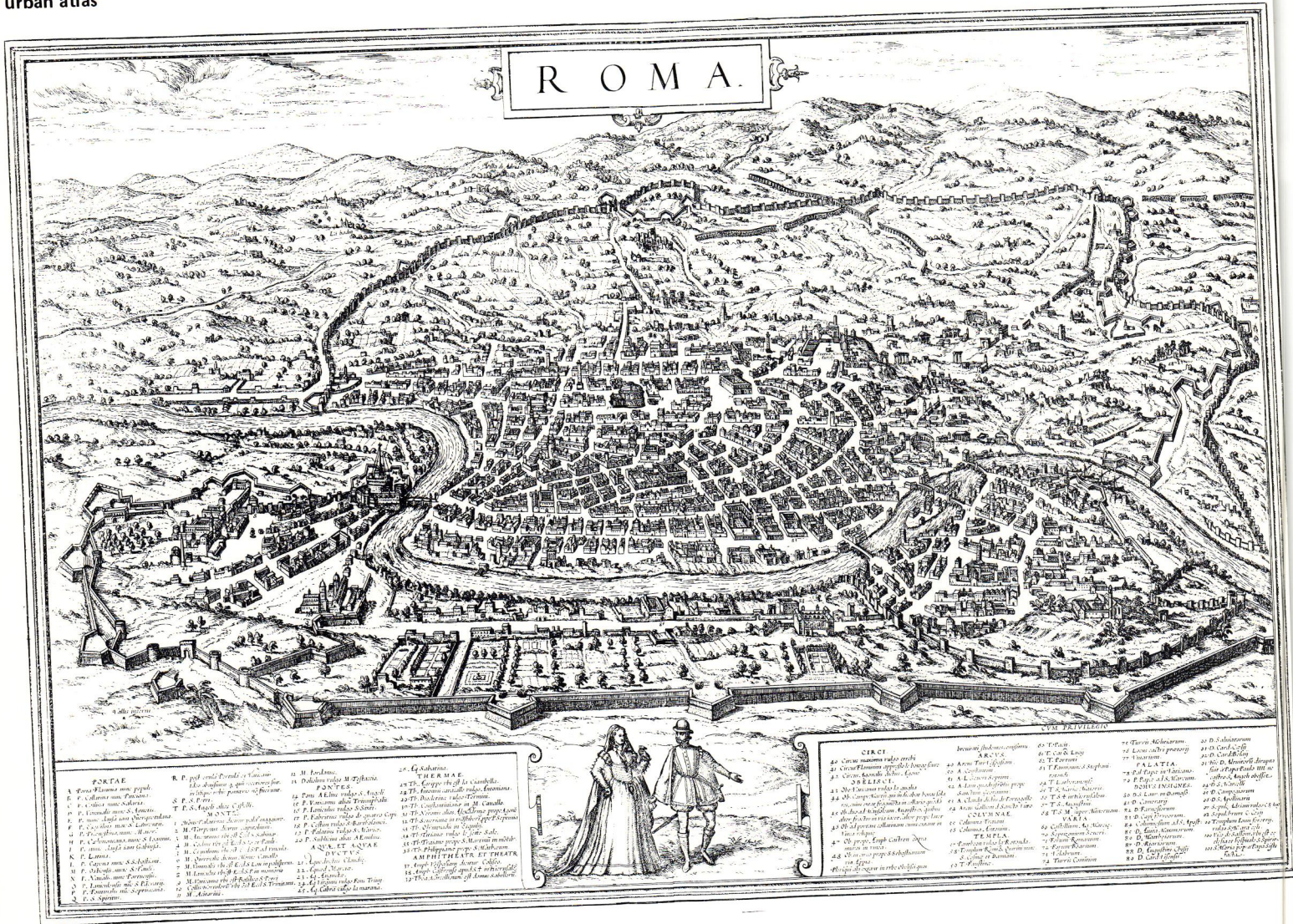
The maps include all the streets, squares, churches, important public buildings, and gardens of Rome and an index with the exact names of all entries.

The perspectival elevations produce an extremely clear visualization of the city.

*This lead entry is representative of several items that follow—pictorial maps from the bird's-eye that show the plan and the look of a city, building by building. The scale is instantly apparent because of familiar objects that are notated throughout.*

**Falda's Plan of Rome**  
Giovanni Battista Falda  
1676

M. Danesi  
56" x 56"  
90 DM (\$24.75)  
Available from:  
Wasmuth Buchhandlung und  
Antiquariat  
Hardenburgstrasse 9a  
Berlin 12, Germany



"... published in 6 volumes from 1572 to 1617 and remains the most original and magnificent of all city atlases. Its compilers were the first to apply the systematic atlas form, devised by Ortelius, to a collection of plans and views, that is, in the field of chorography. . ."

"Throughout the Middle Ages towns had been represented in profile, as seen from the ground, with emphasis on conspicuous or important buildings. . . In the middle decades of the 16th century however geographers, surveyors and engineers introduced geometrical methods of mensuration enabling smaller areas, as in a map, to be delineated from a vertical viewpoint. So the town-plan was reborn, and it quickly became recognized as the only form of topographical representation in which spatial relationships were correctly expressed and the structural growth of a city, in terms of history and geography, could be discerned."

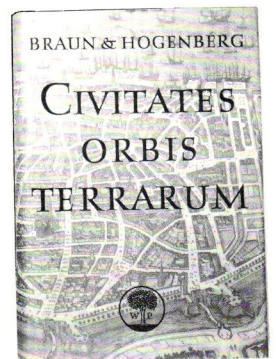
"The Civitates was the first serious

attempt to give graphic representation of the main cities of the world, with a wealth of factual detail." In all six volumes (three books) 546 cities and towns are represented.

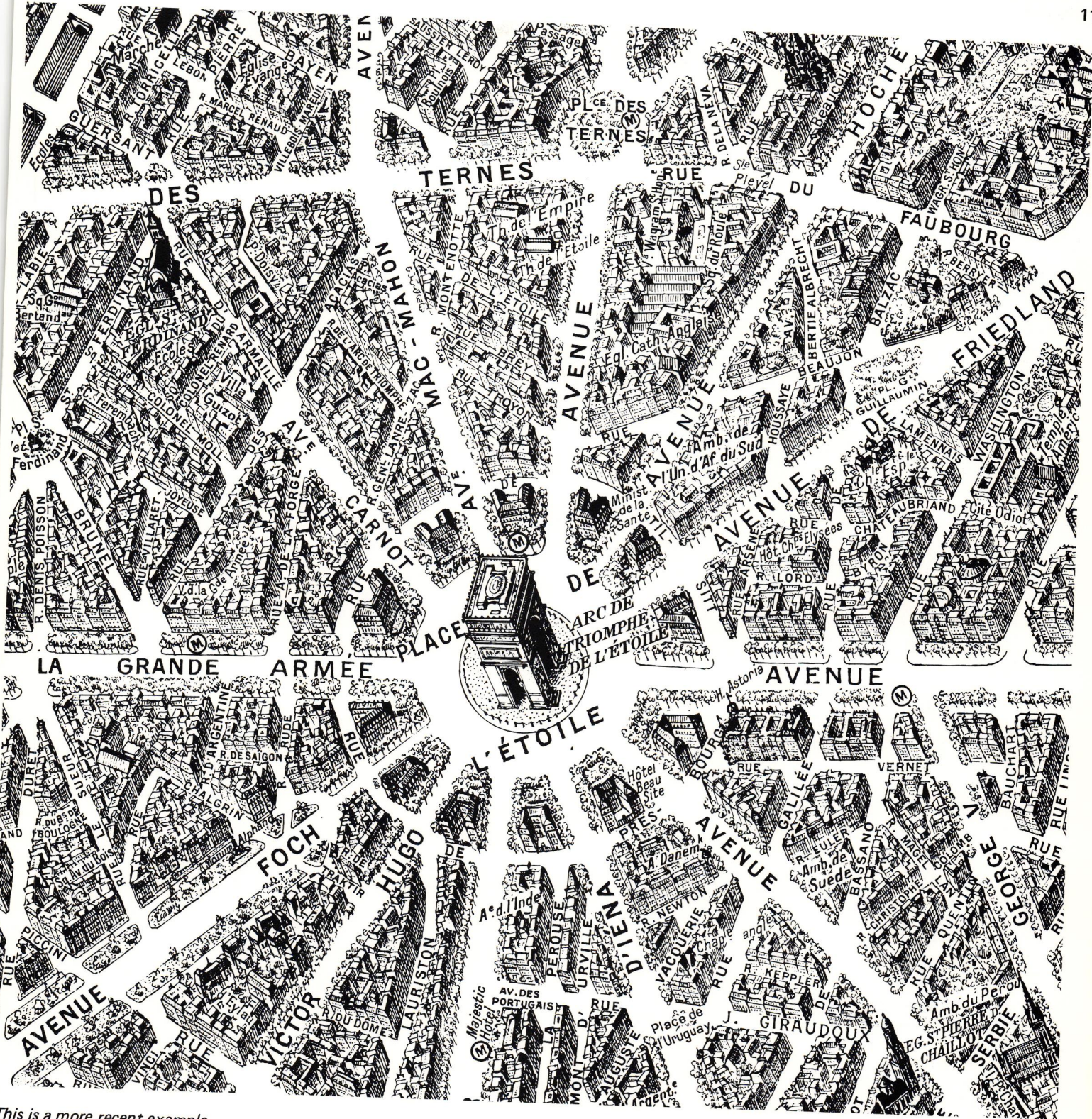
"In the main the buildings in each view are shown in elevation, and while the ordinary dwellings are stylized, the principal buildings are reproduced from actual drawings on the spot, and these, and the main streets, can be recognized today. Further, the editors gave additional factual information as a deliberately planned policy, such as the heraldic arms of the city, and the nature of the surrounding countryside, whether wooded or arable, grazing land, vineyards or gardens. The importance of waterways is stressed by the careful delineation of stone bridges, wooden pontoons, flat-bottomed ferries, moles, wharves and jetties; the inland waters with river traffic. Varieties of land travel are depicted: pedestrian, horse, wagon, coach and palanquin.

Small vignettes illustrate the trades, occupations, and habits of the locality. The law is represented by various forms of punishment: gibbet, wheel, whip, etc. A distinctive feature of the plates is the insertion of large figures in the foreground to illustrate local costumes."

*Published in facsimile these three volumes are exceptional. The introduction is an excellent history of the project and as one looks through these plates he is continually reminded that the view consistently taken by the cartographer was one he could never see. The desire to be as a bird and see the city spread out before you in order to clarify the information is evident. The plates also show costumes of the day and are filled with many fantastic ideas of places perhaps never seen. The intent of the books to create a comparative atlas of world cities has yet to be matched or equaled.*



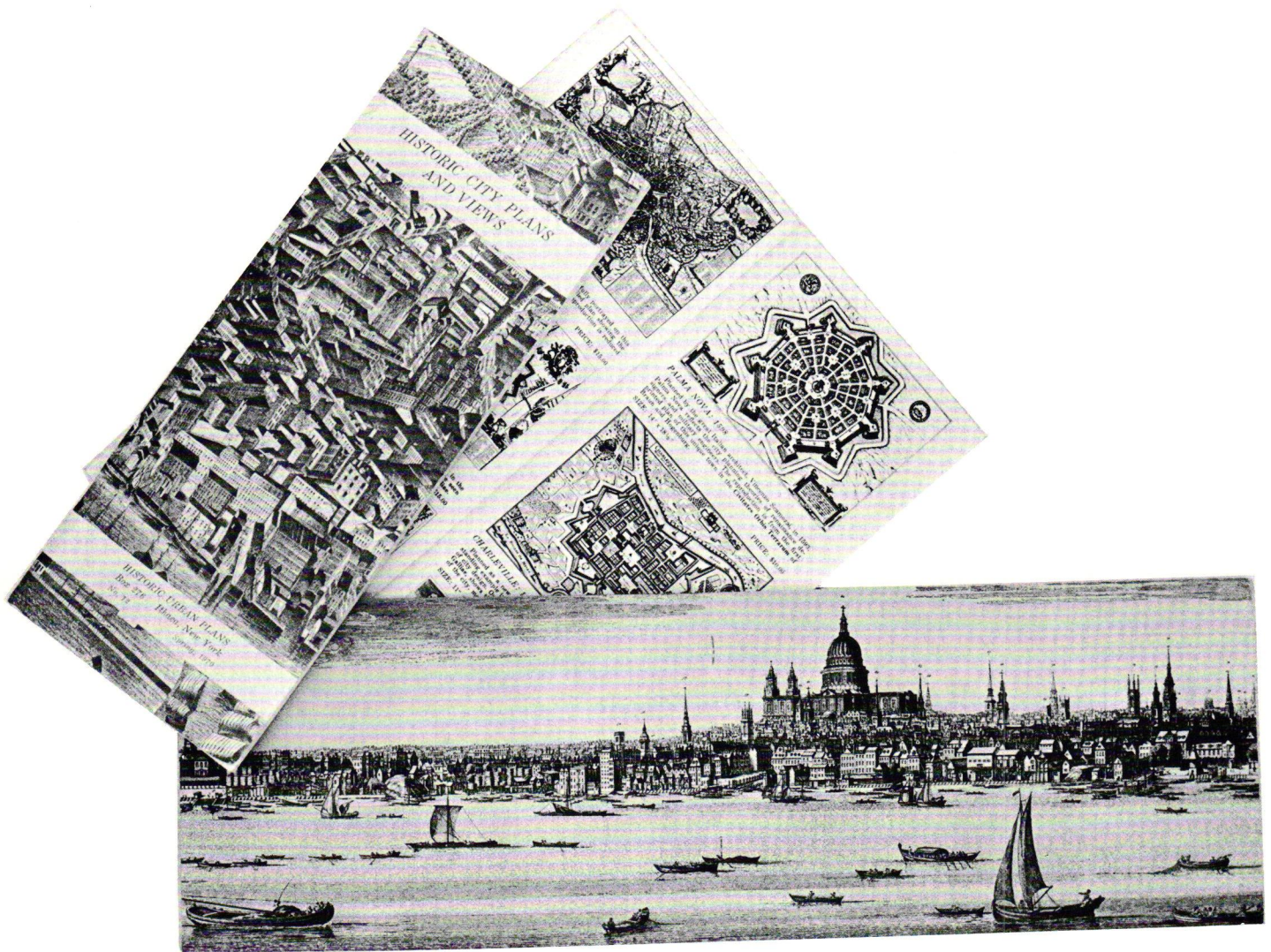
**Civitates Orbis Terrarum**  
 Braun and Hogenberg  
 1572 – 1618  
 1966  
 three volumes  
 12" x 17 1/2"  
 \$200.00  
 World Publishing Company  
 2231 West Tenth Street  
 Cleveland, Ohio 44102



*This is a more recent example of a pictorial plan and is therefore more rigorously developed from an accurate plan. It is handsome, available and would be more useful as a guide to Paris were Metro stops, etc., more assertive in their notation.*

**Plan de Paris a Vol d'Oiseau**  
G. Peltier de 1920 a 1940  
1959  
two sheets  
200 x 160 cm, or 74 x 104 cm  
60.00 francs (\$10.92)  
Librairie Blondel la Rougery  
7 rue Sainte-Lazare  
Paris 9e, France

copyright by Blondel la Rougery  
Paris 1959

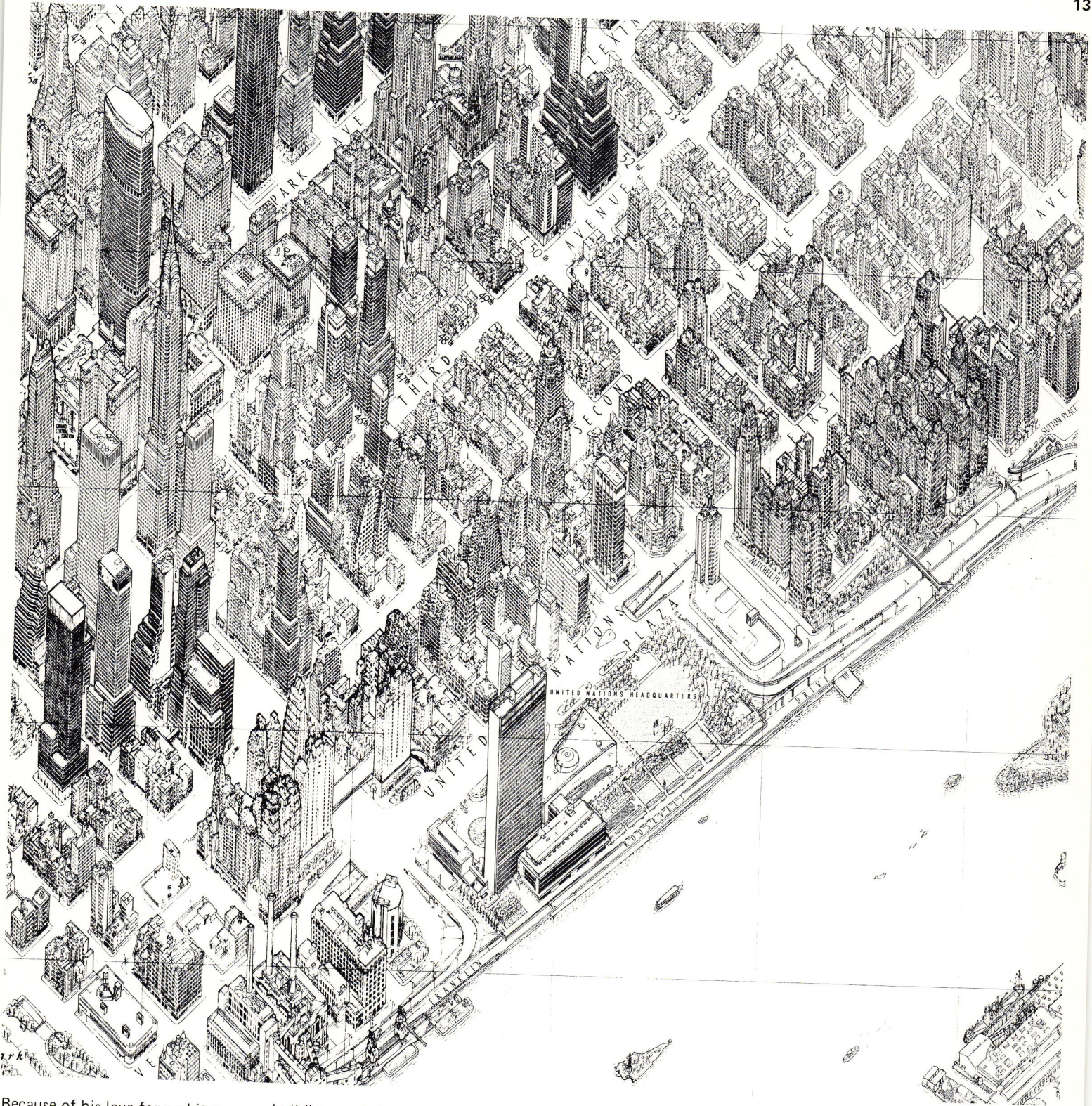


Moderately priced reproductions of historic urban plans and views, each an authentic plan significant in the history of city development, are available from Historic Urban Plans. Plans of London include general views and panoramas as well. The listing is arranged in chronological order from the sixteenth century to the end of the nineteenth century.

*The two free catalogues list plans available for purchase.*

**Historic City Plans and Views**  
54pp catalogue  
5" x 12 1/2"  
free  
Historic Urban Plans  
Box 276  
Ithaca, New York 14850

**Plans of London**  
9 1/2" x 6"  
free  
Weinreb and Douwma  
39 Great Russell Street  
London WC1, England



Because of his love for architecture, Herman Bollmann, a graphic designer from Braunschweig, Germany, walked and drove the streets of 23 cities making drawings and in 1948 translated them into appealing personal graphics.

Today, automatic aerial cameras and camera-furnished cars provide the data used by professionals as basic material for drawing these maps. The maps are updated periodically to include recent

buildings and show, through clear, reliable comparisons, the development of a city. Twenty-five of these city picture maps are collected in the first book "Städte" (Cities). The Bollmann series now includes over 100 city maps. 117 European cities and New York City.

*This is the most energetic modern day version of the Civitates Orbis Terrarum. These maps are accurate, complete and fascinating and allow the pursuit of the city building by building. Most of his over 100 cities are in Germany, Netherlands, etc., although Bollmann has produced an incredible New York City (shown here) and one on Jerusalem.*

Herman Bollmann  
Faltausgabe: DM 4,10-5,50  
Buttenplan, plano: DM 8,-16  
Bollmann Bildkarten Verlag  
Richterstrasse 5  
Braunschweig, Germany



#### Palmanova

"This is a collection of photos of clay models of fifty significant towns and cities all to the scale 1:14,400."

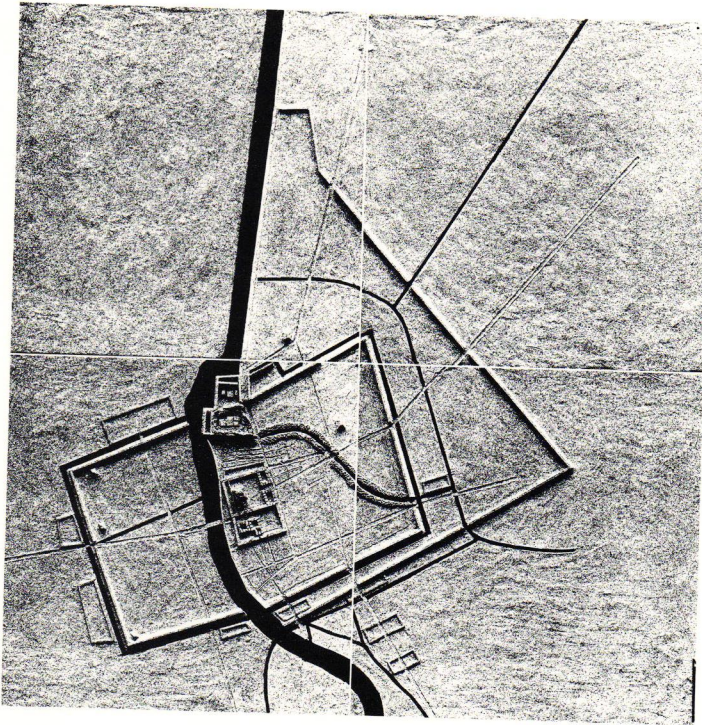
"The list of cities is simply those locations that I am familiar with and that to me give forth an immediate positive image."

Aigues-Mortes, Amsterdam, Angkor, Assisi, Athens, Avila, Babylon, Bern, Bruges, Cambridge, Chandigarh, Chartres,

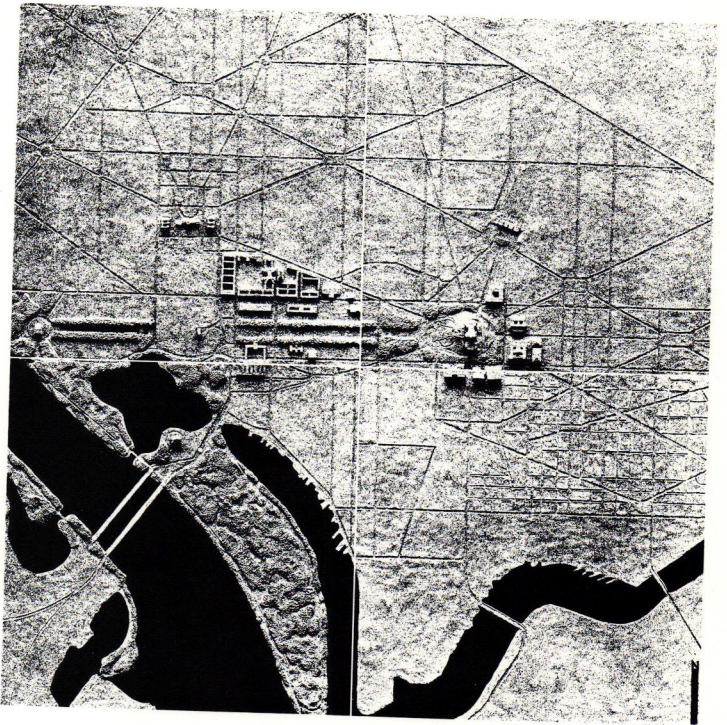
Chichen-Itza, Carcassonne, Granada, Hook, Karlsruhe, Kristiansund, Lucca, Lübeck, Machupicchu, Middelburg, Milletus, Montagnana, Monte Alban, Mont-Saint-Michel, Moscow, New York, Nördlingen, Palmanova, Paris, Peking, Pergamum, Persepolis, Philadelphia, Pompeii, Portofino, Priene Pyramid Complex, Rome, Saarlouis, Sabbioneta, San Gimignano, Savannah, Siena, Tikal, Timgad, Venice, Versailles, Washington, D. C.

"The plates that form the basis of this issue were produced on 108 separate squares of masonite each 16" on a side. The models were built from white plasticene, balsa wood and paint. They were done to the scale 1:7200-600 feet to an inch and photographically reduced to 1:14,400-1200 feet to an inch. The models were produced largely by the efforts of Professor Wurman's second year studio in architecture with help from other members of the

student body. They were photographed by Ralph Mills from the visual aids department and reprocessed by Eugene Feldman, owner of the Falcon Press in Philadelphia."



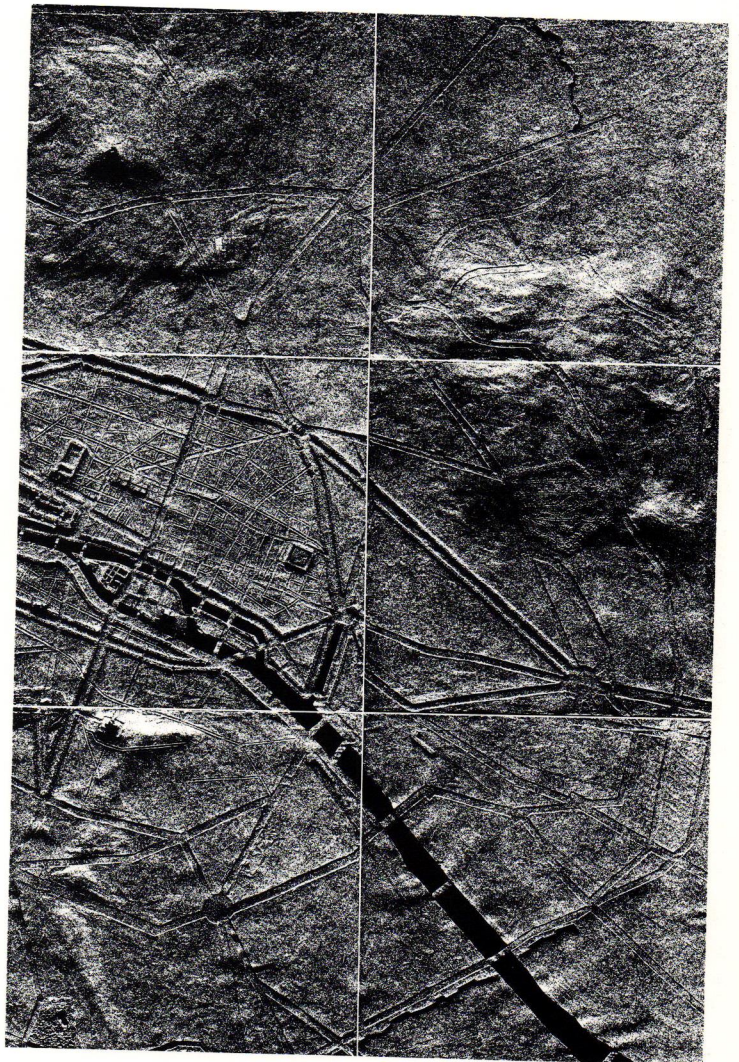
Babylon

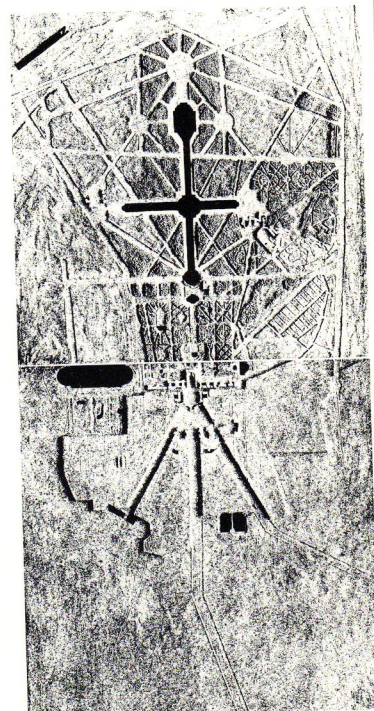
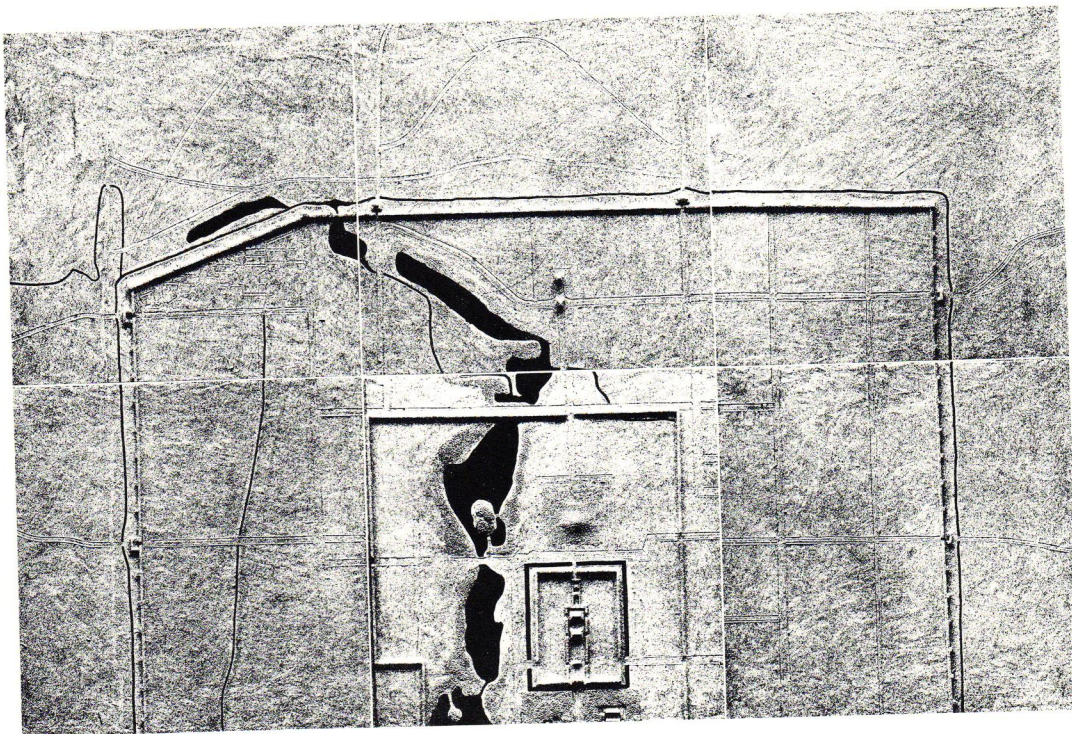


Washington, D. C.

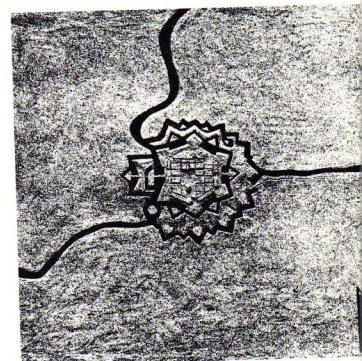
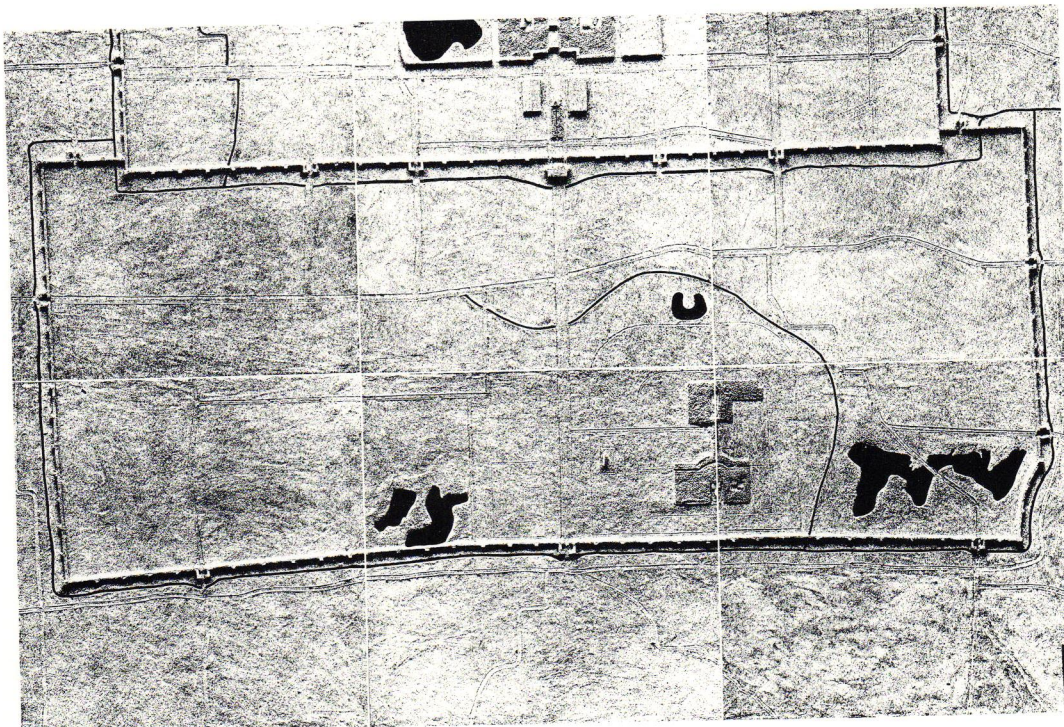


Paris





Versailles



Saarlouis

Peking

*As one only understands relative to something one already understands the idea of comparison is basic. The plates show little information except for the gross form characteristics of each city and although the quality of analysis is uneven the volume collectively has been received well.*

*I would like to redo this book with overlays of additional data.*

#### **City Form and Intent**

Richard Saul Wurman and students  
1963  
50 plates  
8 1/2" x 8 1/2"  
out of print  
Student Publication  
The School of Design  
North Carolina State University  
Raleigh, North Carolina 27607

"This photomosaic depicts complete global coverage assembled from pictures taken during 12 consecutive orbits on October 31, 1966, by the ESSA III meteorological satellite."

These photographs are used in preparing daily worldwide meteorological analyses and forecasts. The camera system was in a circular orbit at a 750-mile altitude.

**Exploring Space with a Camera**

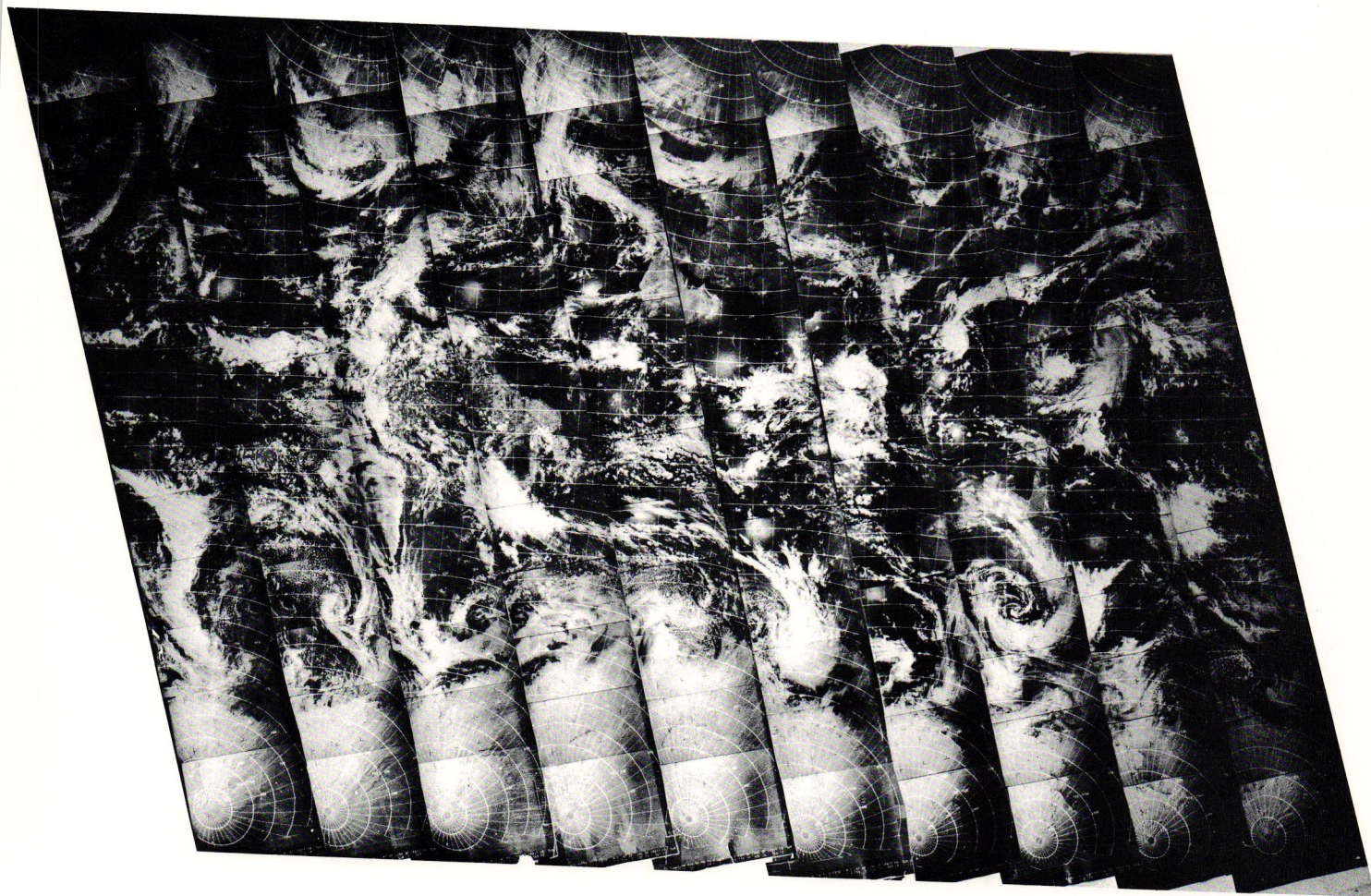
Edited by Edgar M. Cortright  
National Aeronautics and  
Space Administration  
1968

214 pp  
9" x 11 1/4"

\$4.25

U.S. Government Printing  
Office Bookstore  
710 North Capitol Street  
Washington, D. C. 20402

from **Exploring Space with a Camera**



**Airborne Camera**

Beaumont Newhall  
1969  
144 pp  
8 3/8" x 10"  
\$10.00

Hastings House Publishers  
10 East 40th Street  
New York, New York 10016

**Atlas Aerien**

Pierre De Fontaines and  
Mariel-Brunhes Delamarre  
1962

tomes I - V  
8 1/4" x 10 3/4"

\$8.50 each

Wittenborn & Co., Inc.  
1018 Madison Avenue  
New York, New York 10021

**Europe from the Air**

Emil Egli and  
Hans Richard Muller  
1959

223 pp  
9" x 11"

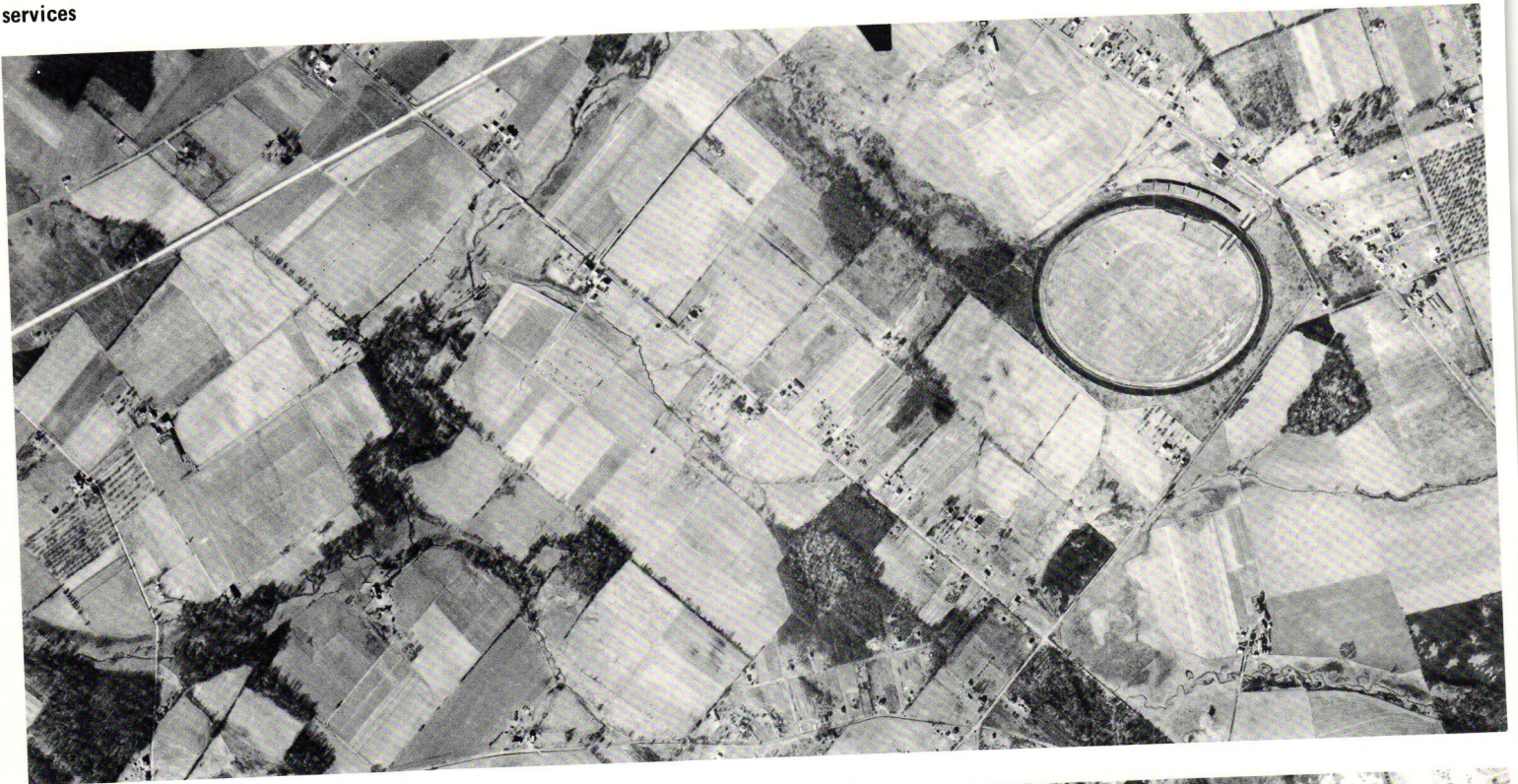
out of print  
George G. Harrap & Co. Ltd.  
182 High Holborn  
London WC1, England

**Europe: Aerial Close-up**

Charles E. Rotkin  
1962

221 pp  
10" x 13 3/4"  
\$6.95

Crown Publishers and  
Bonanza Books  
419 Park Avenue South  
New York, New York 10016



Aerial photographs are available from the government and from private companies. Both vertical and oblique photographs may be ordered from their files. The U.S. Geological Survey publishes an index map periodically to show the status of aerial photography. Photographs obtained by the Geological Survey, except those subject to security restrictions, are generally for sale to the public. The Canadian National Air Photo Library has a program

which makes it convenient to order aerial photographs of a specific area for as little as \$.60.

Photographs by Aero Service

*These two views of Levittown, before and after its construction, clearly indicate the change that has occurred in the landscape.*

Map Information Office  
U.S. Geological Survey  
Washington, D. C. 20242

**National Air Photo Library**  
Surveys and Mapping Branch  
Department of Energy, Mines  
and Resources  
615 Booth Street  
Ottawa 3, Canada

Aero Service  
4219 Van Kirk Street  
Philadelphia, Pennsylvania 19135

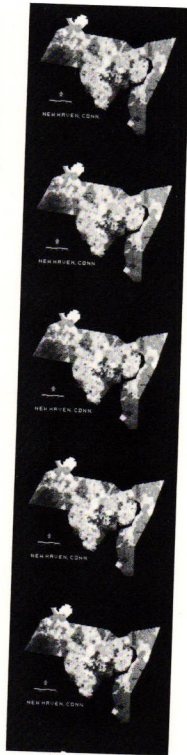
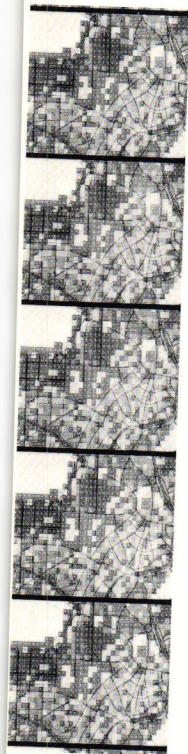
**Eames' film  
on  
urban communications**

SYMAP (Boston), which has been developed at the Laboratory for Computer Graphics of Harvard University, generates maps of spatially distributed data which are located according to pre-determined base map positions. The program uses combinations of the standard computer printout symbols to achieve white-black tone range which corresponds to a low-high data value range. In order to identify place units more easily the maps used in this report are produced with an acetate overlay showing the principal roads and shoreline of the study area; the original map size was 32" x 24".

Dr. Carl Steinitz  
Assistant Professor of City  
Planning and Landscape  
Architecture  
Harvard Graduate School  
of Design  
Laboratory for Computer Graphics  
and Spatial Analysis  
Graduate School of Design  
Memorial Hall 121  
Harvard University  
Cambridge, Massachusetts 02138

See page 26

New Haven census study.  
Ross Hall  
Census Use Study  
U.S. Department of Commerce  
Bureau of the Census  
Washington, D. C. 20233

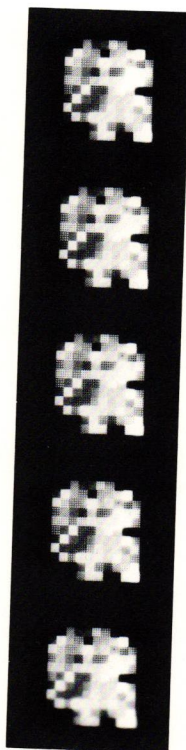
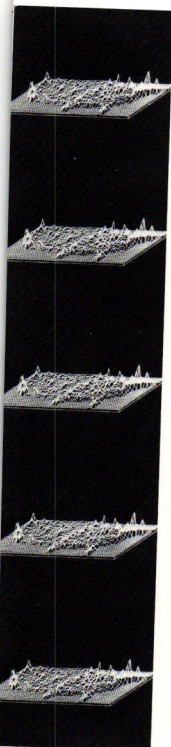


Population distribution in the United States in 1960 shown in isometric diagram based on county statistics (U.S. census) population aggregated into one-degree quadrilaterals of latitude and longitude. This provides an empirical two-dimensional "signal" which can be analyzed in terms of the expected signal suggested by geographical theory. A non-linear vertical scale of population is used in the graph for better visibility. The diagrams were produced on a Cal Comp Model 763 Zip Mode plotter and Model 780 off-line tape unit.

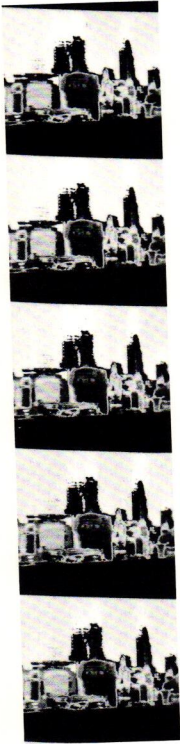
Dr. Waldo R. Tobler  
Associate Professor of Geography  
Department of Geography  
University of Michigan  
Frank Rens  
Graduate Assistant

Rain patterns on 60 square mile area in east-central New Jersey on 28 November 1966.

Sol Dworkin  
Head, Educational Programs  
and Exhibit Department  
Bell Telephone Laboratories  
Mountain Avenue  
Murray Hill, New Jersey 07974

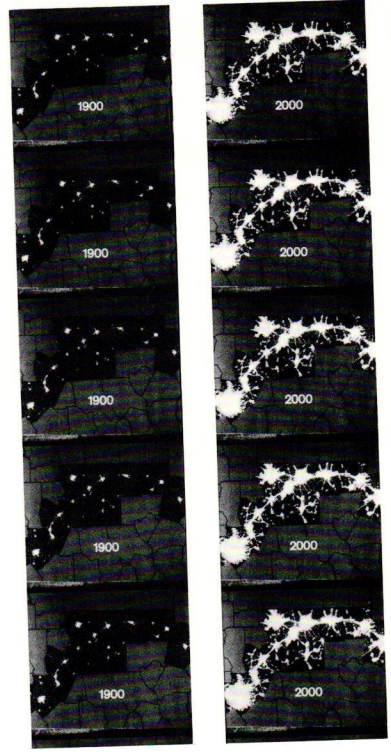


*Charles Eames is one of those  
are, particular people. This  
film is a collection—not unlike  
his DQ—of projects that de-  
scribe the city. The second  
half of the film is the better  
part and it is scenes from that  
half that are reproduced here.  
They are generally representa-  
tive of the more technical visual  
means being used to describe  
urban related phenomena.*



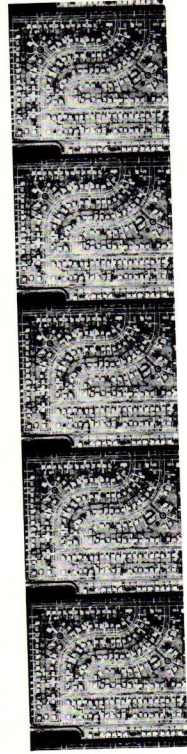
Thermogram measuring the city's emitted infrared radiation recording degrees of heat as different colors.

John E. Hurley  
Barnes Engineering Company  
30 Commerce Road  
Stamford, Connecticut 06904



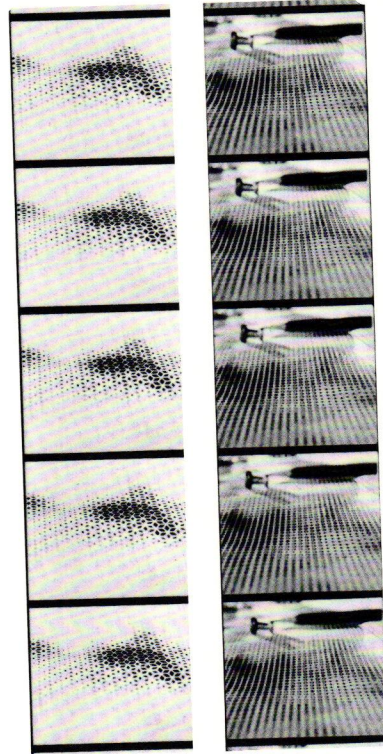
In 1968 Governor Terry Sanford requested that a study related to the most populated area of North Carolina, nominally the Urban Crescent, be initiated through the newly created State Film Board. The end product was to be a cogent description of this twelve county area, aimed to educate the citizenry of the State to enthusiastic acceptance of a regional planning body, which was to be created. The theme of the film is the growth of the twelve Piedmont Counties from 1850 to the year 2000. These counties are initially set in the context of the State of North Carolina, then the southeastern region of the U.S., the eastern U.S. from the Mississippi River, and the entire U.S.

Richard Saul Wurman  
Murphy Levy Wurman  
Architecture and Urban Planning  
1214 Arch Street  
Philadelphia, Pennsylvania 19107



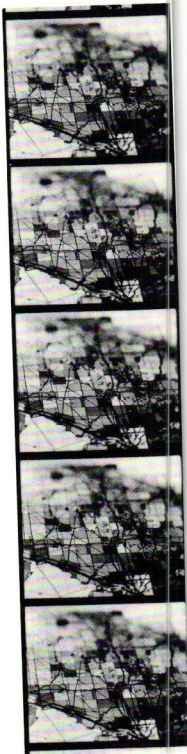
False color—remote sensing residential area.

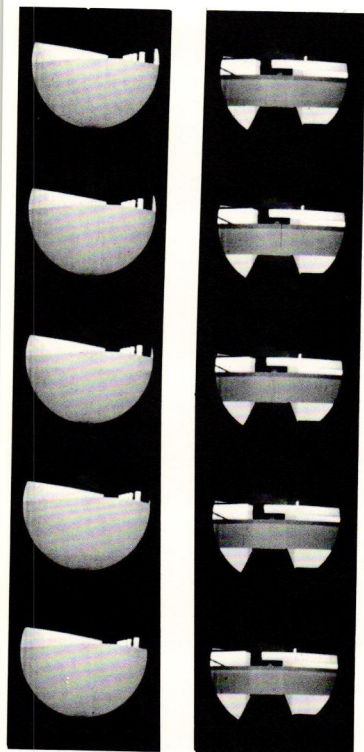
Duane F. Marble  
Remote Sensing Laboratory  
Department of Geography  
Northwestern University  
Evanston, Illinois 60201



Assortment of symbols  
**Urban Atlas**  
20 American Cities  
see page 24

right:  
**Emergence and Growth of an Urban Region**  
By Constantinos A. Doxiadis

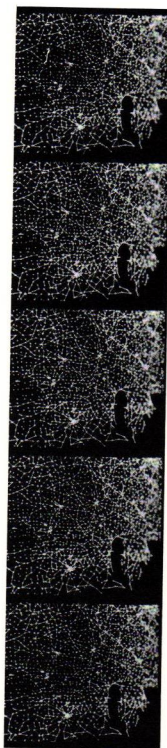




NASA Houston Space Center color graphics

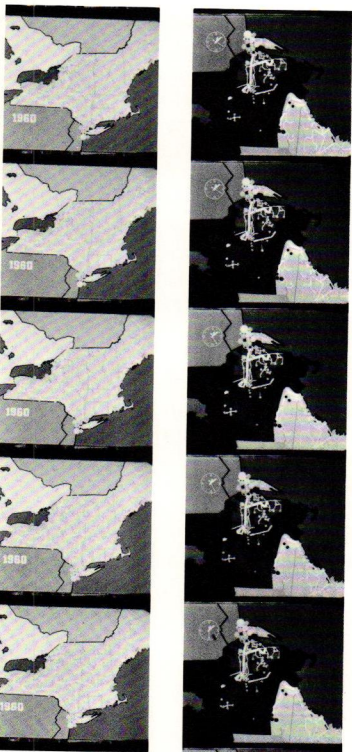
Peter Kamnitzer  
 Urban Laboratory  
 School of Architecture and Urban Planning  
 University of California  
 Los Angeles, California 90024

See page 23



Traffic loading study

Ev Merritt  
 Bureau of Public Roads  
 Federal Highway Administration  
 U.S. Department of Transportation



Animated sequence of the 1965 northeast blackout. Based on information provided by Westinghouse.

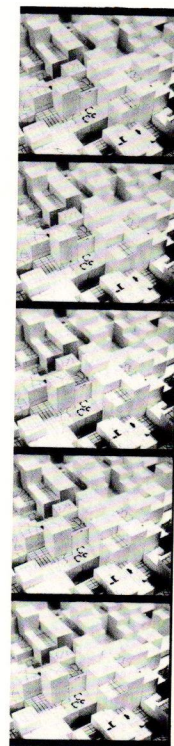


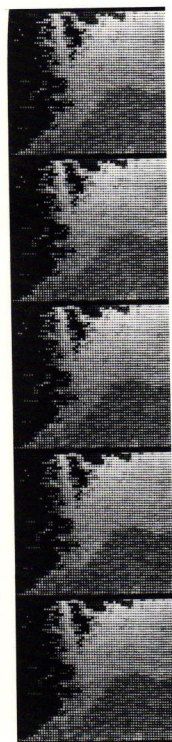
Nine-lens view of New York City Coast and Geodetic Survey's nine-lens mapping camera deflects the images from eight of the lenses through mirrors to form this flower-petal design. Joined by special rectifying equipment into a single wide-angle picture, the images produce an undistorted plan view of the city in which the street grid is square, while the tall buildings are flared out by perspective.

U.S. Coast and Geodetic Survey  
 9000 Rockville Pike  
 Bethesda, Maryland

right:

Model showing land value and population density for a computer demonstration of city planning simulation. By Eames office for IBM.





**Nimbus Earth Resources  
Observations  
Project NERO**

In an experimental IR tracking technique, a radiometer in Nimbus II, a NASA weather satellite, senses the sharp boundary between the 75° F. Gulf Stream and cooler waters. A computer calculates temperatures for five mile-square areas, and an optical device converts them into a color-enhanced mosaic. It shows land as green, cool water as yellow, warmer ocean as red. Splotches south of the boundary are clouds, shown in blue. Future satellites might read 200-foot squares and pick up sub-surface temperatures from instrument-carrying buoys, thus yielding heat maps useful for navigation.

James R. Greaves  
Manager  
Geophysical Space Sciences  
Allied Research Associates, Inc.  
Virginia Road  
Concord, Massachusetts 01742



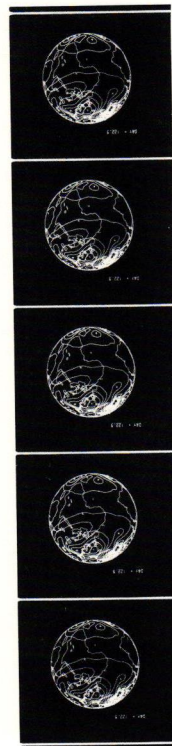
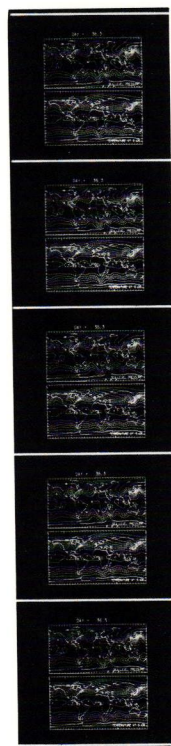
Earthquake prediction pictured left is a four hundred mile wide section of southern California and northern Mexico around the San Andreas Fault. These computer printed patterns indicate lines of constant energy in the earth's crust. This application computes changes in elastic energy and pinpoints locations where earthquakes are most likely to occur.

Willem J. van de Lindt  
IBM Scientific Center  
10889 Wilshire Boulevard  
Los Angeles, California 90024



Tornado isodensitracer. Isodensitometric trace of a portion of a photograph of tornado activity in which the quantized output of a microdensitometer is coded into a repeating series of symbols. When a set of scans is automatically completed, the contours of equal photographic density are readily recognizable.

Brian J. Thompson  
Ronald H. Johnson  
Technical Operations,  
Incorporated  
Technical Operations West  
441 North Whisman Road  
Mountain View, California 90404



Weather simulation. This is a weather map of weather that never happened, at least not in the real atmosphere. It is taken from a single frame of a computer-produced movie that shows changing sea-level pressure patterns of computer-generated weather that "happened" only in the electronic circuits of NCAR's Control Data 6600 computer system.

Henry H. Lansford  
Public Information Officer  
Dr. Akira Kasahara  
Project Head  
National Center for  
Atmospheric Research  
P. O. Box 1470  
Boulder, Colorado 80302

**Photography  
and the City**  
Charles Eames  
Glen Fleck  
Ray Eames  
1969  
15 minutes  
16mm and 35mm  
color  
prints available at  
approximately \$100.00  
Charles Eames  
901 Washington Boulevard  
Venice, California 90291

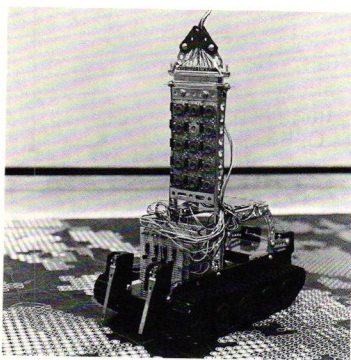
**Powers of Ten**  
Office of Charles Eames  
1969  
10 1/4 minutes  
16mm and 35mm  
color  
prints available  
for \$125.00  
Charles Eames  
901 Washington Boulevard  
Venice, California 90291

"Given that the physical environment is not in perfect harmony with every man's life style, given that architecture is not the faultless response to human needs, given that the architect is not the consummate manager of physical environments, I shall consider the physical environment as an evolving organism as opposed to a designed artifact. In particular, I shall consider an evolution aided by a specific class of machines. Warren McCulloch (1956) calls them ethical robots; in the context of architecture I shall call them architecture machines."

Grope and Stare are eyes for the architectural machine. Grope (illustrated) is a low resolution sensor with a retina composed of an array of photocells which can be sampled individually by the machine. Sampling its environment digitally, Grope can only tell the machine "yes" or "no", "I see light" or "I do not see light".

Inputs to Stare pass through an analog-to-digital convertor and are separately addressed as eight bit inputs.

GROPE is an \$18.00 Japanese toy tank with sixteen photocells mounted on it. Since the construction of the original GROPE by Steven Gregory, two further GROPEs have been built to investigate tactile inputs. One gropes through, bumping into limiting boundaries or obstacles; the



other samples horizontal surfaces for texture discrimination.

Decisions are made on the available evidence, but future and stronger evidence may contradict a previous 'probably.' A heuristic program must not only recuperate from the 'bug,' but its subsequent decisions must be improved by the 'experience' of the error.

In addition to giving our machine visual channels into the real world, two added benefits accrue from studies in machine vision. First, the heuristics of recognition appear to be very close to the heuristics of classification. In other words the way we see things may map directly into how we employ these images. The recognition of commonalities in patterns, intentions in forms, and perhaps meaning in architecture may be related to the heuristics, even semantics, of recognition. Second, not only does heuristic programming have an obvious use in machine vision, it has a still more significant and unexplored potential in computer-aided design. After all, the handling of initial design concepts is a matter of 'probably this, probably that.'

In low-resolution vision experiments, the inputs are restricted to a maximum of twenty-four photocells or photovoltaic cells. As a result discrimination can only be achieved by making the interface more active than in the high-resolution case. The eye must become an actuator: moving in order to affect the patterns on its own retina and observing the resulting changes and its behavior in response to these changes.

As an analogy, consider the problem of selecting the toy in a toy store that is the most fun for a five-year-old child. One method would be to list all the variables involved, their interrelationships (to the best of our knowledge), and the so-called utility function

(or parameters of maximization). A computer program might be able to consider all the combinations for this relatively simple problem, but even here, because of missing information and misinterpreted and misused (context-dependent) information, it probably would come up with a mediocre answer. A second method, one we believe to be more appropriate, is to send a five-year-old child into the store and simply ask him to play with the toys. By observing his behaviour, it will be obvious which toy of those he has played with is the most fun.

It is in this vein that we handle low-resolution vision. We give the device a role as opposed to a goal; looking as opposed to recognizing. Then we, or another machine, as an onlooker, follow the behaviour of the device and extract information from its behaviour rather than from the scene itself.

GROPE, 4 and STARE, 3 are two examples of such devices; each has a retina composed of an array of light-sensors which can be individually sampled by the machine. The retina can, for example, be actuated to move or rotate for the purpose of reexamining the status of its photocells. This technique can deal with moving objects, with major delimiting lines in a scene, and with large bodies of constant tone.

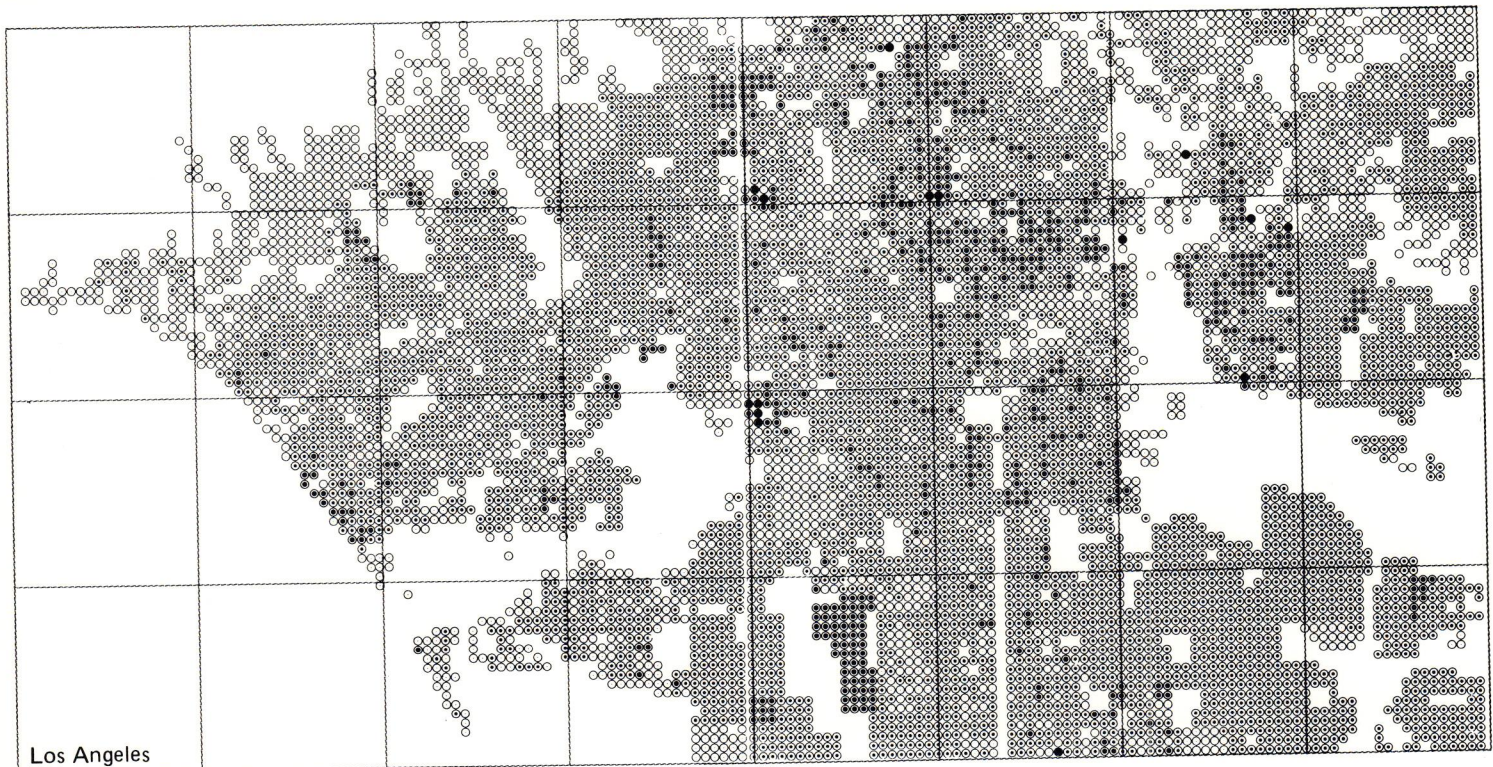
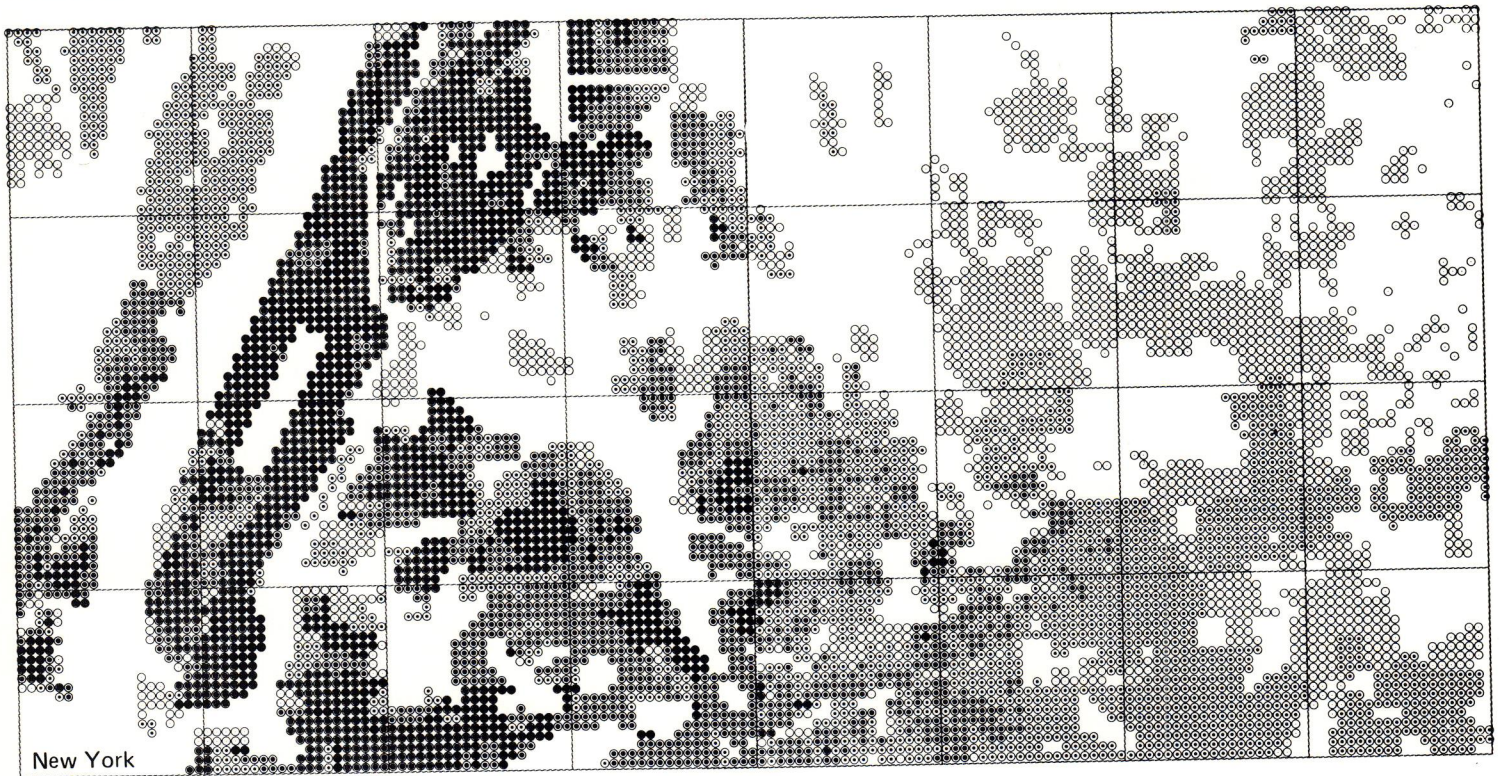
**INTUVAL** (Intuition and Evaluation) is a computer graphic program utilizing interactive computer graphics (IBM 360/91 and 2250 display scope) for systematic evaluation and iterative refinements of intuitively conceived design proposals. Presently **INTUVAL** uses a simple transportation model for evaluating some of the physical and socio-economic repercussions of alternative freeway routes. Evaluations for six parameters and several subcomponents each are displayed on line in bar chart form. A simplified impact model generates before-after land value maps on line. Trade-offs between major parameters are not internally performed but are left to the decision makers. The program is intended for designers and for non-expert user-participants.

#### Architecture Machine

Nicholas Negroponte  
1970  
153 pp  
7 3/8" x 7 3/8"  
\$5.95  
The M.I.T. Press  
50 Ames Street  
Cambridge, Massachusetts 02142

#### INTUVAL

Peter Kamnitzer  
School of Architecture and  
Urban Planning  
University of California  
Los Angeles, California 90007



Maps of twenty urban regions, all at a scale of 1:48,000. "This book is a preliminary investigation of visual systems of programming information for metropolitan-scale design. For our purposes there exist three major categories of urban information: (1) the nature of the people, (2) the nature of the land and its uses, (3) movement of people, goods, and information. These maps all describe (1) classifications (or type) of things or events,

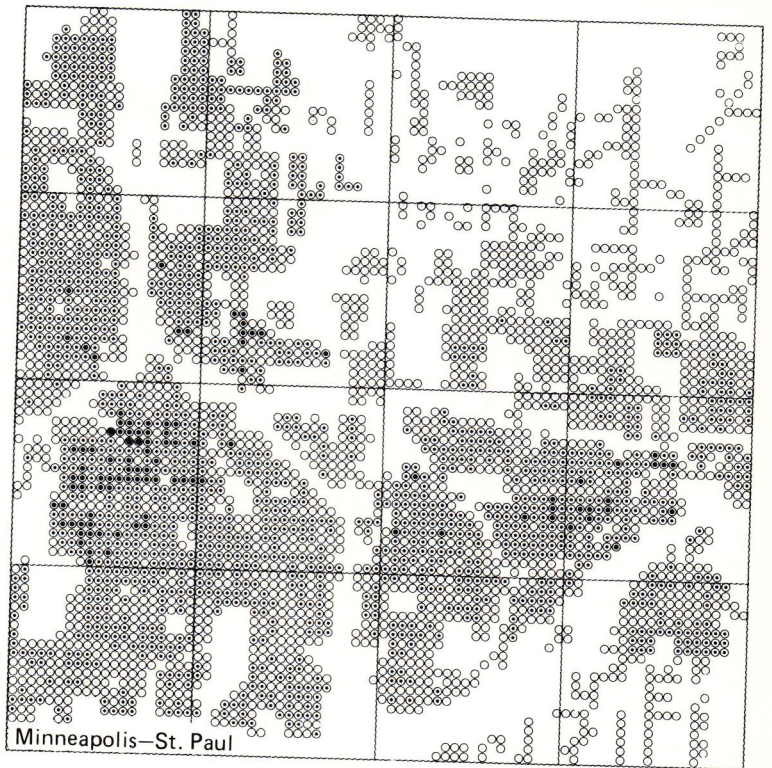
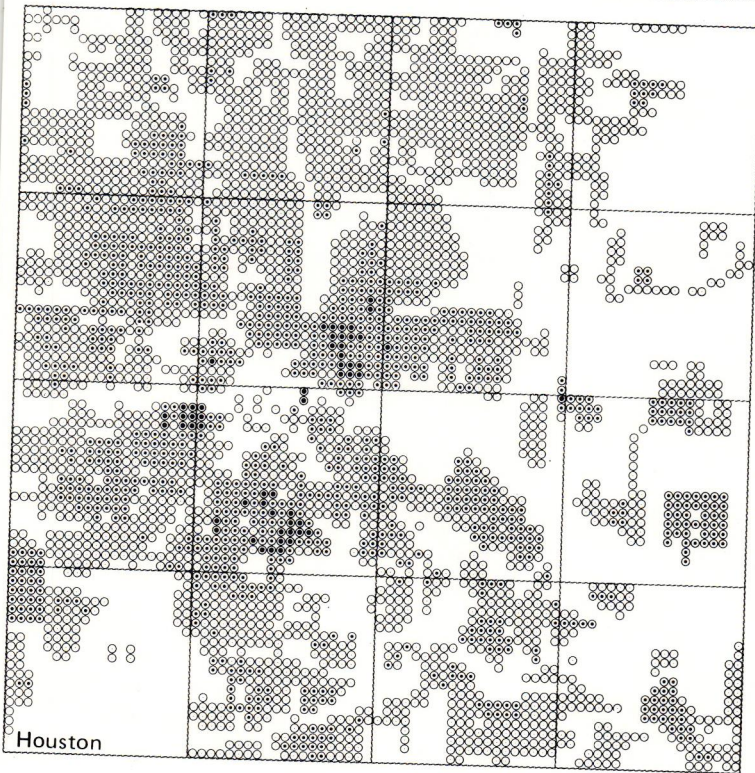
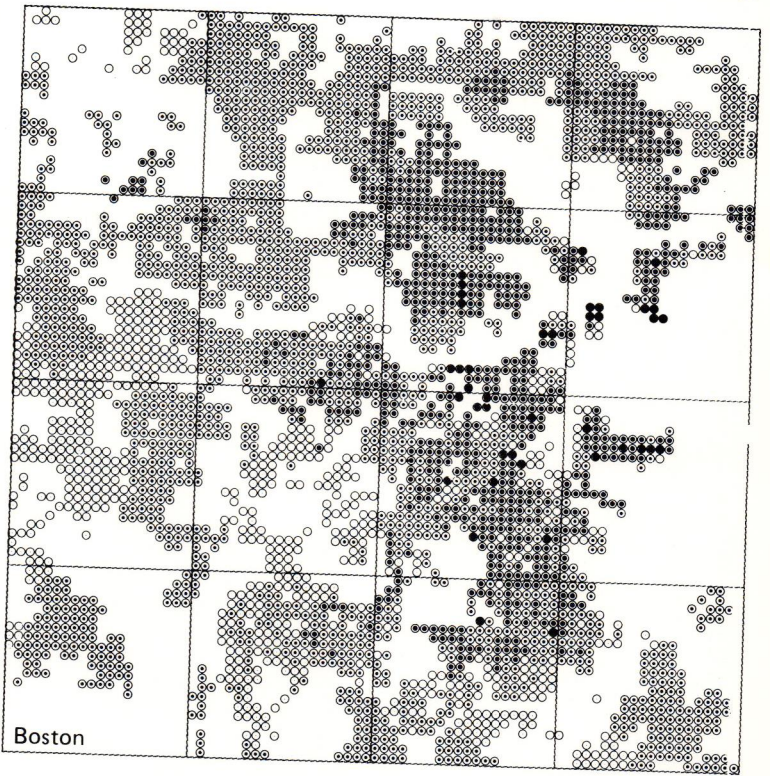
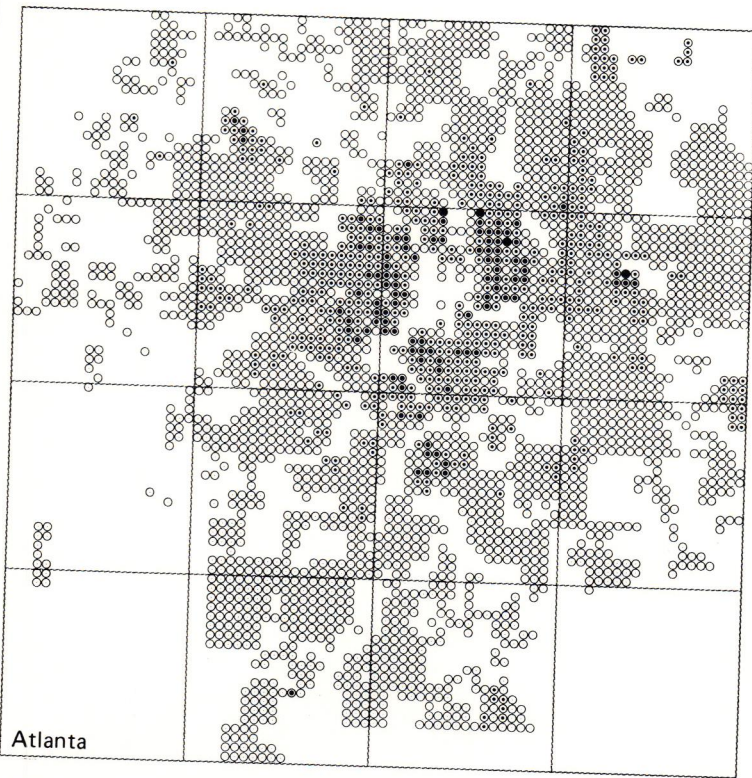
(2) their magnitude, (3) their location in space and time."

"Comparable data mapped at the same scale for a number of cities are useful because unfamiliar situations are best described and understood by comparison with familiar situations. Accurate and complete information about most urban phenomena is difficult to amass, and comparative information is now almost unobtainable."

"The information in this atlas (population, density, income intensity, and land use) is fundamental to an understanding of city form, but it was selected also simply because it was available."

"All of this information (1) is comparable by class, magnitude, and location, that is, the relationships (or non-relationships) of dissimilar urban phenomena can be studied directly; (2) is here organized visually; but (3) has

been also organized systematically and mathematically and can be factored, aggregated, projected in time, and reproduced by automated methods."



*These maps show population densities relatively and comparatively. There exists no standard scale or ledger used by American cities to describe themselves. There is no visual summary of U.S. Census information. This book hinted at solutions to the above.*

**Urban Atlas: 20 American Cities**

Joseph R. Passonneau and  
Richard Saul Wurman

1968

135 plates and introduction

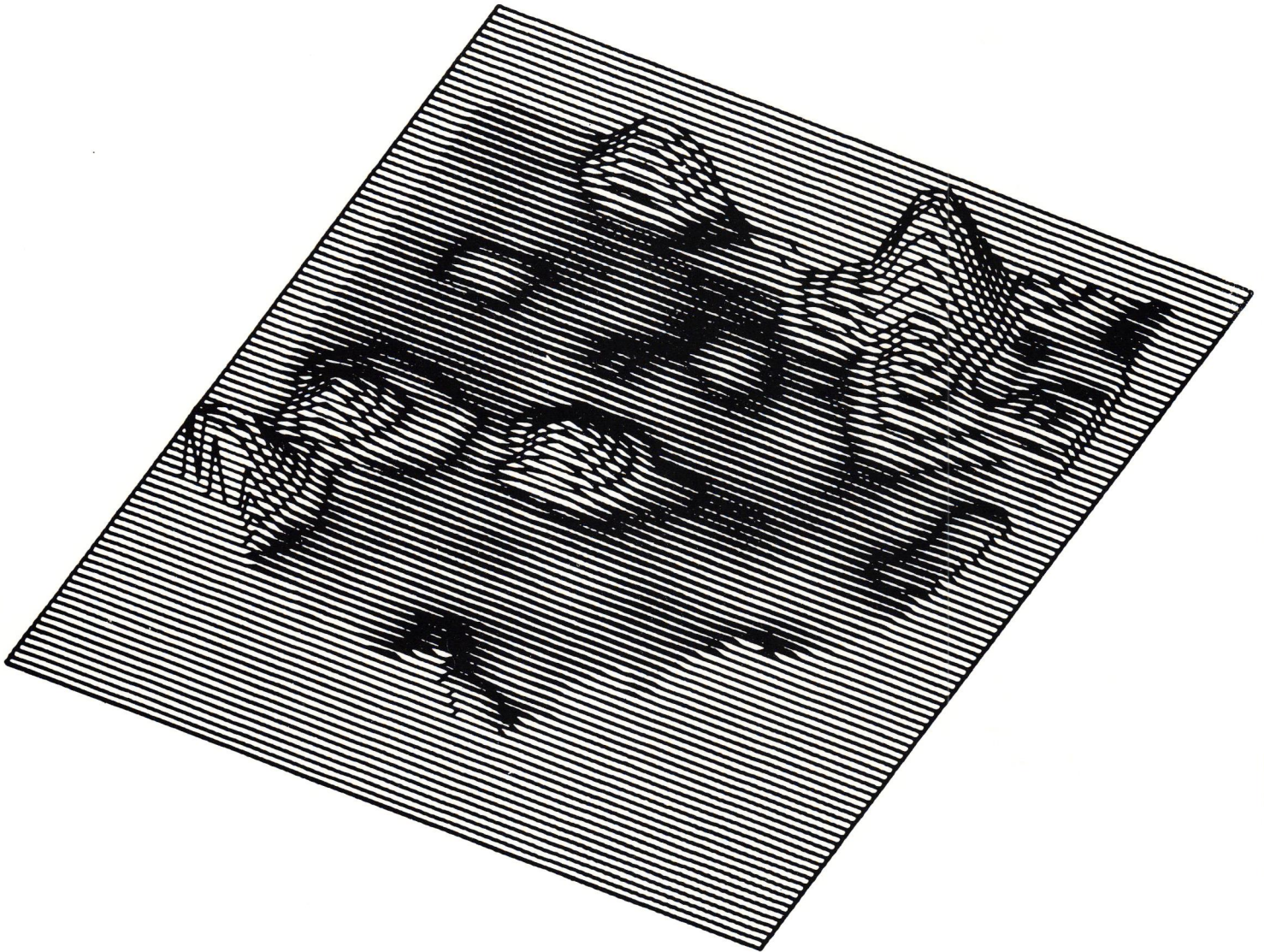
17 1/2" x 17 1/2"

\$100.00

The M.I.T. Press

50 Ames Street

Cambridge, Massachusetts 02142



“...the Laboratory has developed programs for high speed electronic digital computer mapping and new techniques for graphic display that utilize the accuracy, thoroughness, speed, and low cost of computers.”

The Laboratory's past work in graphics was built largely on the computer mapping program developed at Northwestern University's Technological Institute by Howard T. Fisher. The technique, called the Synagraphic Mapping

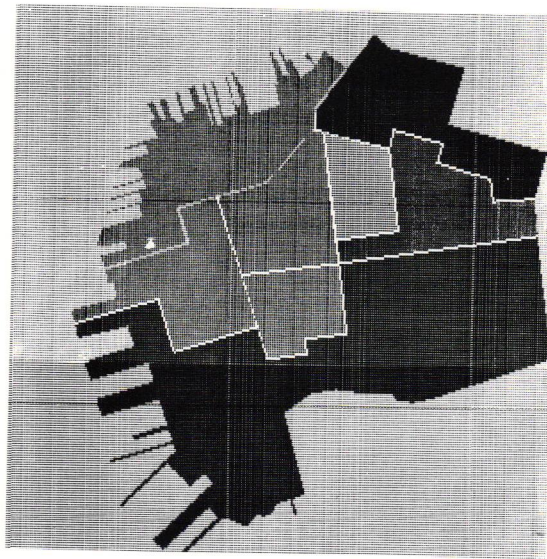
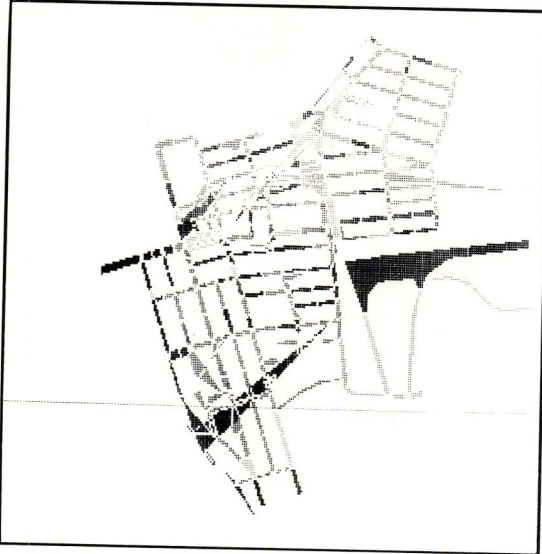
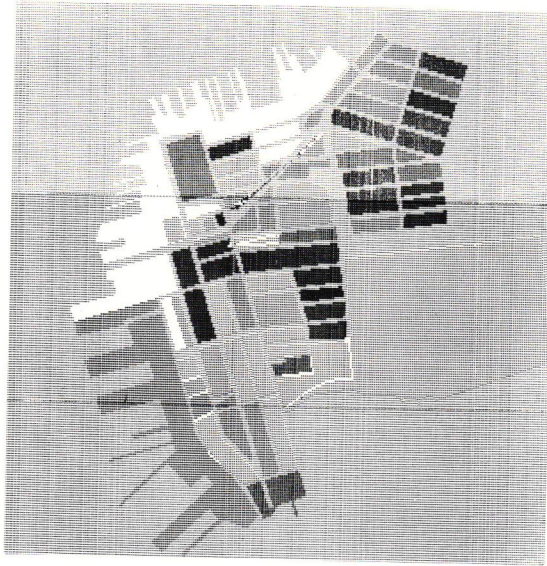
System, or SYMAP, is capable of composing spatially-distributed data of wide diversity into a map, a graph, or other visual display.

The second type of research undertaken by the Laboratory is pure research in the framework of general systems theory and spatial patterns. Much of the spatial analysis research constitutes work in what might be called “general spatial systems” theory, undertaken in relation to architecture,

landscape architecture, city and regional planning, and urban design, with emphasis on the roles of computers in programming, design, simulation, and evaluation.

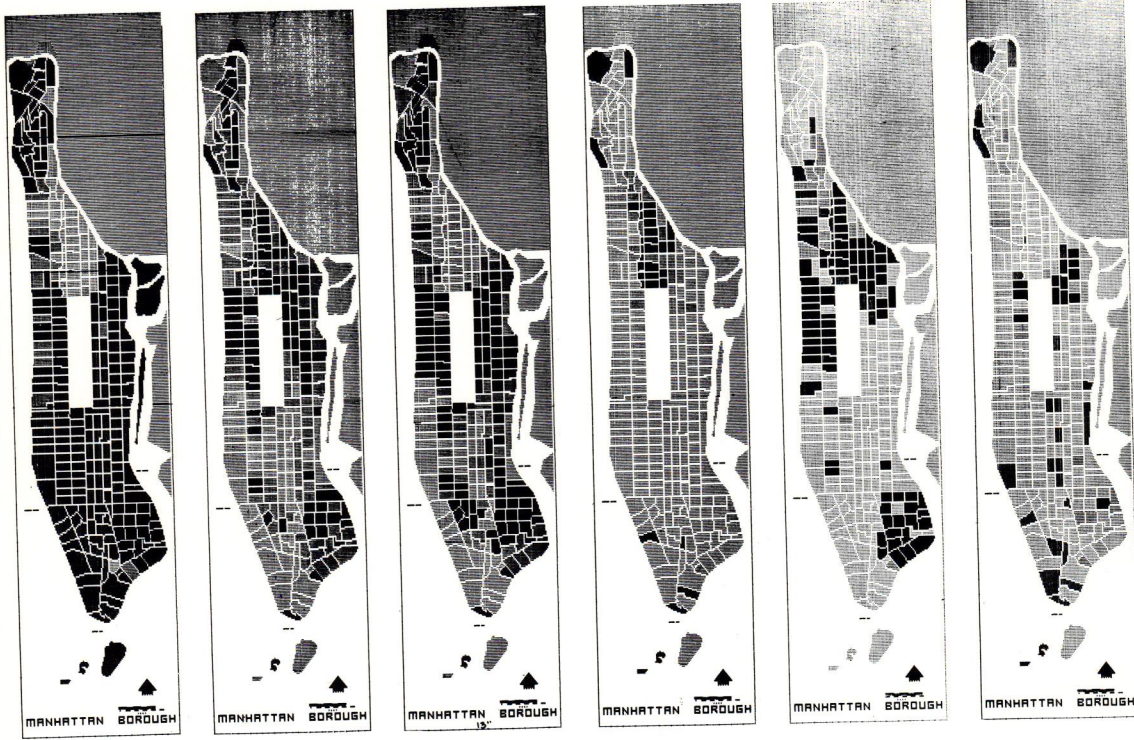


East Boston Recreation Study

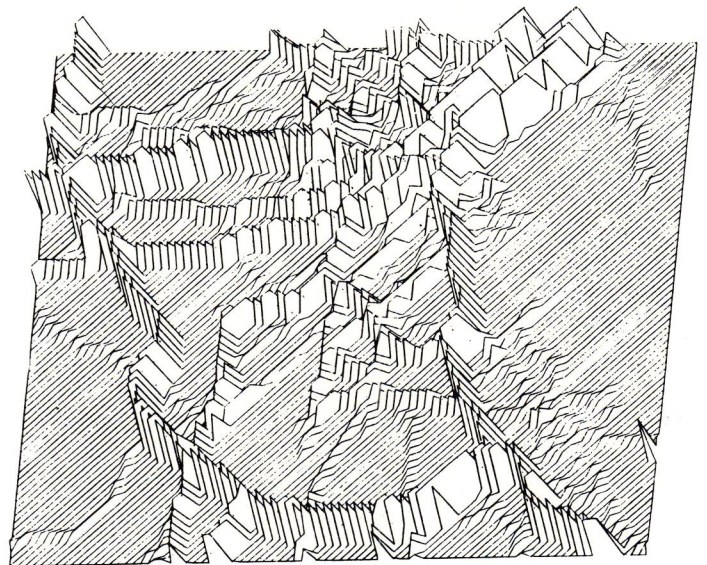
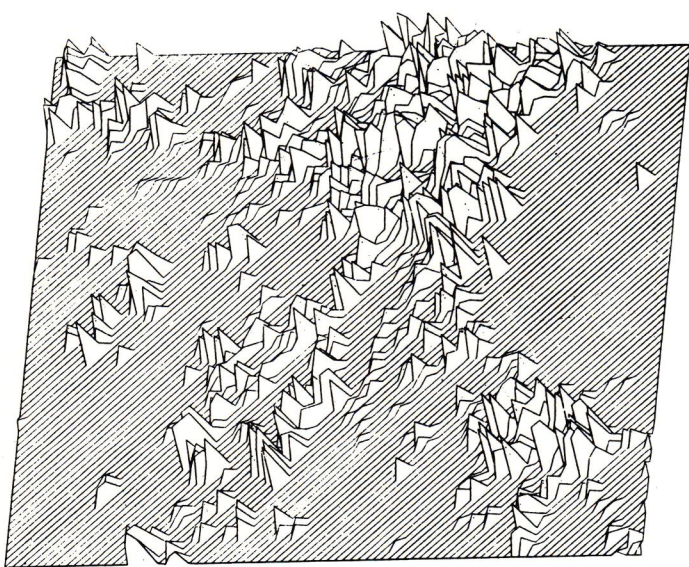


*The Laboratory was known for some time for its major program, SYMAP, but has more recently branched out into many different programs, some of which are shown here. Their looseleaf binders of programs are certainly worth purchasing.*

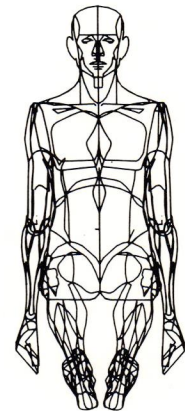
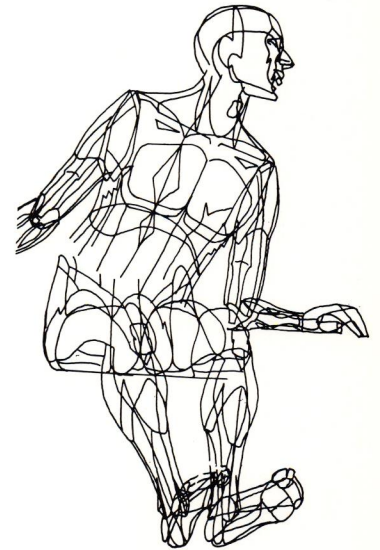
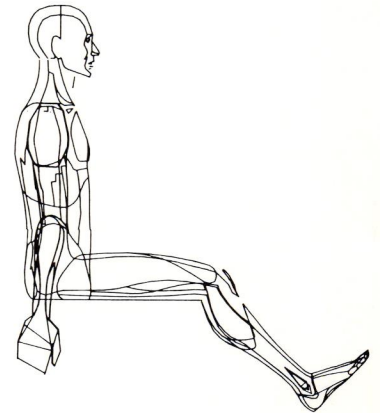
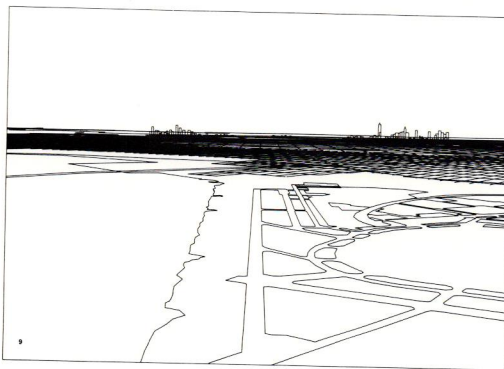
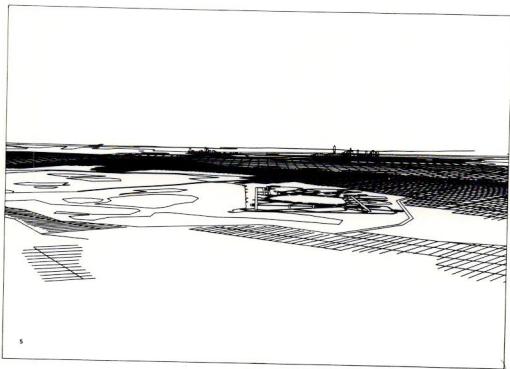
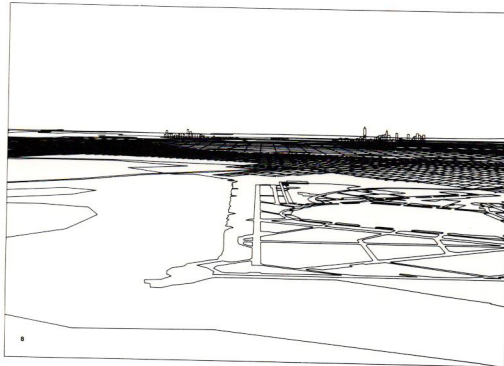
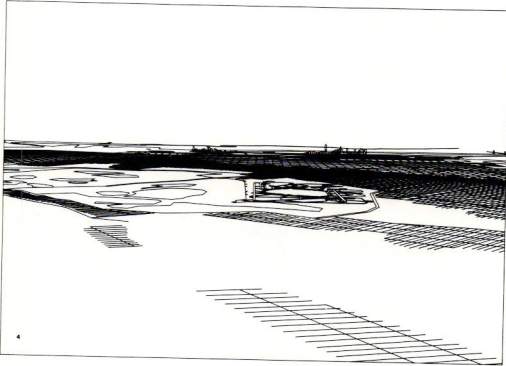
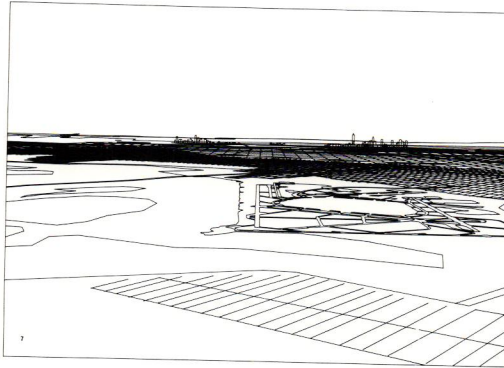
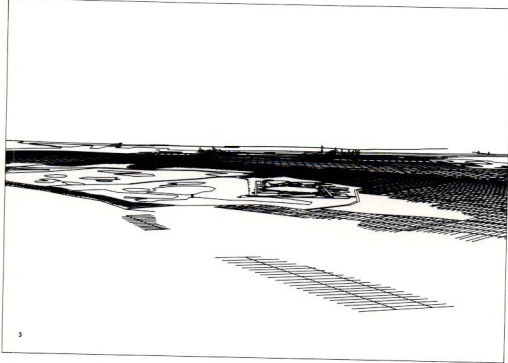
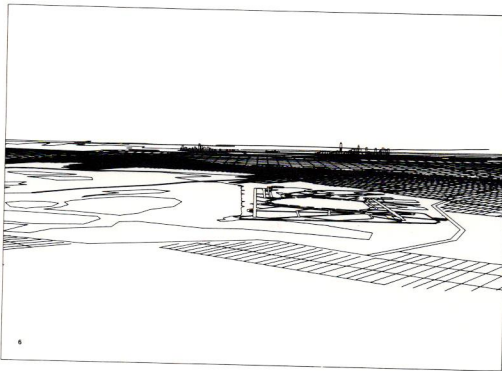
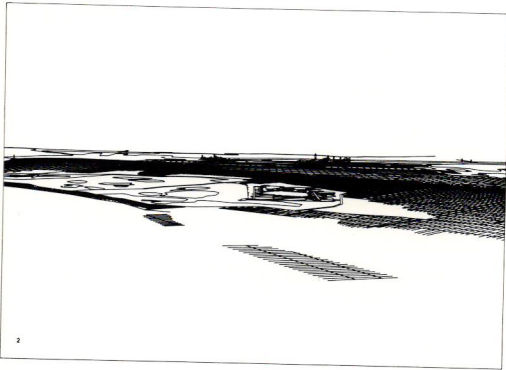
Manhattan Low Income Study



Boston industry and traffic flow diagrams



**Laboratory for Computer Graphics  
and Spatial Analysis**  
200 pp  
8 1/2" x 11"  
\$12.00  
Graduate School of Design  
Memorial Hall 114  
Harvard University  
Cambridge, Massachusetts 02138



*William Fetter who was supervisor of the Computer Graphics Division of Boeing has been involved in the production of many different projects of great fascination.*

*for use in man-machine interaction studies, the measurements of the man represent the man-measurement of 50 percent of Air Force pilots, based on anthropometric data.*

**William Fetter**  
705 North Oakland Avenue  
Carbondale, Illinois 62901

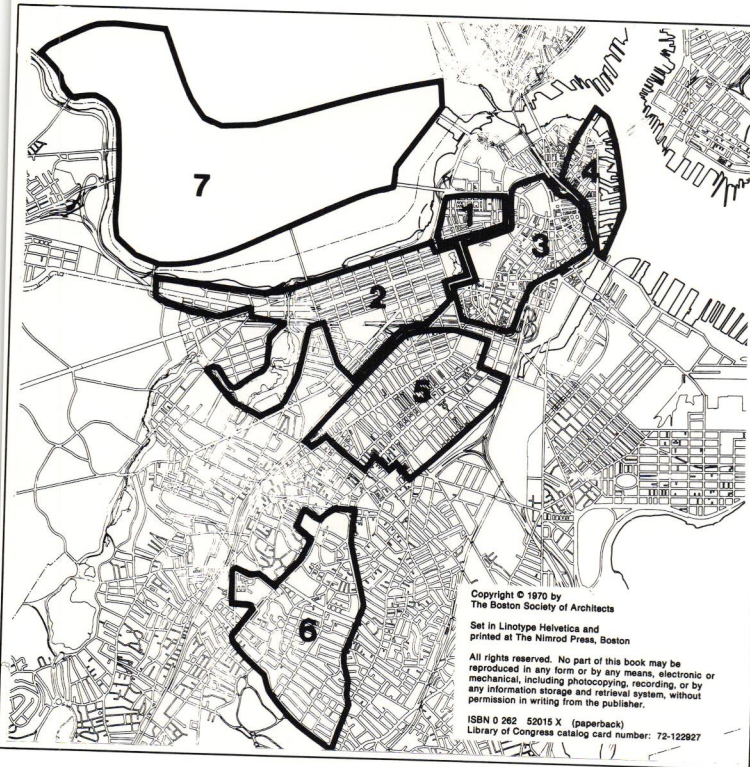
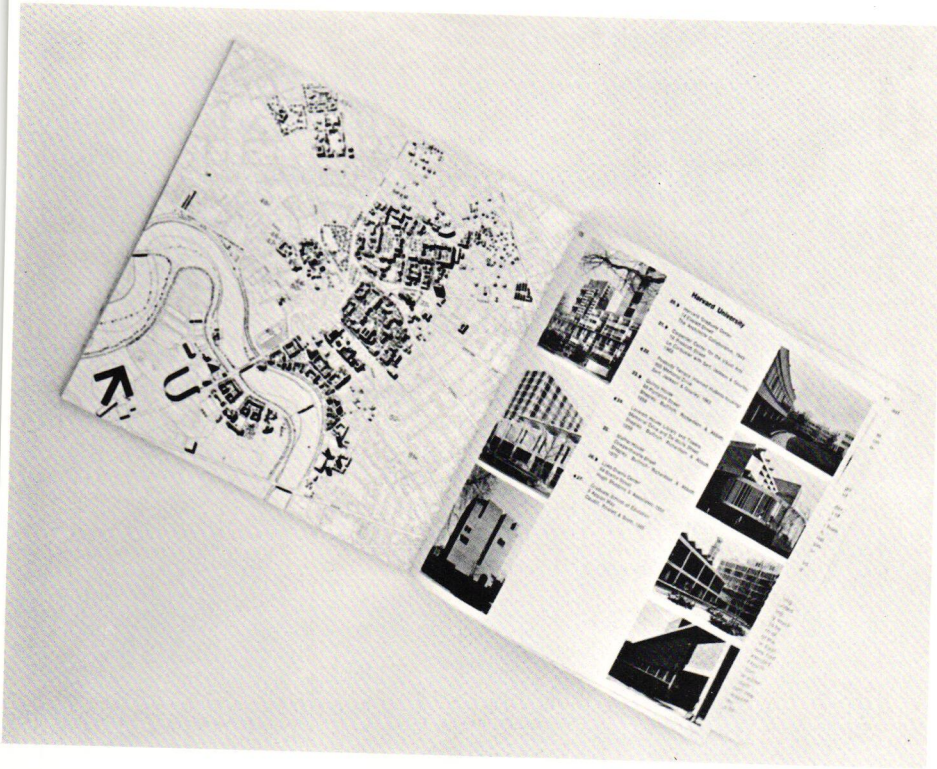
**Computer Graphics in Communication**

William Fetter  
1965  
128 pp  
6" x 9"  
\$4.95 hardcover  
\$3.50 softcover  
McGraw-Hill  
330 West 42nd Street  
New York, New York

*The two shown above are: the landing at an airport in a computer generated film, and a computer drawn man which has been used in a number of films at Boeing, and in this case, commercially for Norelco. Designed*

*William Fetter used the animated figure data he created at Boeing through arrangements with Computer Graphics Inc.*





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Originally prepared to introduce Boston to members of the American Institute of Architects meeting there in June, 1970, this guide is a thoroughly professional and handsomely presented handbook for the practicing architect, planner, or deeply interested layman. Organized by sections of the city, the book attempts to communicate the unique character of each, and to demonstrate their historic-architectural cohesion.

*Boston Architecture is a finely produced guide of the seven sections of Boston oriented to architects. I fault this where I find fault with many other guides of this kind in that their photographs, although of high quality, have a tendency not to show buildings in context but buildings for buildings sake.*

**Boston Architecture**  
Edited by Donald Freeman  
Boston Society of Architects  
1970  
122 pp  
9" x 9"  
\$2.95  
The M.I.T. Press  
50 Ames Street  
Cambridge, Massachusetts 02142

1904 list of Baedeker's guides

Nord Amerika  
Canada  
Alps (Eastern)  
Austria  
Belgium and Holland  
Berlin  
Egypt  
France (Northern)  
France (Southern)  
Germany (Northern)  
Germany (Southern)  
Germany (Rhine)  
Great Britain  
Greece  
Italy  
Italy (Northern)  
Italy (Central)  
Italy (Southern)  
London  
Norway, Sweden, Denmark

Palestine and Syria  
Paris  
Spain and Portugal  
Switzerland  
United States

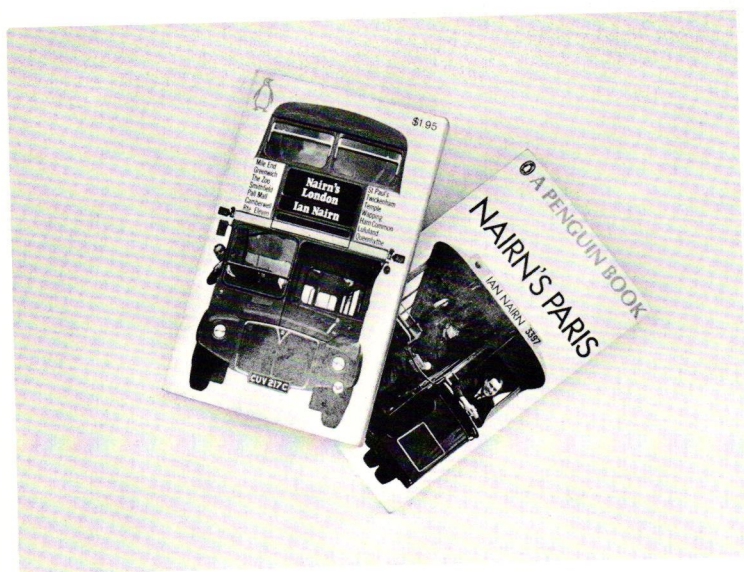
Karl Baedeker  
4 1/4" x 6 1/4"  
from \$.90 to \$4.80  
originally published by  
Charles Scribner's Sons

**Nairn's Paris**

Ian Nairn  
1968  
220 pp  
4 3/8" x 7"  
\$1.65  
Penguin Books, Inc.  
7110 Ambassador Road  
Baltimore, Maryland 21207

**Nairn's London**

Ian Nairn  
1966  
272 pp  
4 3/8" x 7"  
\$1.95  
Penguin Books, Inc.  
7110 Ambassador Road  
Baltimore, Maryland 21207



"This guide is simply my personal list of the best things in London. . . .What I am after is character, or personality, or essence. . . . The book is organized into what seemed to be common-sense areas. Within them, the order does indicate a route of a sort; but this is not intended to be a package tour. . . .Everything in the book is accessible. Locked churches are out unless the keys are freely given. . . .This, quite obviously, is not a normal guide and is not

trying to be one. If you want straightforward, general information, the best bet is probably the **Blue Guide.**"

*Nairn—As you can see from the above description this is a most personalized guide to a city and it is here listed as an example of just that.*



*Karl Baedeker was the turn of the century travel guide expert with no equal. I've listed here the books that he had available about 1904. Many of his guides are easily purchased, inexpensively, at used book stores. The one on the U.S., pictured open here, is particularly fun to read. I've used his books as supplemental guides on a recent trip to Europe and find them still quite informative.*

**Baedekers Paris**  
1909  
454 pp, 52 maps  
4 1/4" x 6 1/4"

**Baedekers United States**  
1904  
660 pp  
4 1/4" x 6 1/4"



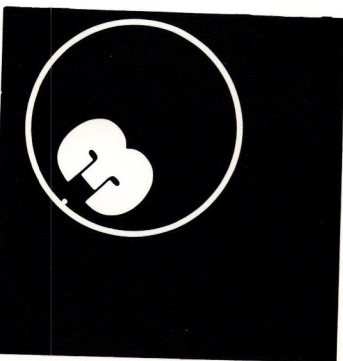
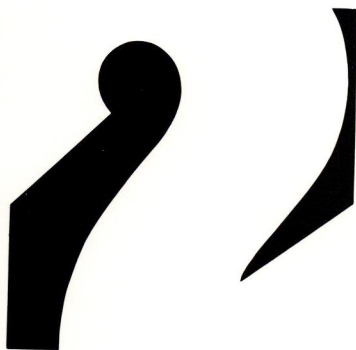
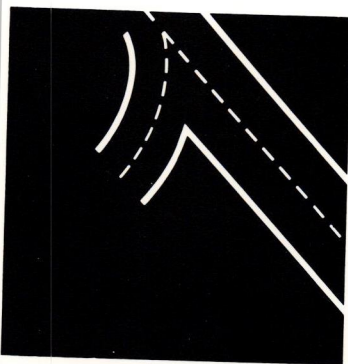


**Routes**—Public streets are the primary determinants of the form of the city. They range in scale from expressways, to major arterial streets, to significant streets confined to a particular area of the city. Certain buildings stand out along the routes, either by position or architectural appearance, and usually serve as visual landmarks which help to identify specific places or characteristics of specific areas. The routes, and the physical environment along them, are the initial and dominant experience of the city for all people.

**Areas**—Housing, commerce and industry all expand along movement systems. These areas invariably touch on the major routes of the city and then grow out from them into fairly defined areas of consistent use. Within most cities, there are a limited number of areas of particular interest — downtown, universities, primary residential areas — each with its own architectural environment.

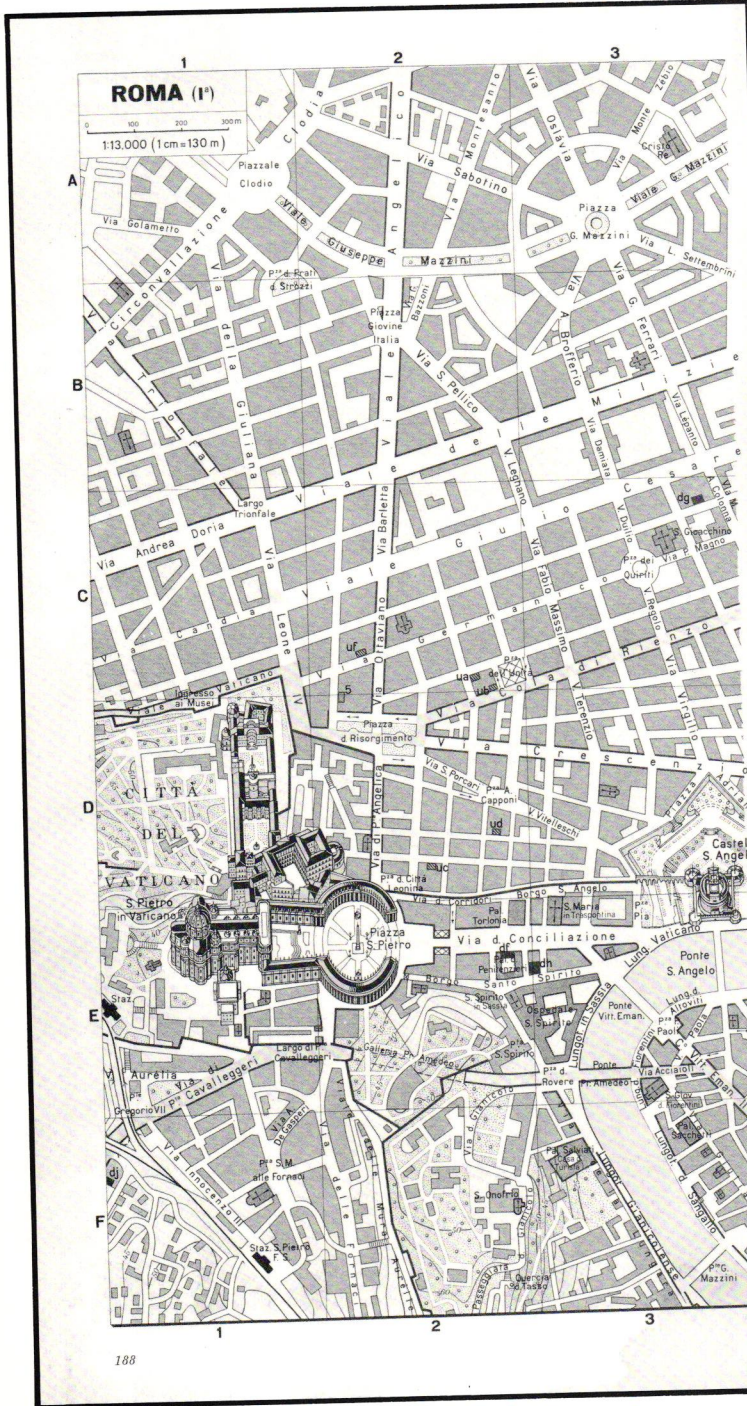
**Demography and Geography**—The routes and areas describe the city as it is today. But this present form is the result of development and change over long periods of time, and subject to a variety of influences — population expansion and movement, street growth and urbanization, regional transportation — all influence the present form of the city. This present form is, in turn, controlled through a series of legal and political districts which are designed to help it function and provide the complex range of services required by the population.

**Plans and Planners**—Present form and patterns of growth are generally the result of a limited number of consciously developed public policies and plans. Many cities have simply grown without any controls and the resultant form is dependent upon the network of streets. In all cases, the final achievement is the result of work by individual architects serving both the public and private clients in carrying out their objectives within the context of a broader image of the city.



**Man-Made Philadelphia**  
 Richard Saul Wurman and  
 John Gallery  
 96 pp  
 11" x 10"  
 Available Spring 1971  
 Philadelphia Magazine  
 1500 Walnut Street  
 Philadelphia, Pennsylvania 19102

from: Guida Rapida of Touring  
Club Italiano-authorized repro-  
duction



Touring Club Italiano has offices in 19 regions of Italy and offers its members a variety of publications for touring Italy and other areas of Europe. Guidebooks to 23 different regions of Italy contain detailed descriptive information about the people, geography, and culture of each area. There is a set of guidebooks with concise descriptions of 3 areas of Italy, as well as a set of similar brief guides to nine European countries. Routes are

mapped out by the Club so that a reader can choose an area and the length of time he wants to travel by following the Club's guide. The Club offers guides to the mountains and seas of Italy and to its restaurants and hotels. One book describes the cooking of Italy; another two volumes, the sports in 2 areas of Italy. The Club also offers a variety of road maps of Italy and an archeological map.

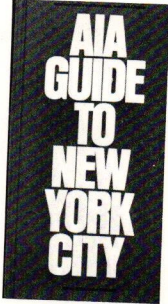
*Touring Club Italiano is Italy's answer to Michelin. They have produced a three volume guide to Italy which combines some of the aspects of Michelin's Green Guides and their standard red guide of France.*

*The maps of the larger cities rate significant buildings on a scale of annotation from coloring it a flat color to drawing it in perspective. They are clear and useable.*

**Touring Club Italiano Guides**  
270 to 344 pp  
12,5 x 23 cm  
4400 L to 5450 L  
(\$7.04 to \$8.80)  
A83 Italia Settentrionale  
A84 Italia Centrale  
A85 Italia Meridionale  
Touring Club Italiano  
Corso Italia N10  
20832 Milano, Italy

SEE PAGES 82-153

# MIDTOWN MANHATTAN



The guide is published under the sponsorship of the AIA, New York Chapter. Each of the five boroughs is discussed separately with its own maps, tour instructions, and individually numbered entries. Buildings, structures, streets, landmarks and parks are captured in photographs. There are more than 1500 entries, with informative descriptions.

The primary purpose of this book is to indicate, by way of thou-

sands of examples, how the buildings, streets, tunnels, structures, monuments and public spaces, both open and enclosed, serve as backdrop, stage and roof for the myriad lively and life-giving activities whose totality make up the phenomenon we know as New York City.

The ultimate purpose of the guide is to enable New Yorkers—permanent or temporary—to enjoy themselves while at home

and abroad in the city. It attempts to tie landmarks, whether world-renowned or obscure, to their models and their architectural and historical relatives.

*Norval White and Elliot Wilensky have produced the best of the AIA initiated guides. It is a compendium of data and small photographs of buildings, places and things aimed at the professional.*

**AIA Guide to New York City**  
Norval White, Elliot Wilensky,  
Editors  
1968  
464 pp  
5" x 10 1/4"  
\$6.95  
Macmillan Co.  
866 Third Avenue  
New York, New York 10022

copyright by New York Chapter  
American Institute of Architects



## Introduction

Over the past year, I and a team of experts, have been working on this new edition of the guide to extend its scope without losing its original pocket size and fine quality printing.

Our aim has been to help Londoners and tourists both to enjoy London and to deal with any emergency. It is apparent that this book is providing an essential public service. Realising this we have given special attention to this factor throughout. For instance the 'Cry for Help' section is now more detailed and comprehensive, 'Childrens London' has added chapters for the ever increasing interest of children and parents in cultural and educational activities – such as 'Bird-watching', 'Trips out of London', 'Zoos, aquaria and aviaries'. For students there is an entirely new section dealing with their requirements, such as holidays, clubs, and accommodation.

In addition to the red star ✱ for outstanding distinction I have provided for the needs of people on a limited budget by introducing a quick reference blue spot ● indicating good value for money. The shopping guide is considerably enlarged, more comprehensive and authoritative. There is a new easy-to-read bus map and the special inclusion of a night bus map in the 'All-night London' section.

No advertising is carried. No one can buy a place in the guide. Every entry is here on its own merit.

I hope this guide will give help and pleasure and fulfil its aims. I would welcome any suggestions that might add to its value.

*Robert Nicholson*

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**Nicholson's London Guide**  
 Robert Nicholson Publications  
 1968  
 128 pp  
 3 3/4" x 6 3/4"  
 7/6 (\$90)  
 Seymour Press  
 334 Brixton Road  
 London SW1, England

\*\*\*

**FIFTH AVENUE**

From the Empire State Building to Grand Army Plaza (59th Street)

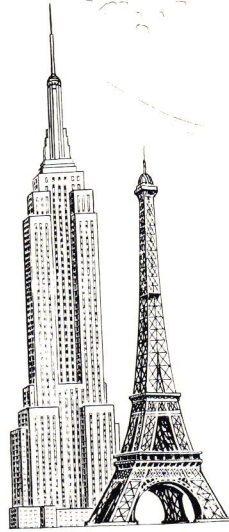
**EMPIRE STATE BUILDING \*\*\***

However you arrive in New York, by land, sea or air, the Empire State Building stands out as a landmark, its tower rising above Manhattan, shining at a height of 1472 feet. Named for New York the Empire State, its 102 stories make it the tallest building in the world.

The view from the top is so splendid that it deserves two visits : first by daylight, to understand the layout of New York; and then again in the evening, to enjoy the spectacle of the city's lights.

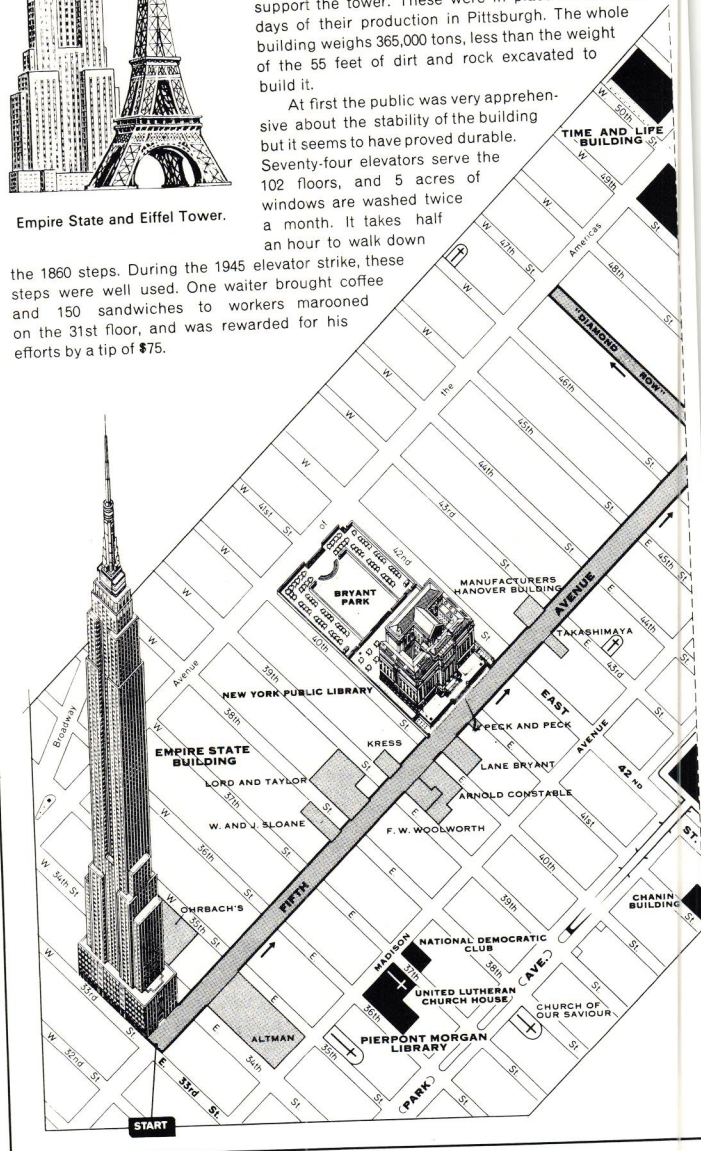
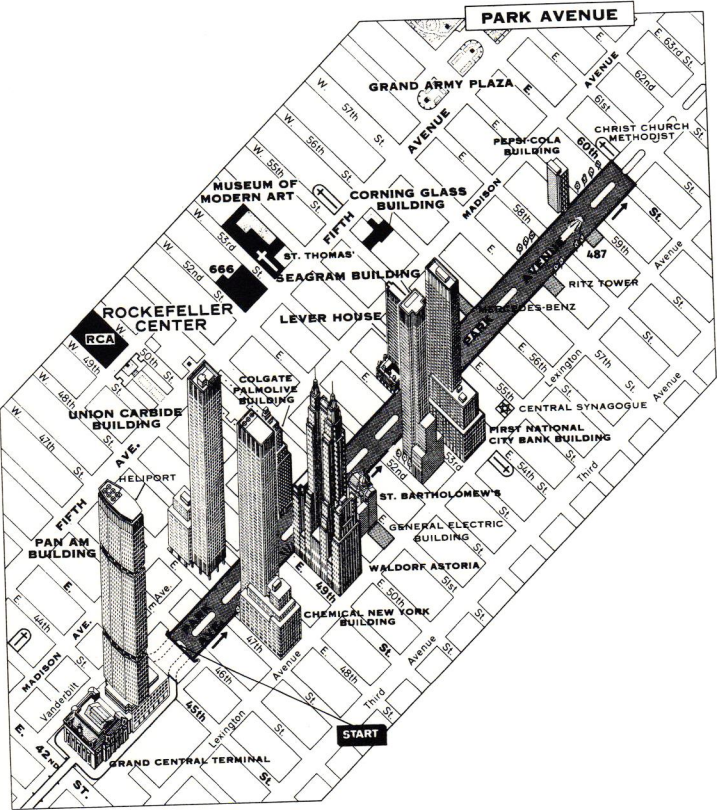
**The construction.** — Less than two years after the first excavations in October 1929, the building was opened in May 1931. Work progressed at a dizzy pace; at times, more than a floor rose each day. There are only two stories of foundations, but 60,000 tons of steel beams (enough for a double-track railroad from New York to Baltimore) also support the tower. These were in place within three days of their production in Pittsburgh. The whole building weighs 365,000 tons, less than the weight of the 55 feet of dirt and rock excavated to build it.

At first the public was very apprehensive about the stability of the building but it seems to have proved durable. Seventy-four elevators serve the 102 floors, and 5 acres of windows are washed twice a month. It takes half an hour to walk down



Empire State and Eiffel Tower.

the 1860 steps. During the 1945 elevator strike, these steps were well used. One waiter brought coffee and 150 sandwiches to workers marooned on the 31st floor, and was rewarded for his efforts by a tip of \$75.



"The Michelin maps and guides are edited and designed in a turn-of-the-century, white glazed-tile building on one of the outer boulevards of Paris. The scrupulous respect for information, the constant revision and the high communicative value of their design are the result of the team-work of 200 specialists, including seventy cartographers. The three main publications are the maps, the green-cover French tourist guides, and the red-cover Michelin guides

to hotels and restaurants. Concern for reliability is matched by an extremely clear editorial structure providing:

- (a) Basic data on 3700 towns and villages, their attractions, distances from other towns, timetables of ferries, custom houses, etc.
- (b) Town maps with cross routes, main places of interest, monuments, hotels, restaurants, main garages, one-way

streets, restricted parking zones, etc.

- (c) A selected list of garages, their specialization or affiliation, their working hours for Sundays and night service.
- (d) An extensive, graded selection of hotels and restaurants of all classes with indication of up-to-date prices and comforts.

This information is tabulated clearly, with typographic common sense, and notes in four languages."

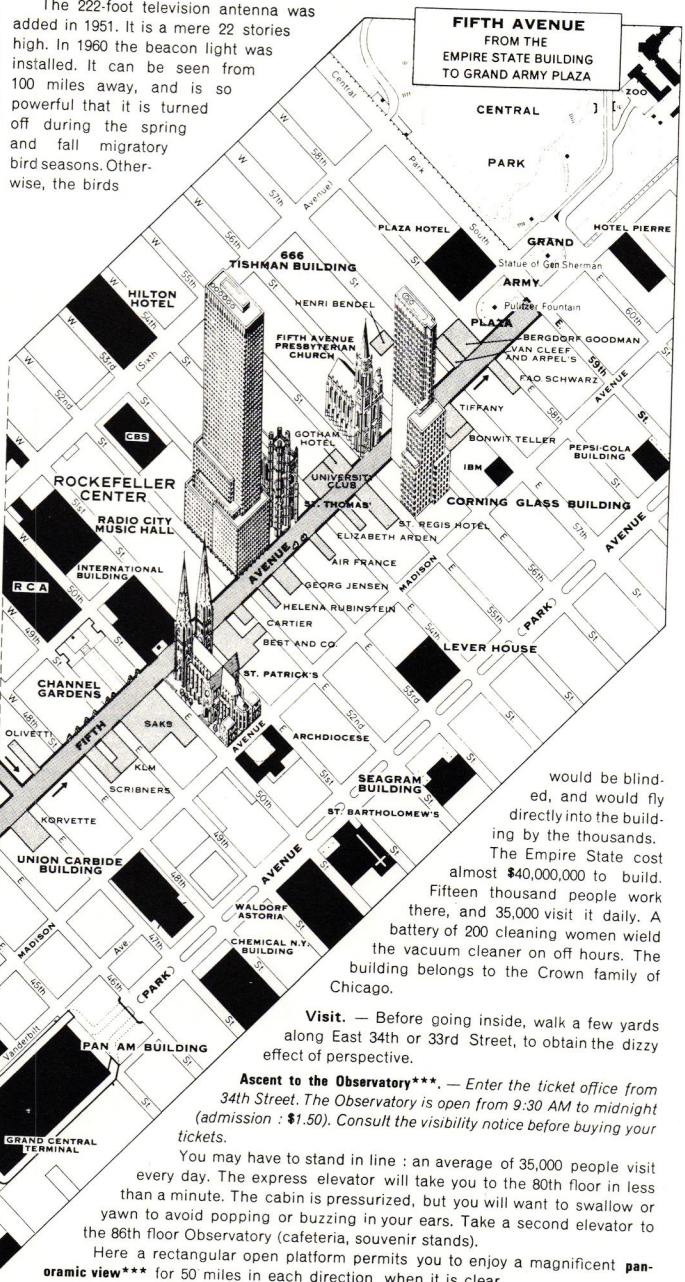
"Before 1923 all lettering on maps was in black. Then, as some regions became overloaded with data it became necessary to lighten the information of lesser importance by printing it in a light colour. The basic colour system is at present red for main road networks, yellow for secondary roads, and white for the others.

**FIFTH AVENUE**

★★★

From the Empire State Building to Grand Army Plaza (59th Street)

The 222-foot television antenna was added in 1951. It is a mere 22 stories high. In 1960 the beacon light was installed. It can be seen from 100 miles away, and is so powerful that it is turned off during the spring and fall migratory bird seasons. Otherwise, the birds



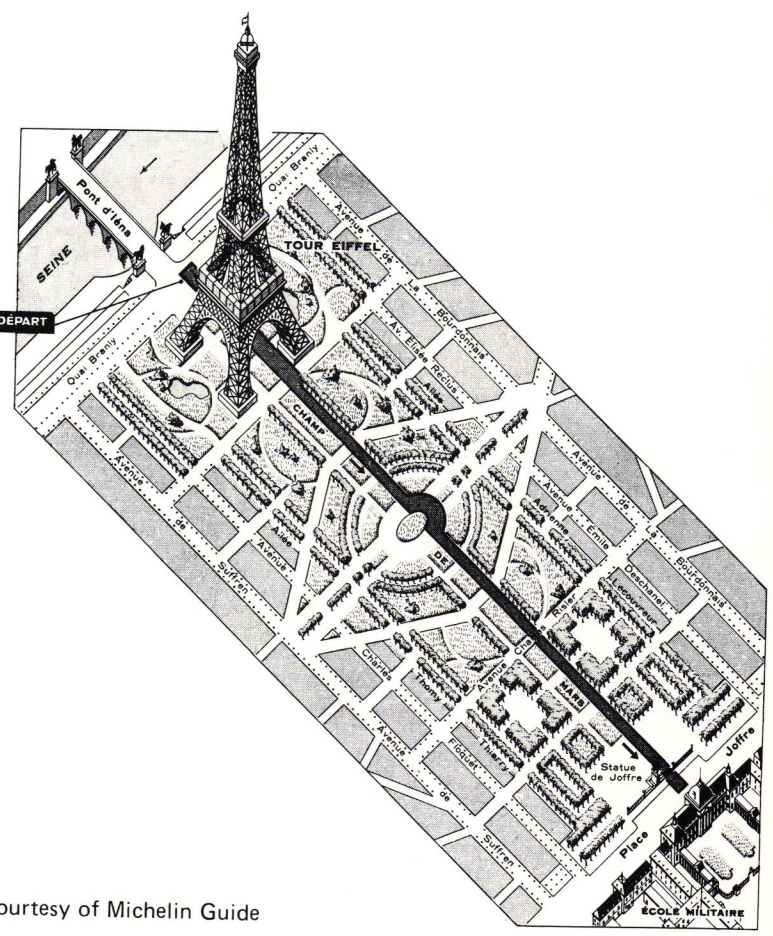
would be blinded, and would fly directly into the building by the thousands. The Empire State cost almost \$40,000,000 to build. Fifteen thousand people work there, and 35,000 visit it daily. A battery of 200 cleaning women wield the vacuum cleaner on off hours. The building belongs to the Crown family of Chicago.

**Visit.** — Before going inside, walk a few yards along East 34th or 33rd Street, to obtain the dizzy effect of perspective.

**Ascent to the Observatory\*\*\*.** — Enter the ticket office from 34th Street. The Observatory is open from 9:30 AM to midnight (admission : \$1.50). Consult the visibility notice before buying your tickets.

You may have to stand in line : an average of 35,000 people visit every day. The express elevator will take you to the 80th floor in less than a minute. The cabin is pressurized, but you will want to swallow or yawn to avoid popping or buzzing in your ears. Take a second elevator to the 86th floor Observatory (cafeteria, souvenir stands). Here a rectangular open platform permits you to enjoy a magnificent panoramic view\*\*\* for 50 miles in each direction when it is clear.

You may shudder to think that one July day in 1945, a bomber crashed into the building, at the level of the 78th and 79th floors. On bad days, or when the crowd is not too large, we advise you to take another elevator to the circular upper observatory which is glass enclosed.



courtesy of Michelin Guide



Panoramic routes are green. Rivers, lakes, canals, and the sea are of course blue. Representation of relief, given up in 1923, is being remodeled for a new issue of maps."

"The yearly collection of information for the continuous process of rejuvenation flows to both maps and guides, as the value of each is determined by how up to date they are. The Michelin services digest 50,000 survey

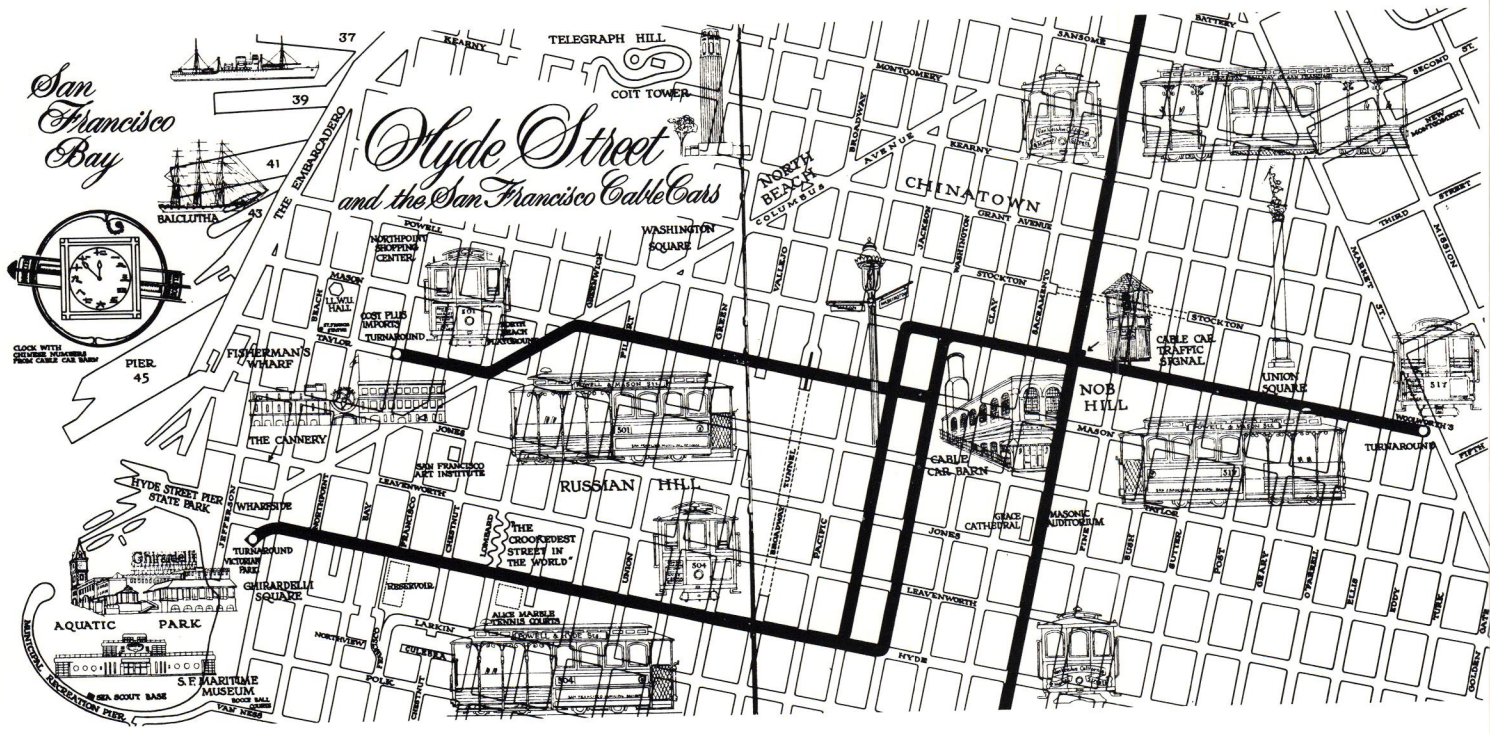
documents a year, compare them with descriptive tape recordings taken on site, and interview public works officials to feed their cartography department with tabulations of changes that have occurred."

New York City  
Michelin  
1968  
144 pp  
4 3/4" x 10"  
\$3.50  
French and European Publications  
610 Fifth Avenue  
New York, New York 10020

Covering essentially the whole city of Cambridge, Massachusetts, in a series of ten neighborhood tours, this book describes hundreds of buildings of all sorts—institutional, commercial, residential. Each building is illustrated with a small photograph; the date of construction and the name of the architect, when known, are given, together with a succinct comment by the author.

*This is the most rigorously produced walking tour guide of a city I know of. Unfortunately, the photographs show the buildings as individual jewels in the landscape as opposed to the way you would see them as you walk by.*

**Guide to Cambridge Architecture**  
Ten Walking Tours  
Robert Bell Rettig  
1969  
224 pp  
8" x 5"  
\$3.95  
The M.I.T. Press  
50 Ames Street  
Cambridge, Massachusetts 02142



This publication includes walking and driving tours of those attractions in San Francisco and the bay area presumed to be of the greatest interest to children. Maps isolate and identify significant structures.

*This book turns out to be drives for adults with children in their cars in San Francisco. Nevertheless the maps, although not particularly to my taste, are useful and the idea of doing a book for children is to be commended.*

**Walks for Children in San Francisco**  
Margot Patterson Doss  
Maps by Len Darwin  
1970  
64 pp  
8" x 8"  
\$2.95  
Grove Press Inc.  
53 East 11th Street  
New York, New York 10003



**Pan Am Walking Tour of Amsterdam: Part 1**

**Read this first.**  
 -If possible, take this tour any day but Sunday. Amsterdam's shops are closed that day, and even the open-air markets are shuttered then. The Heineken Brewery is open for tours on Monday through Friday. Your hotel can usually tell you the days and hours for all activities, or get in touch with the Amsterdam Tourist Association.  
 -Be sure to play the first portion of this tape before you leave your hotel room.  
 -Insert the cassette into the cassette player with the label marked Tour of Amsterdam.  
 -The tour stop numbers on this map correspond to the numbers that your guide (on the tape) will refer to when giving you directions.  
 -The tour stop numbers on this map correspond to the numbers that your guide (on the tape) will refer to when giving you directions.  
 -Keep this map handy as you walk along your tour route. When your guide (on the tape) tells you where to go next, you can follow his directions easily on the map.  
 -We've done as much as possible to keep the tour map clear and simple. But, if you should get confused or lost, just run your tape back a little way (by rewinding) and listen to the instructions again while following them on the map.  
 -Be sure to dress comfortably and wear your walking shoes. Many of Amsterdam's streets, especially in the old quarter, were not designed for high heels.  
 -Bring along some money for taxicabs, entrance fees, food and drink. And take a traveler's check or two in case you want to buy something along the way.  
 -For privacy, and to avoid annoying others in small, quiet places, be sure to use the small earphone speaker provided with your cassette player.  
**Have a good time!**

© 1970 Pan American World Airways, Inc.

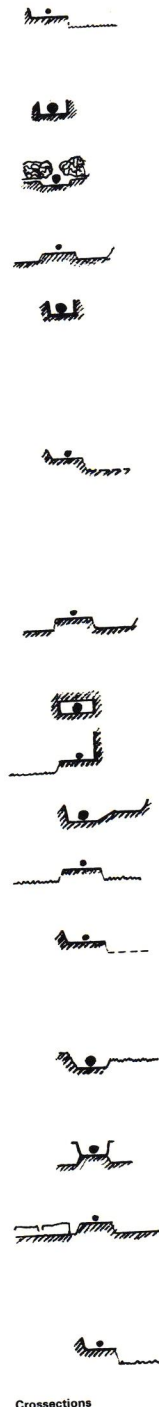
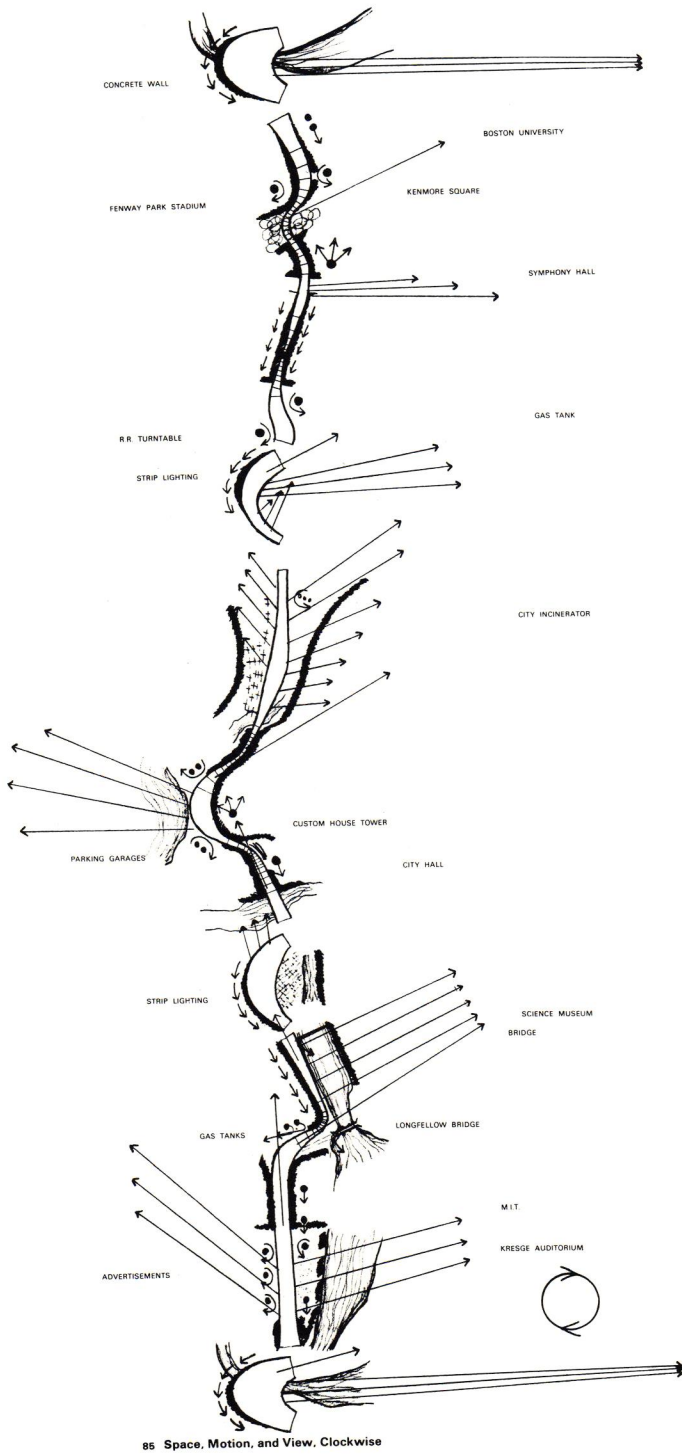
Each tour includes an hour of actual cassette tape time, equivalent to four to seven hours of tour time, depending on the pace the traveler sets for himself. Six different cassettes are now available - walking tours of Amsterdam, London, Paris and Rome, and driving tours of the English and French countryside. Each tape comes complete with a detailed map of the tour area.

- Pan Am Tours on tape offer travelers several bonus conveniences:
- 1) travelers can familiarize themselves with a tour before leaving the hotel room
  - 2) they can see and hear simultaneously, thus eliminating the nuisance of continually glancing at a guidebook
  - 3) the narrative includes precise instructions on getting from one spot on the tour to the next
  - 4) the tapes provide a permanent

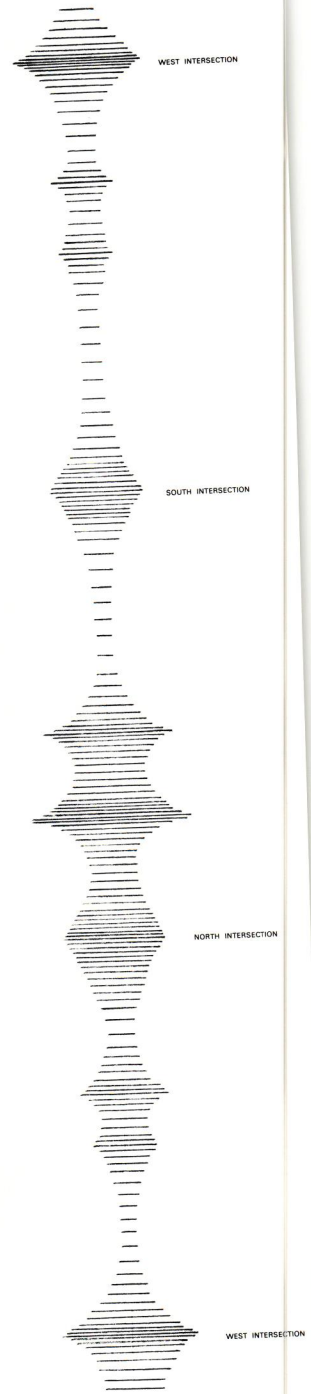
narrative of the tour and can be used to accompany slides and film  
 5) a blank cassette is provided with each Pan Am recorder for those who wish to record their own impressions.

*The idea is terrific, the execution only average. I would hope that further generations of this idea either by Pan American or others improve the quality of their map and soundtrack.*

**Pan American Taped Tours**  
 London, Paris, Rome, Amsterdam, English Countryside, Fontainebleau and Versailles  
 \$2.95 cassette  
 \$19.95 tape player with tape  
 Pan American World Airways (or your travel agent)  
 Box 5337  
 Detroit, Michigan 48211



Crosssections



Presumed Tempo of Attention

"This monograph deals with the esthetics of highways: the way they look to the driver and his passengers, and what this implies for their design. We emphasize the potential beauty of these great engineering achievements, as contrasted with their current ugliness. Since the realization of this visual potential lies in the hands of the men who design them, this monograph is addressed to the highway engineer. We hope that he will

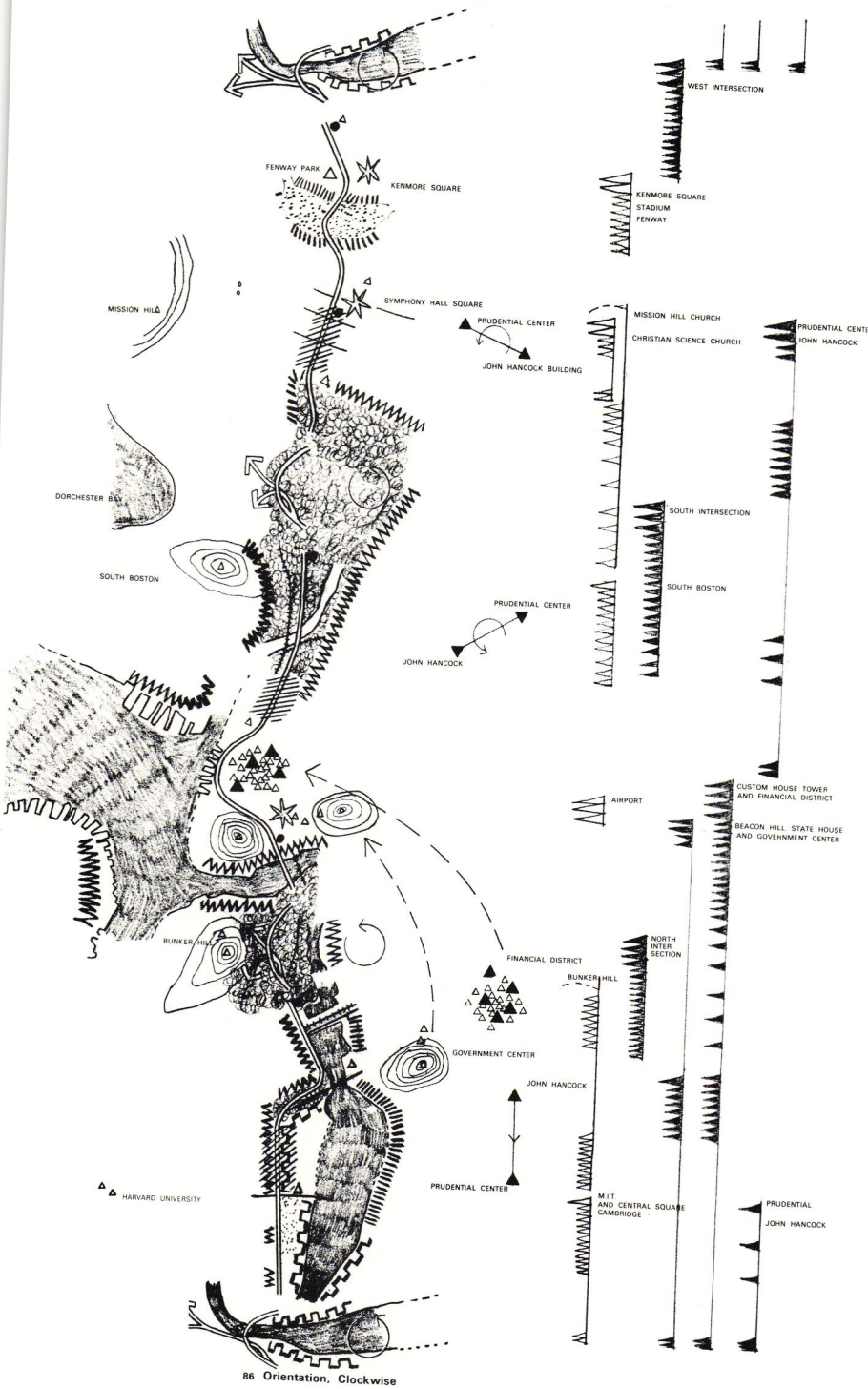
find our ideas of use."

"We became interested in the esthetics of highways out of a concern with the visual formlessness of our cities and an intuition that the new expressway might be one of our best means of re-establishing coherence and order on the new metropolitan scale. We were also attracted to the highway because it is a good example of a design issue typical of the city: the problem of de-

signing visual sequences for the observer in motion. But in the end the study contributes something toward making the highway experience a more enjoyable one, we will be well satisfied."

"Most of our particular conclusions are the result of a series of studies of existing highways and of people's reactions to them. They have been further modified by our attempt to develop appro-

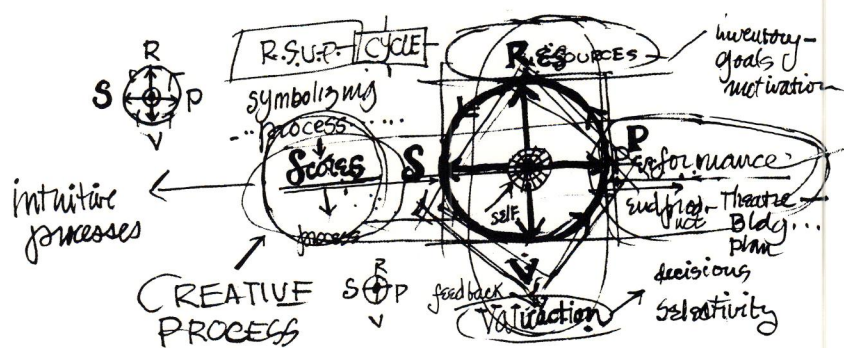
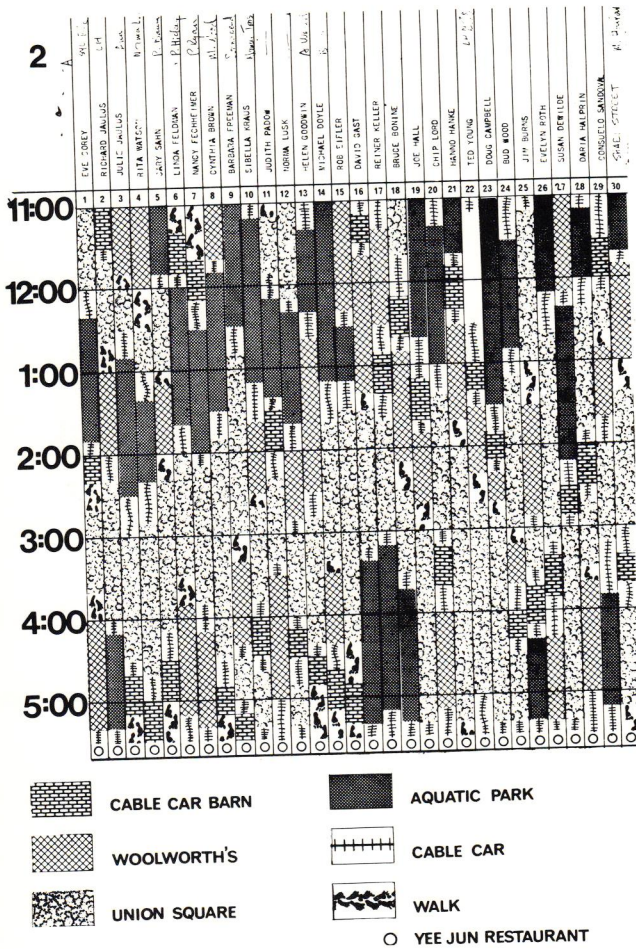
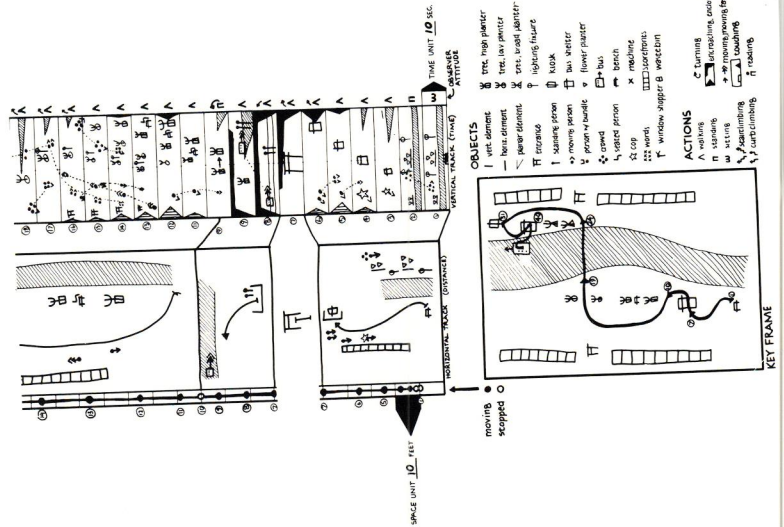
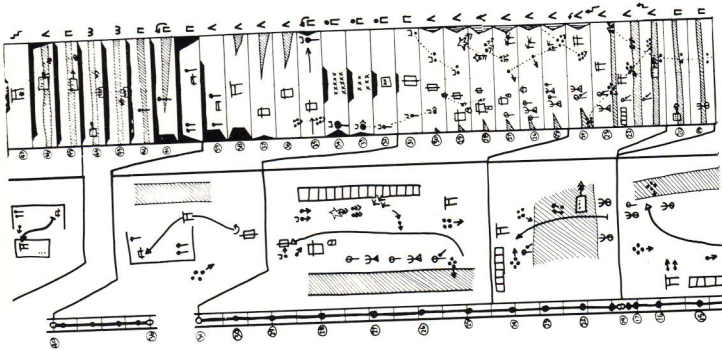
prate methods of design. Chapter 1 contains a summary of our findings and conjectures, while Chapter 2 proposes a new graphic language for describing visual sequences on the highway. Chapters 3 and 4 use these concepts and this language to analyze the impact of an existing road, and to illustrate how a new road might be designed."



86 Orientation, Clockwise

Sequence experience notation first came to my attention in an article by the same name by Philip Thiel in the *Town Planning Review* of April 1961. *The View from the Road* is an enriching outgrowth of that idea (which is not to say that Thiel's piece was its source). Appleyard, Lynch and Myer have produced a veritable dictionary of sequence space notation. Especially useful to the student, the para-professional and the professional.

**View from the Road**  
 Donald Appleyard, Kevin Lynch  
 and John R. Myer  
 1964  
 64 pp  
 9 1/2" x 15 1/8"  
 \$15.00  
 The M.I.T. Press  
 50 Ames Street  
 Cambridge, Massachusetts 02142



"This book started as an explanation of 'scores' and the interrelationships between scoring in the various fields of art. Scores are symbolizations of processes which extend over time."

"I saw scores as a way of describing all such processes in all of the arts, of making process visible and thereby designing with process through scores."

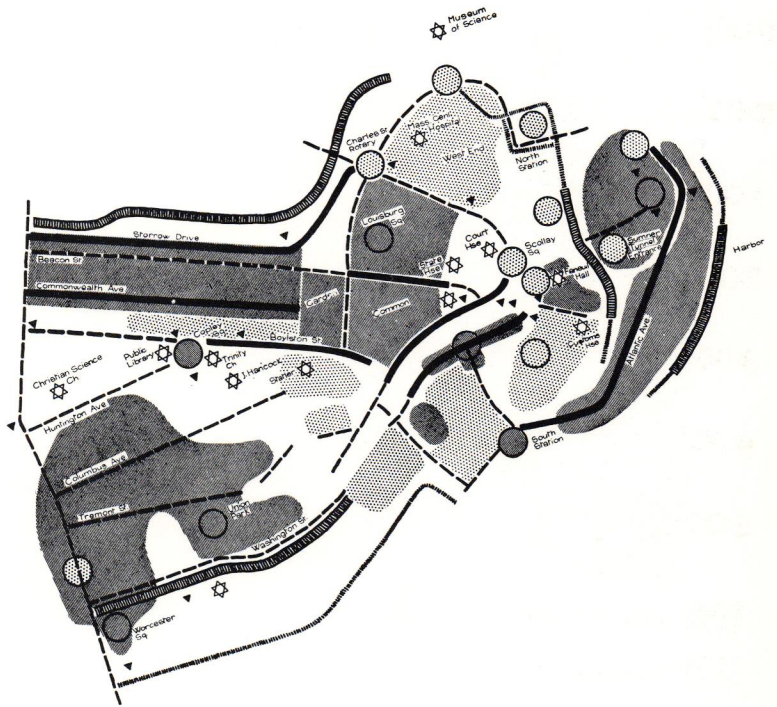
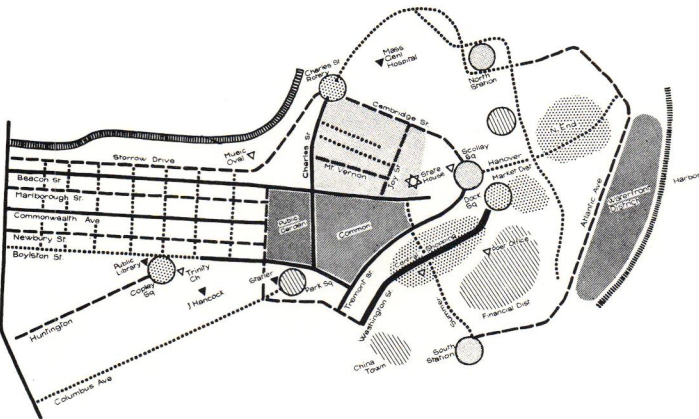
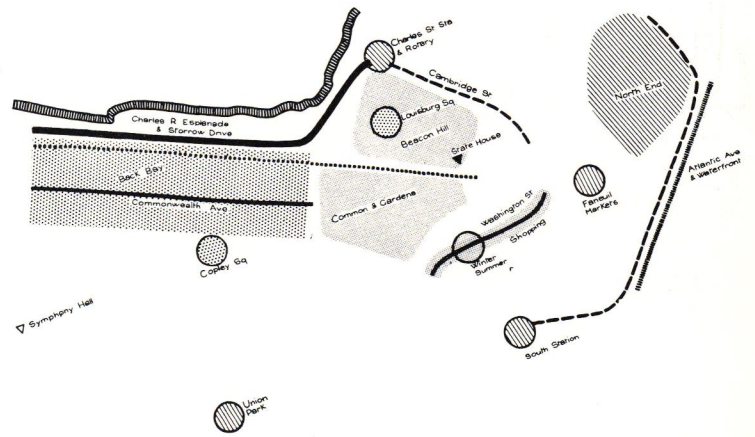
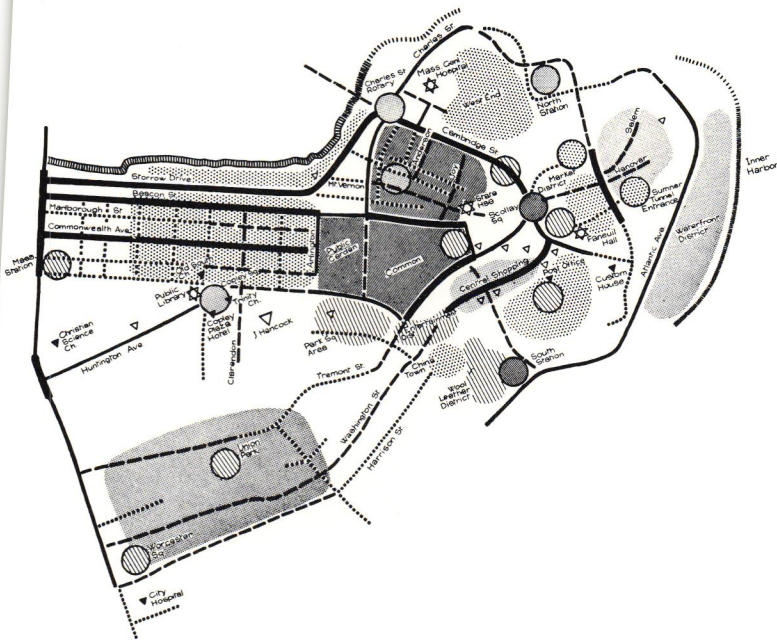
"I hope that scores will lead into new ways of designing and planning large-scale environments of regions and large communities whose essential nature is complexity and whose purpose is diversity."

"... the second half of the book describes street scores, ecological scoring, city scores, and finally community scores."

Mr. Halprin continues to develop his innovative movement notation systems and this new book profusely describes what he calls "scores." There is a feeling of Klee about some of the drawings.

As in the case of Image of the City shown on the following page, I wonder about its general language applicability.

**RSVP Cycles**  
Lawrence Halprin  
1969  
207 pp  
9" x 9"  
\$15.00  
George Braziller, Inc.  
One Park Avenue  
New York, New York 10016



"This book is about the look of cities, and whether this look is of any importance, and whether it can be changed. The urban landscape, among its many roles is also something to be seen, to be remembered, and to delight in. Giving visual form to the city is a special kind of design problem, and a rather new one at that."

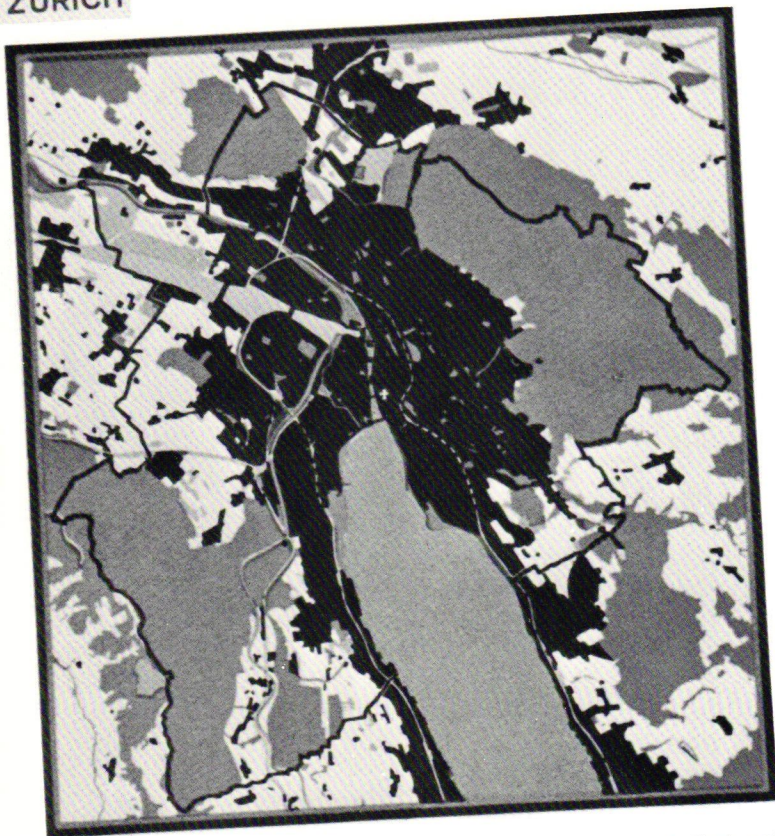
"In the course of examining this new problem, the book looks at three American cities: Boston, Jersey City and Los Angeles."

Mr. Lynch formulates a new criterion — imageability — and shows its potential value as a guide for the building and rebuilding of cities.

*It would be interesting to develop a notation system similar to the one used here, but more rigorous in its display, that would enable one to combine it with statistics that might have been gathered by a more mechanical means. In the hands of Kevin Lynch this book represents an excellent tool. I'm concerned with its general use by those with less facility.*

**Image of the City**  
Kevin Lynch  
1960  
194 pp  
5 1/4" x 8"  
\$2.95  
The M.I.T. Press  
50 Ames Street  
Cambridge, Massachusetts 02142

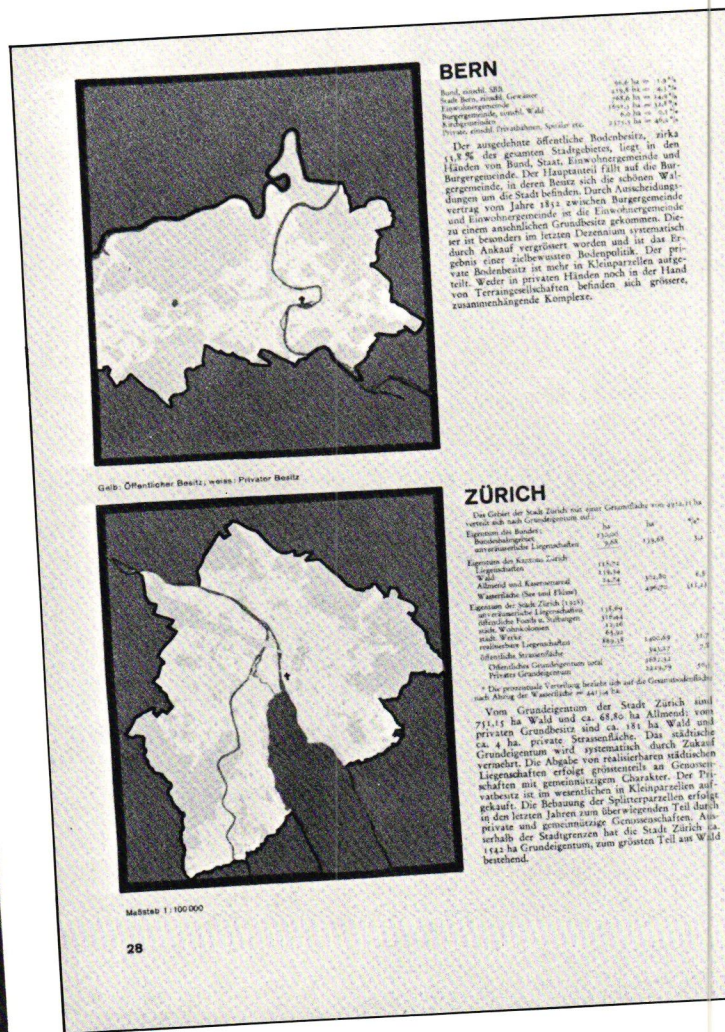
ZÜRICH



A comparative study of ten Swiss cities through aerial photographs, structural elements, public and private property, traffic, street photographs, land use, green areas, population density and city growth, and statistics.

The Association of Swiss Architects (headed by Dr. Camille Martin) compiled comparable mapping material to show urban development in 10 major cities during the National Exhibition

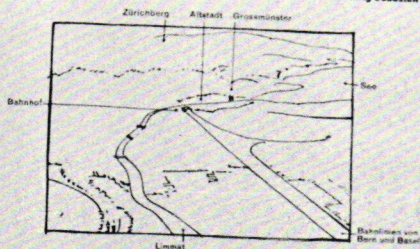
of 1911 and 1914. First displayed in an exhibition in 1928 in Zurich, Switzerland, this collection was available in book form.





ZÜRICH

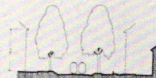
Aufnahme der Ad Astra aus 1900 m Höhe  
Blickrichtung Südosten



Die im Verhältnis zum heutigen Stadumfang winzige Altstadt mit dem eben noch erkennbaren Grossmünster im Mittelgrund des Bildes, an dem Punkt, wo die Seefläche sich zum Flussbett verengert. Im Vordergrund das breite Limmattal, dicht am Steilabhang von Höngg die Limmat; in der Talmitte die in einen Kopfbahnhof art an der Altstadt einmündenden Balngleise, dazwischen das Industriequartier der Stadt, westwärts der Bahn die Wohnquartiere der Arbeiterbevölkerung. Die auf dem rechten Ufer über der Altstadt aufsteigenden Hänge des Zürichberges sind bis 200 Meter über den Seespiegel hinauf bebaut; in Villenvororte sich auflösend folgt die Bebauung, weit über das Stadtgebiet hinauswachsend, den Uferändern des Sees.



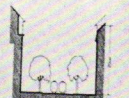
BERN  
NEUBRÜCKSTRASSE  
Ansicht von Westen (1900/1901)  
Längsrichtung gesehen  
Geograph. Maßstab 1:500



Die gesamte Anstaltensseite ist die über Altan gebildet von Charakteristik des Mittelalters von Bern, allerdings mit die Wäldern der Stadterne an die Altstadt. Die Bestenfalls bilden einen Teil der Rechteckigkeit des Nachbarn, was wiederum die Formierung der überhöhten Lücken in der Hauptstadt und im großen Teil davon. Mit wachen in diese letzten Gassen in den Jahren 1900/1901 mit der Verknüpfung der Hauptverkehrsstrasse mittels Freigebäude für die Hauptstrasse der Stadt, bilden sie ein Netzwerk, was die Bebauung im südlichen in nach Süden verläuft. Die Gassen haben keine in größeren Abschnitten von der Altan an Erdgeschoss und Mittelgeschoss.



ZÜRICH  
BAHNHOFSTRASSE  
Westlich vom Bahnhof  
Ansicht gegen Norden  
Geograph. Maßstab 1:500



Rechtwinklige Gassen und Erdgeschoss der Schweiz sind wichtige Verkehrsstrassen. Nachbarschaften in gleicher Richtung, mit höchsten dreistöckigen Reihungsbauweise, in einer Länge von 1/2 km und einer Breite von 10 m sind in der Hauptstadt von dem Ort zum Ende des Sees. Die Hauptstrasse mittels Hauptstrasse wurde durch die Gassen und die Hauptstrasse. Ein Vorzeichen für diese ist in diesem Bereich sichtbar. Die Breite in der Hauptstrasse vollständig und ganz in der Höhe 1900 auf 11 m beschränkt. Die 11 m sind in der Hauptstrasse, auf Grund einer Bebauung, notwendig für die vollständige Fußgänger- und Radfahrer-Verkehr, während in die meisten Bereiche der im Bienen betrieblen Verkehrs nicht übersteht.



BERN  
Lageplan Bern (1900/1901)  
Geograph. Maßstab 1:500



GENÉVE  
Lageplan Genéve (1900/1901)  
Geograph. Maßstab 1:500



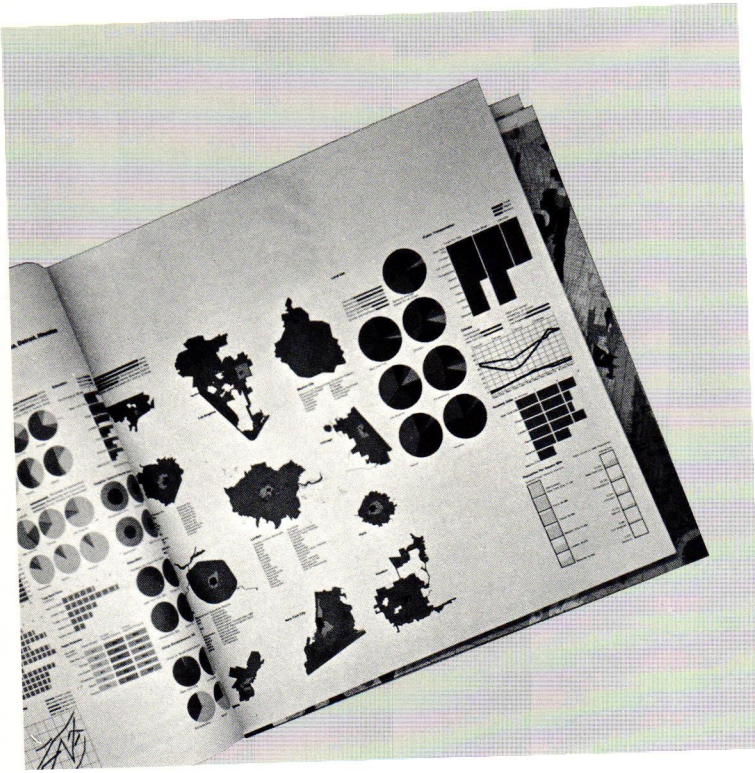
ZÜRICH  
Lageplan Zürich (1900/1901)  
Geograph. Maßstab 1:500



LAUSANNE  
Lageplan Lausanne (1900/1901)  
Geograph. Maßstab 1:500

This is a rigorously conceived and executed comparative atlas of Swiss cities describing small grain information about streets and street cross sections up to aerial photography of the city and generalized regional information. It is excellent, modestly produced and unfortunately, to the best of my knowledge, unavailable.

Städtebau in der Schweiz  
1929  
72 pp  
8 1/2" x 11 3/4"  
out of print  
Wasmuth Buchhandlung und Antiquariat  
Hardenburgstrasse 9a  
Berlin 12, Germany



The New York City Plan consists of five volumes, one on each borough: Staten Island, Queens, Brooklyn, Bronx and Manhattan representing New York City's first comprehensive plan, and a sixth volume that is a 180 page Critical Issues Book.

"The book has 36 maps, many of them full-page. They include maps of existing and planned community facilities such as schools, colleges, hospitals,

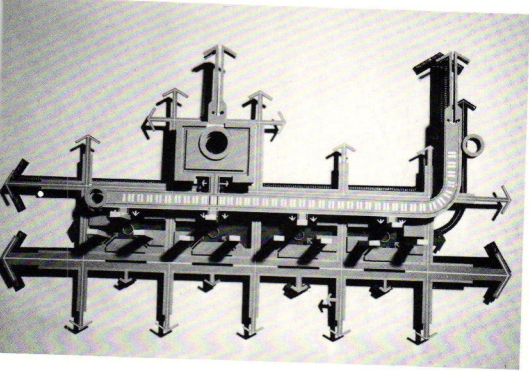
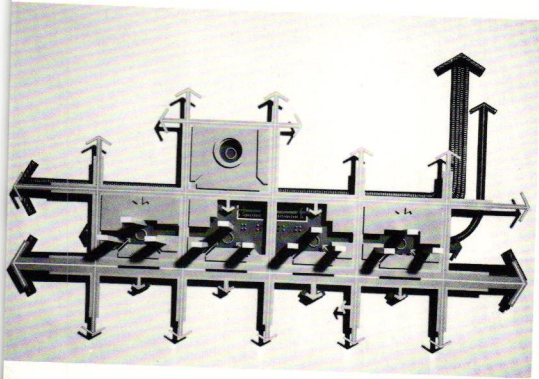
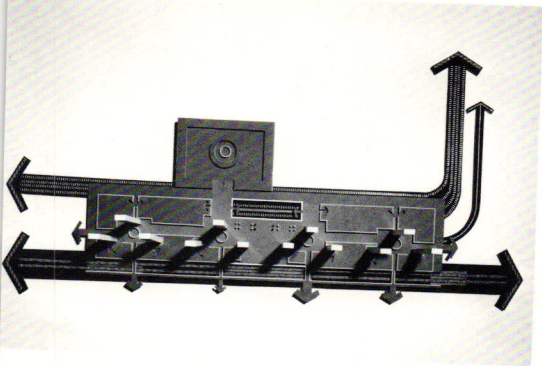
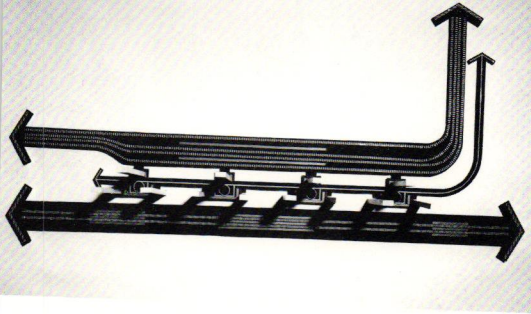
mass transit, highways, publicly-aided housing and recreation areas; community planning, health, fire and sanitation districts, and police precincts and urban renewal areas.

"The text appraises the City today and sets forth broad goals and guidelines for the City's social and physical development focusing on four broad themes: New York as a national center of art, culture, business and finance;

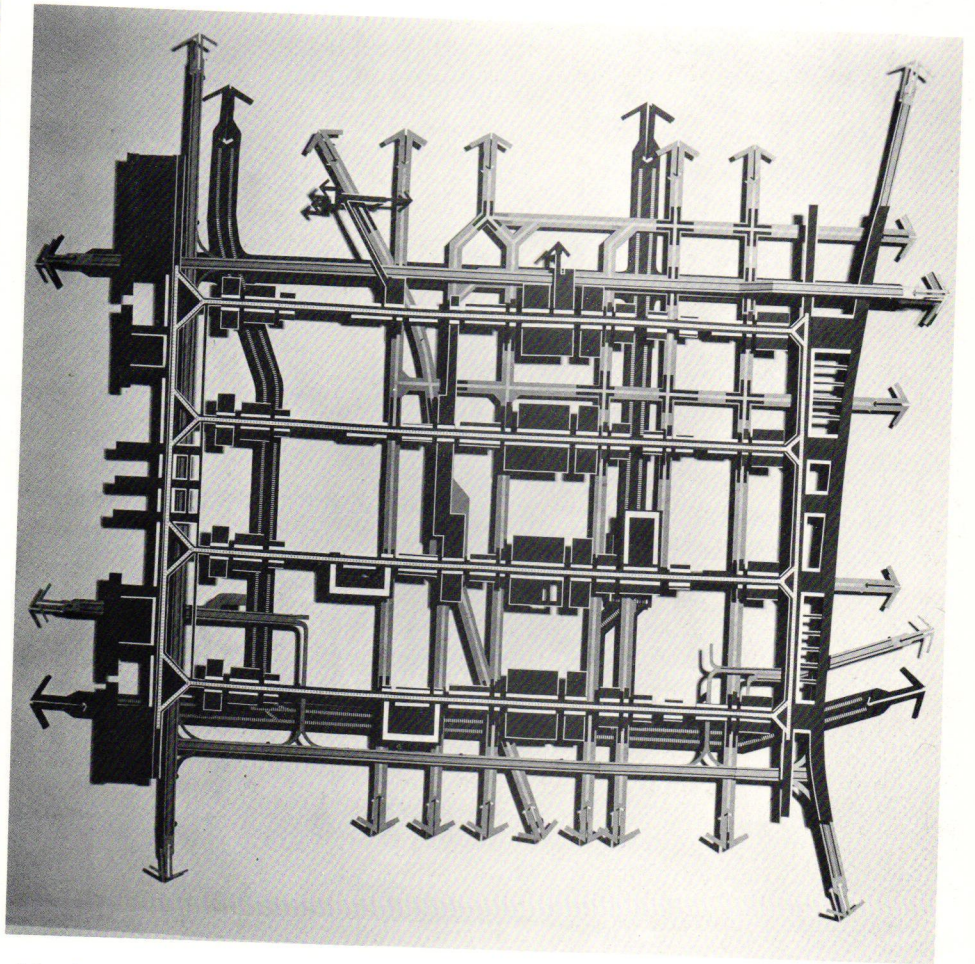
the City of opportunity; the urban environment and the role of the government."

**Plan for New York City**  
New York City Planning  
Commission  
1969  
six volumes  
17" x 17"  
\$15.00 each  
The M.I.T. Press  
50 Ames Street  
Cambridge, Massachusetts 02142

Market East



Midtown Manhattan



Frank Williams, urban design consultant for Skidmore, Owings and Merrill, has created three dimensional models of enormously complex projects like Market Street East (Philadelphia) and areas like Midtown Manhattan which clearly demonstrate the horizontal and vertical movement systems of each and how they mesh. Williams makes urban movement observable.

*Frank Williams' models of Market East, Manhattan, and Berkeley are fine examples of the ability to communicate complex multi-level movement systems easily and beautifully. (This is one of many pages where the use of color is needed to explain the material fully.)*

Frank Williams  
210 Centre Street  
New York, New York 10013

Sanborn maps



"The Sanborn Map Company has mapped at large scale (1" = 50' to 1" = 200') over 11,000 cities in the United States."

"New maps are produced using current aerial photography, together with a field inspection to add the finer details. Revision work is accomplished by field inspection."

"The conventional map sheet is approximately 22" x 28" and

others are 11" x 14". An example would be the coverage of the city of Philadelphia which is contained in twenty-nine volumes, comprising 2,390 22" x 28" full color map sheets."

"These maps were originally designed to serve the fire insurance industry and are still used for this purpose. In the past several years the basic information has been found to be invaluable in the preparation of land use, urban

renewal, noise abatement and other types of studies."

*No maps in general production give more specific information about buildings, how they're made, lot lines, land use, and addresses than the Sanborn maps. A Sanborn map of the area around a school would entertain children for a whole day.*

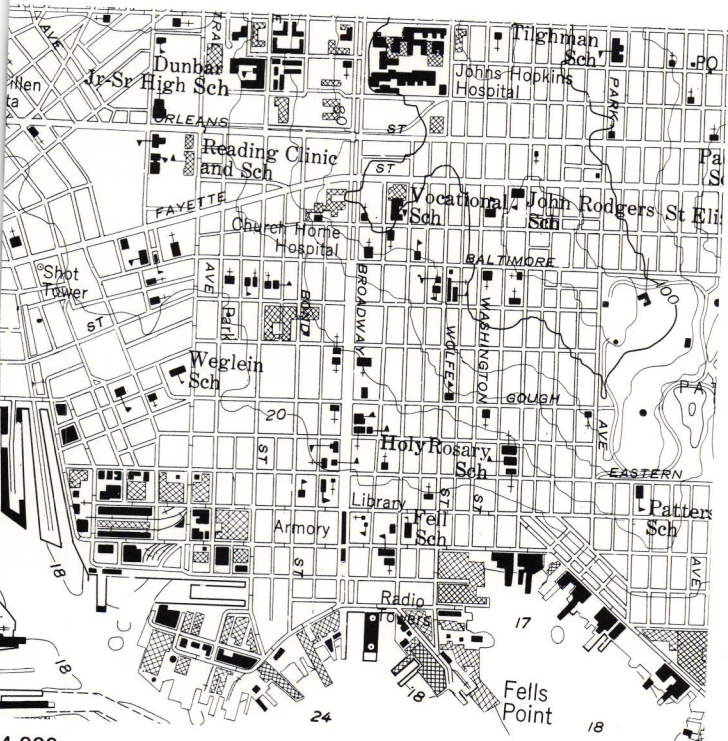
Sanborn Map Company  
629 Fifth Avenue  
Pelham, New York 10803



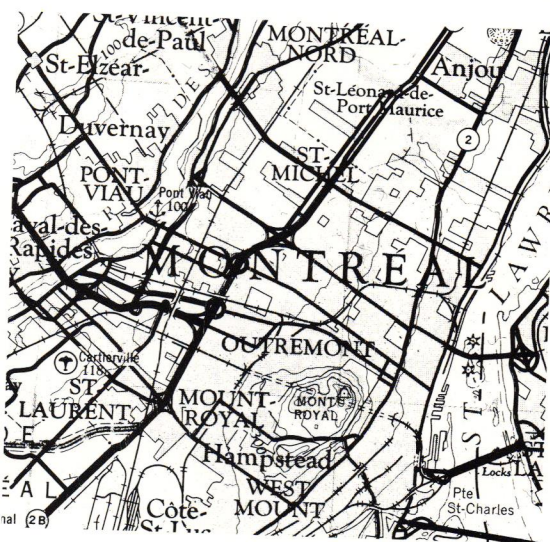
1:62,500



1:250,000



1:24,000



1:250,000

Maps published by the Geological Survey are intended to give a picture of the terrain that is as complete as can be legibly produced at the selected scale. Mapping accuracy is assured by field surveys and photogrammetric methods, using stereoscopic plotting instruments and aerial photographs. Metropolitan Area Maps, at 1:24,000 scale, have been prepared for many cities and published in one or more sheets,

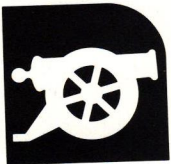
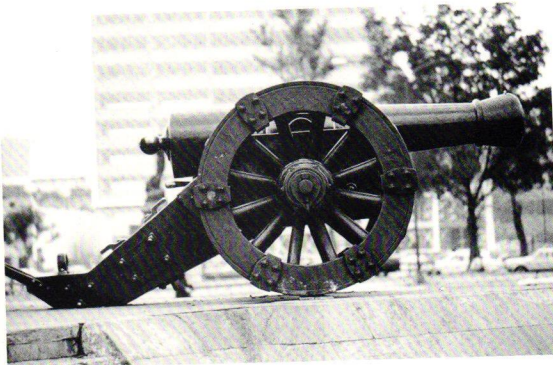
according to the size of the area shown.

Baltimore, Maryland is shown here at the three major scales employed by the Geological Survey. Also included is Montreal, Quebec, at 1:250,000 scale, from the Canadian Map Distribution Office.

*The only maps done in an orderly and complete fashion in the U.S. are produced by the U.S. Department of the Interior. These were used as base maps in Urban Atlas (page 24) and are used in their varying scales extensively. 1:24,000 is equal to one-inch is equal to 2,000 feet.*

**U.S. Department of the Interior  
Geological Survey Maps**  
1:24,000  
1:62,500  
1:250,000  
United States Geological Survey  
Washington, D. C. 20242

Map Distribution Office  
Department of Energy, Mines  
and Resources  
615 Booth Street  
Ottawa 3, Canada

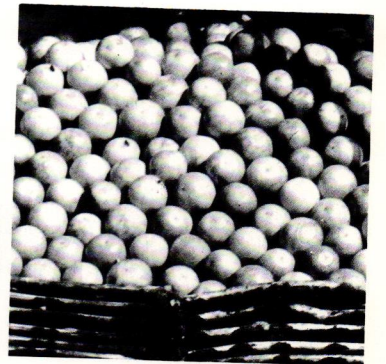
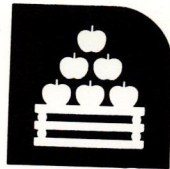
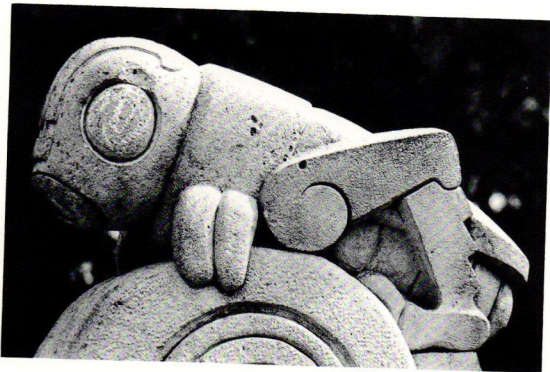
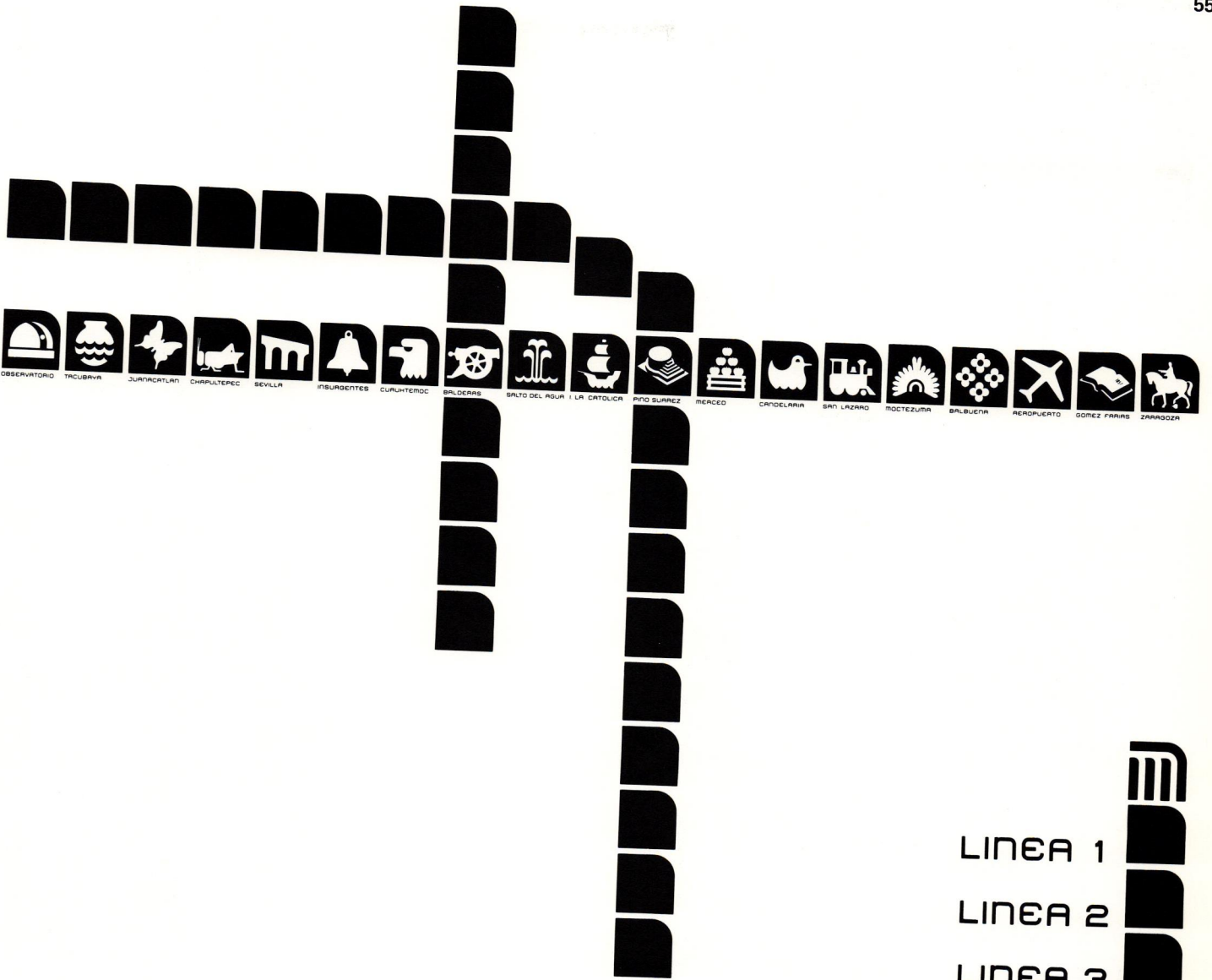


To get around Mexico City's new subway you don't even have to be able to read, thanks to the Metro Graphics Program of Lance Wyman. Along with other essential information, each station has a graphic symbol as part of an overall graphic design for the transportation system. Colors are keyed to help identify both the signs and the message. Each station's sign represents some historical or distinctive landmark near that station. For example, a cluster of flowers

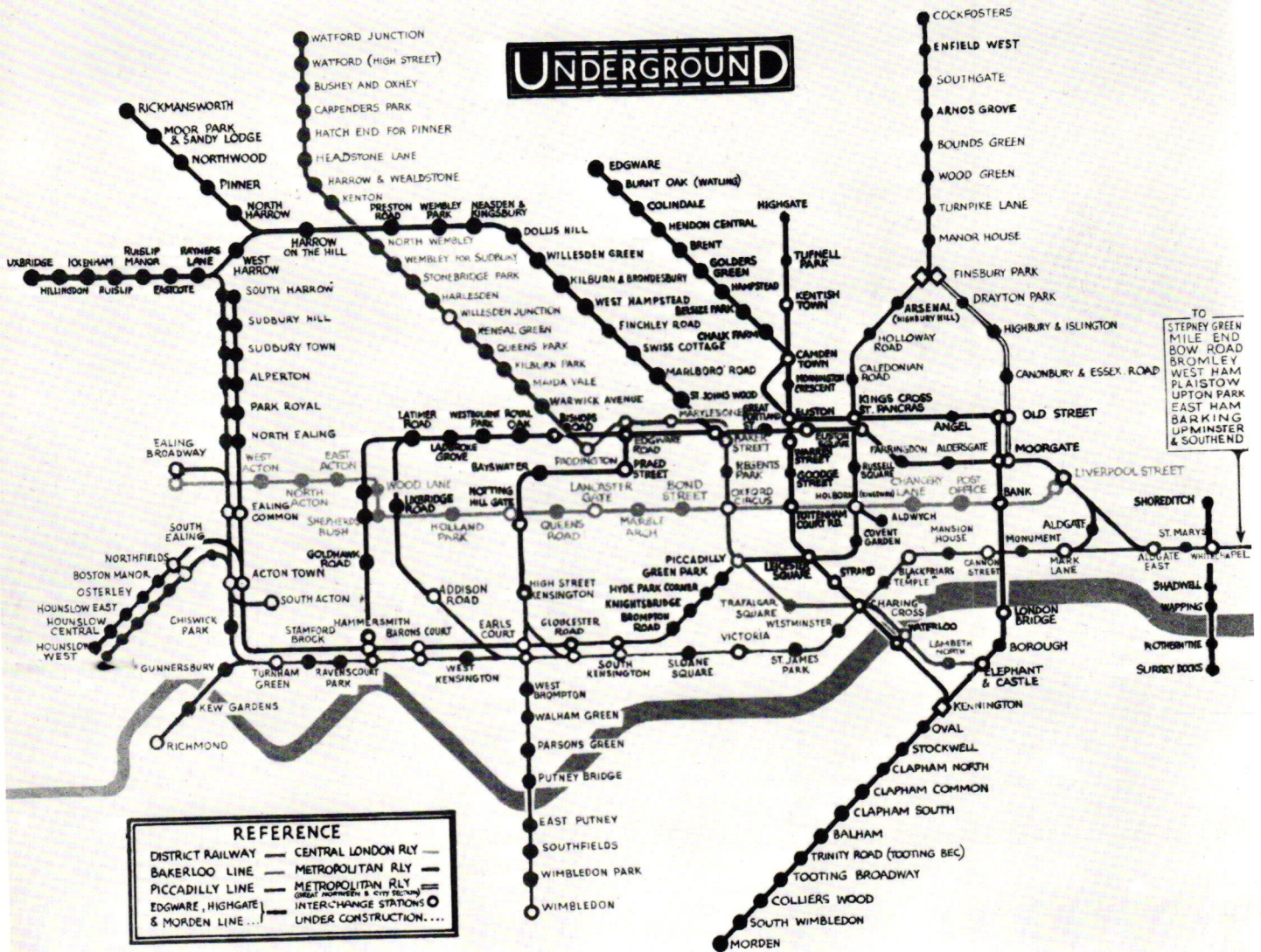
denotes Balbuena, a station located near the garden of Balbuena. The site of Salto del Agua station was once the termination of an aquaduct and is symbolized by a fountain. Very near Mexico City's International Airport is a station whose symbol is a plane. An eagle marks Cuahtemoc station, named after an Aztec chief. Juanacatlan station, named for a "Butterfly Net," made famous by area fishermen, is marked by a butterfly symbol.



*Lance Wyman's love of life which was so exuberantly displayed in his Mexican Olympics Graphics and symbology shows through in his most recent effort for the Metro in Mexico City. The pictograms used, as you can see in this double page spread, are entertaining and meaningful.*



Lance Wyman  
118 West 80th Street  
New York, New York 10024



The London Underground map makes a complex transportation system immediately observable without benefit of compromises requiring further explanation and detailing.

It was invented in 1932, by Harry C. Beck, a 29 year old temporary draftsman in the Establishment Office Drawing Section of the London Underground Group. There were two radical innovations which have been incorpor-

ated in all subsequent versions of the diagram, right up to the present day: (a) the enlargement of the central area of the underground system in relation to the outlying areas, so that the complicated connections at the center could be more clearly shown; (b) the limiting of the direction of route lines to verticals, horizontals, and 45° diagonals.

Every character of every word in the original version was hand-

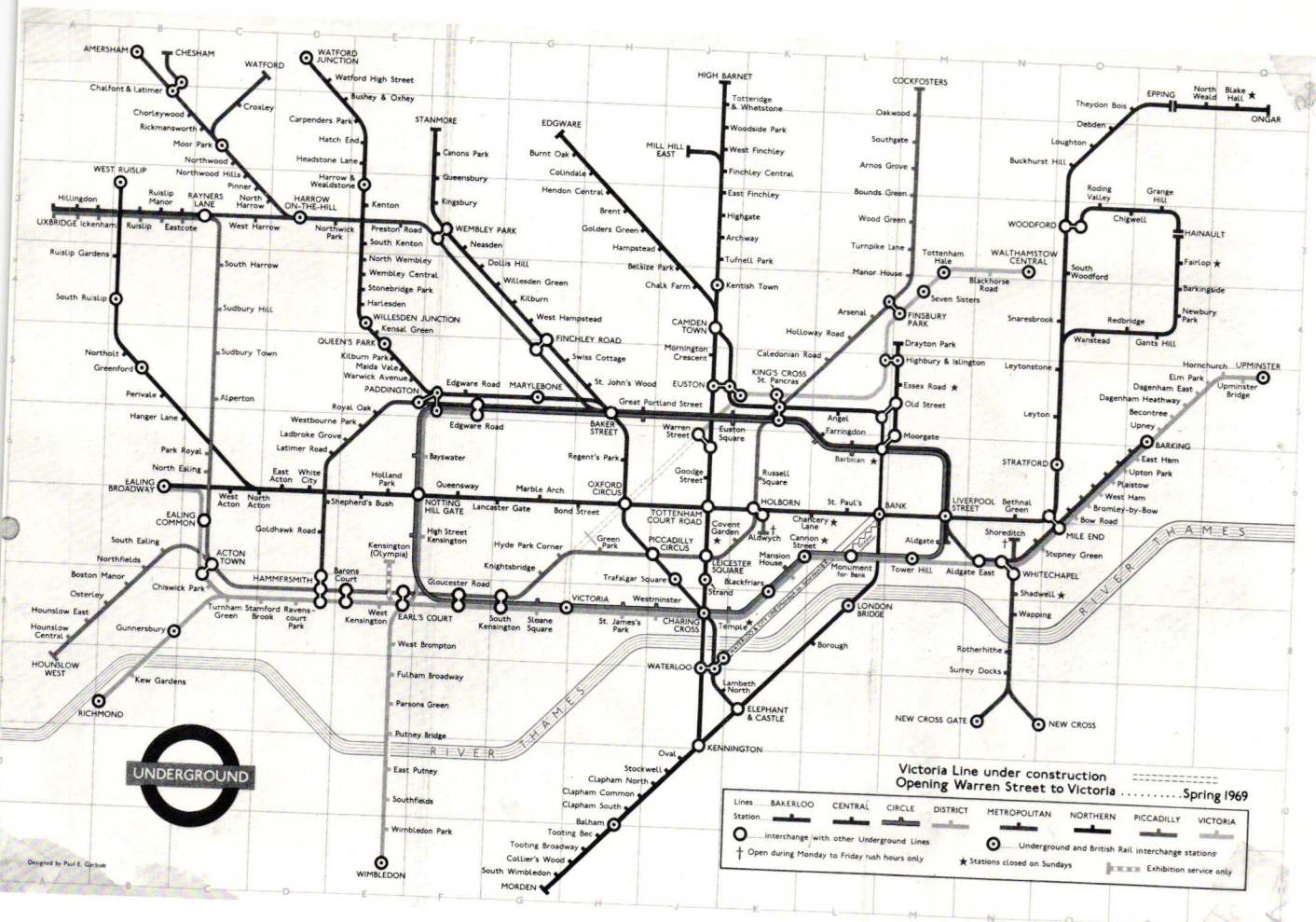
lettered by Beck in Johnston sans-serif capitals: more than 2400 characters in all.

The L.U.G. rejected the map outright when Harry Beck submitted his first, unsolicited design in 1931. Then a limited trial number was run off for the first edition and comment was invited from the traveling public.

**The Design of the London Underground Diagram**

Ken Garland  
pp 68-82  
The Penrose Annual 1969  
edited by Herbert Spencer  
Hastings House  
10 East 40th Street  
New York, New York 10016

Pocket edition shown actual size. Original in colors.



The London Underground Map is shown in its first sketch form (1931) on page 56 and in its current version on 57. This map represents a high water mark in cartographic diagrams and has fathered a whole series of derivative diagrams. Some of these have proven useful, like the new Boston map, and others like the current New York City subway map have proved disastrously unintelligible. This map has

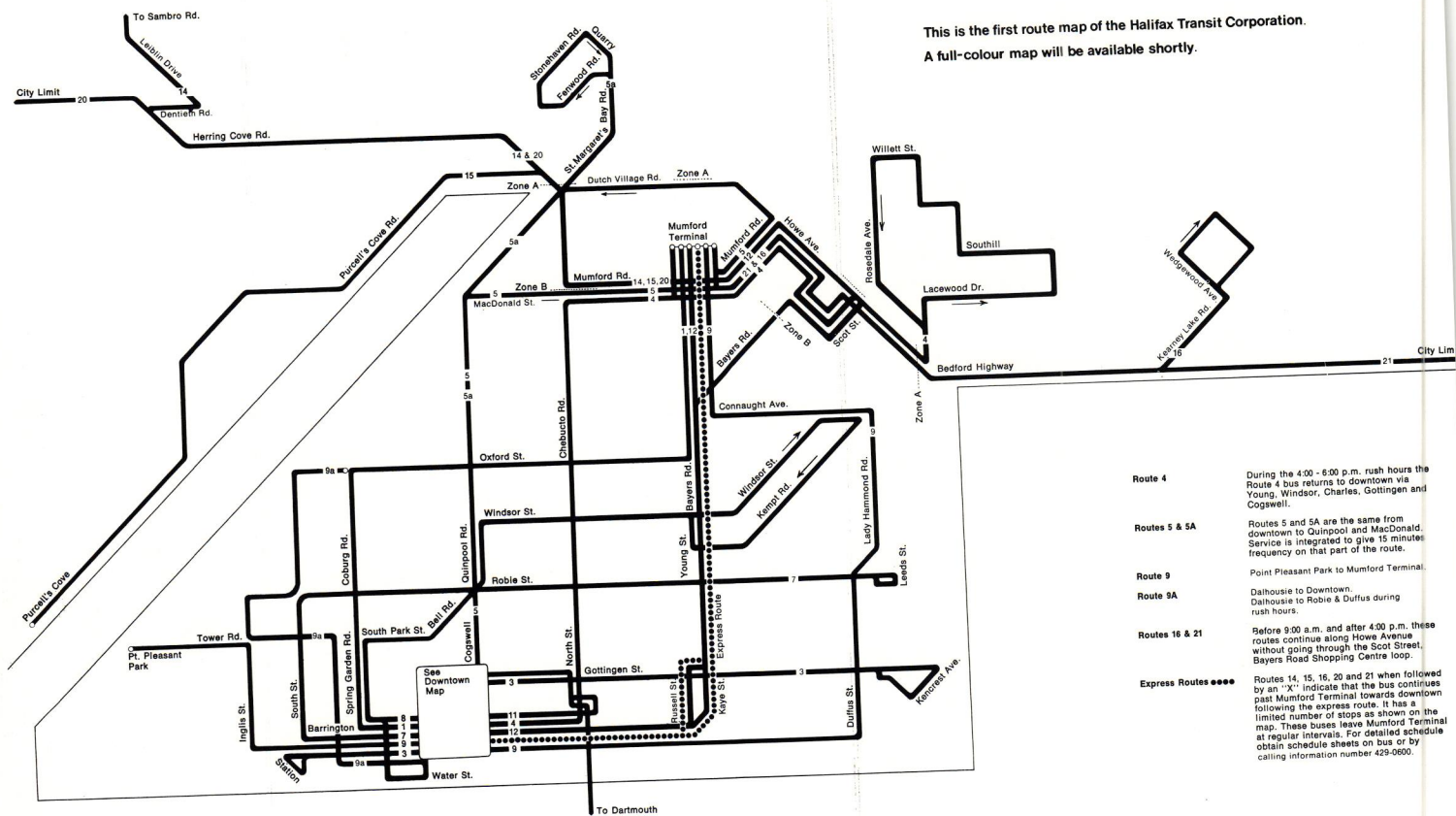
had the ability to relieve the disorientation of visitors to London over the last forty years.

**London Underground Map**  
 Harry C. Beck and Paul E. Garbutt  
 40" x 50"  
 7/6 (\$ .90)  
 pocket editions free  
 Publicity Officer  
 280 Old Marylebone Road  
 London NW1, England

Halifax bus network



This is the first route map of the Halifax Transit Corporation. A full-colour map will be available shortly.



This graphic material represents aspects of a complete design program for Halifax transit, a bus company which operates from Halifax, Nova Scotia.

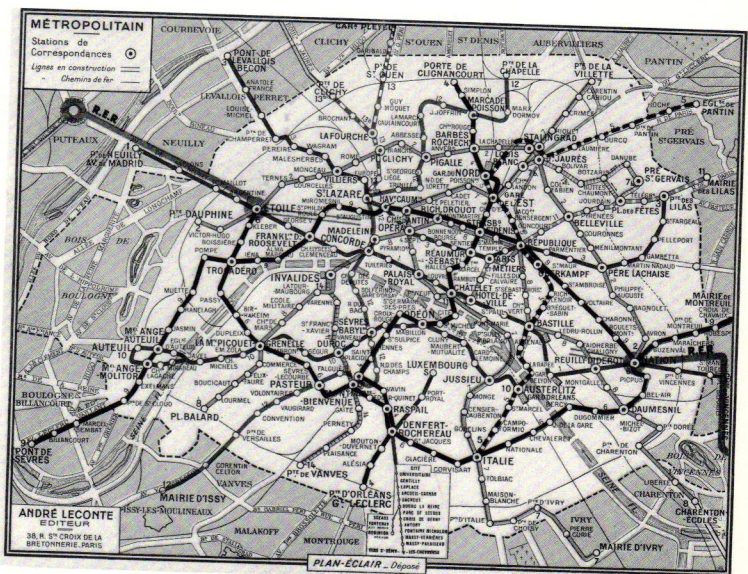
The coordinated design of the buses, street information, signs, tickets and route map, make it easy to understand and demonstrate the operation in detail and as a whole.

Gottschalk + Ash Limited  
2050 Mansfield  
Montreal 110, Quebec, Canada

Symbol Design: Ian Valentine  
Map Design: Margrit Stutz  
Client: Halifax Transit Corp.



*The Metro in Paris is an extraordinarily complex system; it is usual to change lines several times in order to reach one's destination. Many stations have a push-button light board which lights up the network to be used to gain access most efficiently to one's chosen last stop.*



Paris Metro light boards  
 Regie Autonome Des  
 Transports Parisiens  
 Boite Postale 70-06 Paris  
 53ter, Quai Des Grands-Augustins  
 Paris (6e) France  
 Michel Linon  
 Le Chef du Service des  
 Relations Exterieures

**Q.-5: How much are White racial attitudes to blame for the urban crisis?**

**Q.-16: Effect of nonviolent demonstrations on improving ghetto conditions?**

**Q.-22: Long-term effects of riots in changing ghetto conditions?**

**Black View**

**HOW DO YOU SEE THE CITY?**

The majority of the nation's poor people in small communities spending to rebuild the metropolitan area. Urban dwellers believe that people in smaller communities compared to nonviolent do few positive effects. Stricter law enforcement ghetto problem.

**Do you agree?**

**City Silhouette**

If you do, then ex you see the city people who resp research quest problems in th torial, page 5 matter of fac poor are wh **Who ans** research p ter-educat public: 62 82 per cr lege gr: Ph.D. c cent e Sic plies from wel ter of f

negativ almost above Do ness guid forc wor me for la at o

Results of the Psychology Today research questir correlated and by G. Ray Funi and Nathan M Institute for C munication Resea... Stanford University

22

**24** Are the easy availability of guns and other lethal weapons to blame for urban violence?

1  
 2  
 3  
 4

**25** How much more for would have been spent on social programs if the money had been spent on guns and other lethal weapons?

1. Very much  
 2. Somewhat  
 3. No  
 4. Somewhat  
 5. Very much

**26** How much do you think the problems of the ghetto dwellers are caused by the following?

1. Very much  
 2. Somewhat  
 3. Not to blame  
 4. Don't know

**27** In general, how do you rate the current welfare system?

1. Much too lenient  
 2. Somewhat too lenient  
 3. Not lenient, but fair  
 4. Somewhat too strict  
 5. Much too strict

**28** How much do you think racial discrimination in setting up the urban problems is to blame for?

1. Very much to blame  
 2. Somewhat to blame  
 3. Not to blame  
 4. Don't know

**29** How much has the exodus of whites from city centers to suburbs contributed to the ghetto crisis?

1. Very much  
 2. Somewhat  
 3. Not much  
 4. Don't know

**1** Some people claim that America's big cities are in serious trouble, with the situation worsening. Others believe that there are no serious problems or that existing problems will correct themselves soon. How serious do you think the situation is?

1. Very serious trouble  
 2. Some trouble, fairly serious  
 3. Some trouble, not very serious  
 4. No trouble worth worrying about  
 5. Don't know

**2** How do you think the "quality of living" in our major cities today compares with what it was 20 years ago (1948)?

1. Much better  
 2. Somewhat better  
 3. About the same  
 4. Somewhat worse  
 5. Much worse

**3** How important to you, personally, is the situation in America's big cities?

1. Very important  
 2. Somewhat important  
 3. Not important

**4** To what extent do you think outside agitators are responsible for causing urban unrest and riots?

1. Very much responsible  
 2. Somewhat responsible  
 3. Not responsible  
 4. Don't know

**5** How much do you think white racial attitudes are to blame for the urban crisis?

1. Very much to blame  
 2. Somewhat to blame  
 3. Not to blame  
 4. Don't know

**6** To what extent are urban problems caused by the failure to run a city as a price system, a failure which creates many distorted economic values?

1. Very much  
 2. Somewhat  
 3. Not at all  
 4. Don't know

**7** Which of the following do you think would have the greatest effect in reducing racial prejudice in America?

1. Integration of public schools  
 2. Publicity campaigns to promote integration  
 3. Fair employment and housing legislation  
 4. Direct, personal contact between members of various racial groups

**8** In recent riots in cities, toward which of the following did the rioters direct their actions the least?

1. Police and other authorities  
 2. White-dominated social structure  
 3. Property owned by whites  
 4. White individuals

**9** How much do you think the present system of property taxes is to blame for urban slums?

1. Very much to blame  
 2. Somewhat to blame  
 3. Not to blame  
 4. Don't know

**A PSYCHOLOGY TODAY Research Questionnaire**

Please join us in a challenging and important social research project. Professor Nathan Maccoby and Doctor G. Ray Funkhouser, of Stanford University's Institute for Communication Research, have designed this first Psychology Today research questionnaire—an experiment in two-way communication with highly informed readers.

Your opinions and attitudes count. Help open a dialogue between the social scientist and the educated public. The Institute for Communication Research, Stanford University, will correlate and interpret the responses to the survey. Last month, ten per cent of our subscribers received this questionnaire in their copies of Psychology Today. If you already have answered once, you can double the value of your response by answering the questions again. Just mark a big X at the top of your reply card. This will give us an important measure of how attitudes change over a period of time. You can read the results and compare your own attitudes with those of other readers in a coming issue of Psychology Today. Please do not fill in your name. Just let honesty and anonymity be synonymous.

To participate, answer questions by checking appropriate squares on the reply card and mailing it to us.

Psychology Today research questionnaires draw as many as 30,000 completed response forms. Step one is a thorough computer analysis (percentages, cross-tabulations, correlation coefficients and factor analysis). Step two is human analysis and interpretation of the computer data. The primary objective is to compress the data, to make visible and comprehensible the trends and relationships found. Graphs are made when complex relationships are best

communicated visually. Color is used, when available, to clarify relationships or separate compound data and for decorative purposes. The text and tables are intermingled in the copy, each supporting and leading into the other so that the reader can go through the report smoothly, without having to flip from one page to the other looking for data.

Part of urban communication is urban responsibility. The ability to articulate a good question in order to elicit valued response and then display these tabulations in a form understandable to a general public (or in this case to a large readership) is done at a consistently high level by Psychology Today, a magazine whose informative art direction and interest in urban information is worthy of note.

Psychology Today August 1968 and December 1968 8 1/2" x 11" subscription: \$7.00 per year P.O. Box 60461 Terminal Annex Los Angeles, California 90060

**Diagrams and  
The Way Things Work**

"The aim of this book is to make the graphic designer more aware of diagrams, their use and design."

"The book has three parts, each covering different aspects of the subject: statistical diagrams, explanatory and statistical maps, explanatory diagrams. There is a final section which briefly discusses problems of technique and includes notes on books that deal in more detail with certain aspects of the subject."

"The various ways of showing statistics or providing explanatory drawings by diagram or on map are described. The best uses for and the disadvantages of each method are discussed. The text is fully supported by the illustrations and their captions. There is as wide a selection as possible with examples from many countries: the United States, Germany, France, Sweden, Japan and other countries. Diagram methods

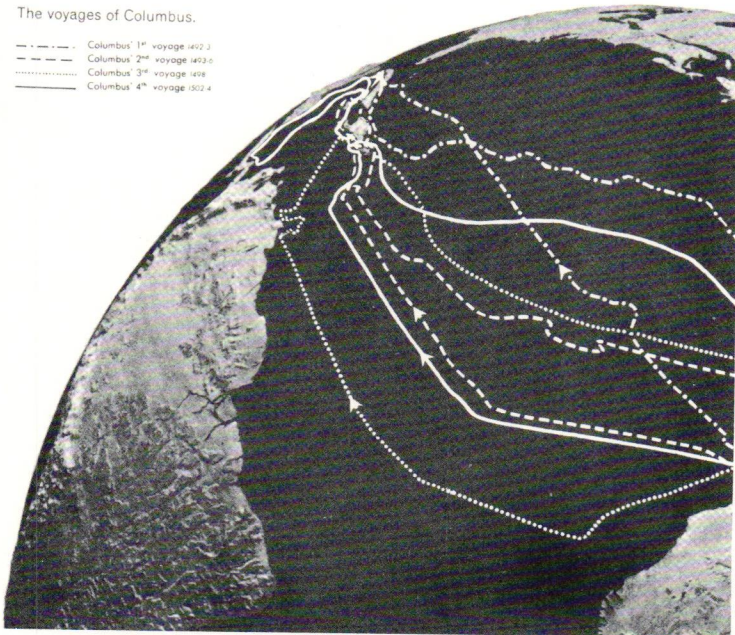
are part of the language of international communication. The diagrams come from a wide variety of sources: atlas, encyclopedia, school and university text book, scientific magazine, newspaper, advertisement, and television."

"The illustrations in this book are important. The designer will see more quickly from example than from description the effectiveness of using a particular kind of diagram. But not all illustrations are equally successful. The diagram produced by the statistician, geographer or sociologist can convey a great deal of information in an interesting way but may lack the graphic distinction which a designer would give. And, conversely, the diagram produced by the designer may have all the current graphic clichés but fail in the aim of getting over information clearly and accurately."

4

The voyages of Columbus.

- - - Columbus' 1<sup>st</sup> voyage 1492-3
- - - Columbus' 2<sup>nd</sup> voyage 1493-4
- - - Columbus' 3<sup>rd</sup> voyage 1498
- - - Columbus' 4<sup>th</sup> voyage 1502-4



**Diagrams**  
Arthur Lockwood  
1969  
144 pp  
8 3/8" x 10 3/4"  
\$15.00  
Watson-Guption Publications  
165 West 46th Street  
New York, New York 10036

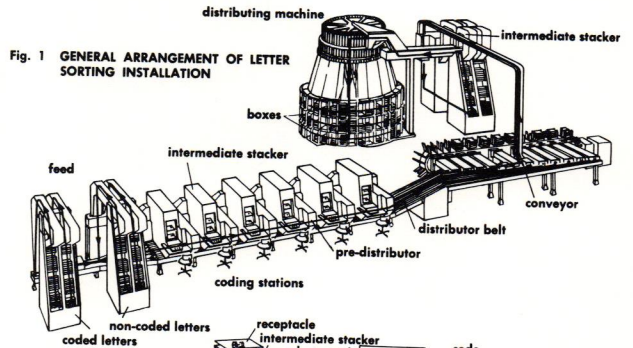
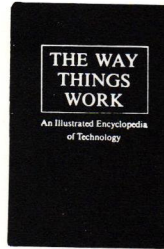


Fig. 1 GENERAL ARRANGEMENT OF LETTER SORTING INSTALLATION

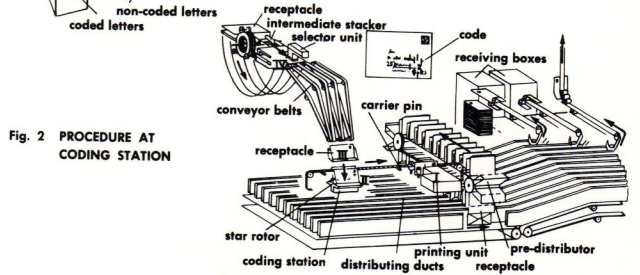


Fig. 2 PROCEDURE AT CODING STATION

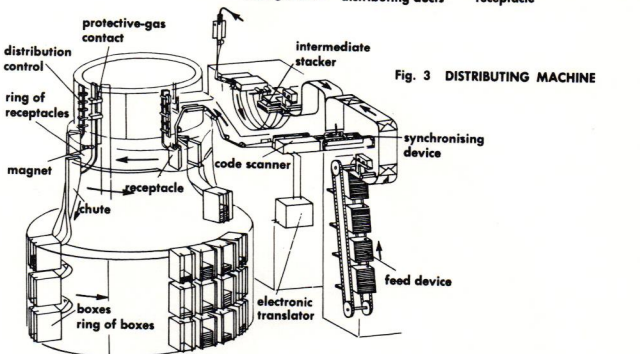


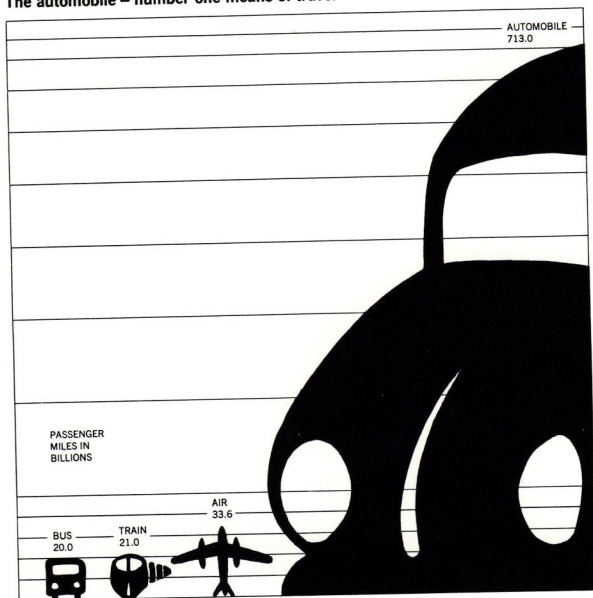
Fig. 3 DISTRIBUTING MACHINE

309

This book is a technical reference for the inquisitive. Machines and processes are grouped according to the underlying principles on which they are based. Each is explained in drawings and text. The book covers a complete selection of everyday technology . . . light bulbs, zippers, automobiles . . . as well as an extensive selection of industrial processes.

**The Way Things Work**  
1967  
590 pp  
5 1/2" x 8 1/4"  
\$9.95  
Simon and Schuster  
630 Fifth Avenue  
New York, New York 10020

### The automobile – number one means of travel



In all but a handful of large cities, the automobile now accounts for more than 85% of all travel within a metropolitan area.

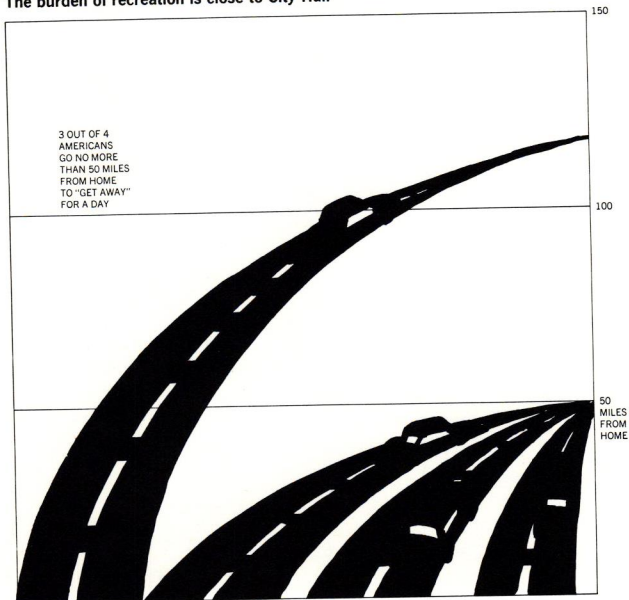
In 1962, there were 78 million registered motor vehicles. Counting trips to and from work, driving "for pleasure" and all other reasons for using a car, Americans drove 713 billion passenger miles that year.

In 1964, there were 86 million vehicle registrations. In that year, there was one car registered for each 2.8 persons. According to present projections, by 1980 there will be one registered private car for every 2.4 persons, and total car registrations are expected to reach 120 million.

76

77

### The burden of recreation is close to City Hall



A special Census Bureau study, begun in the summer of 1960, showed that three out of four Americans went no more than fifty miles from home to get "away" for a day. The greatest pressures for recreation demand are not in the wide-open spaces, or even the medium-open spaces, but in what could be called the fifty-mile "day-trip" zone.

Out-of-town parks, with rare exceptions, are not accessible to central city people without automobiles. That means that minority groups, the old and the indigent crowd what recreational facilities are close-by.

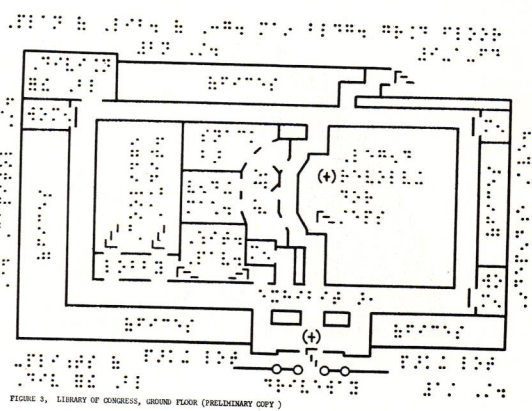
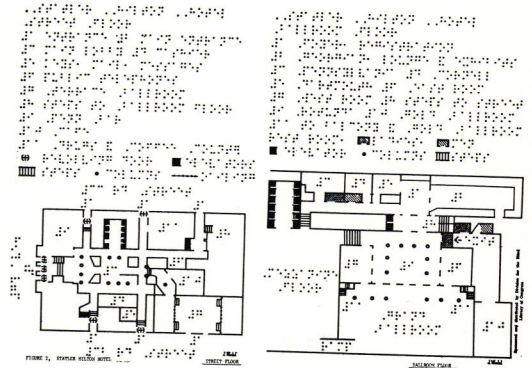
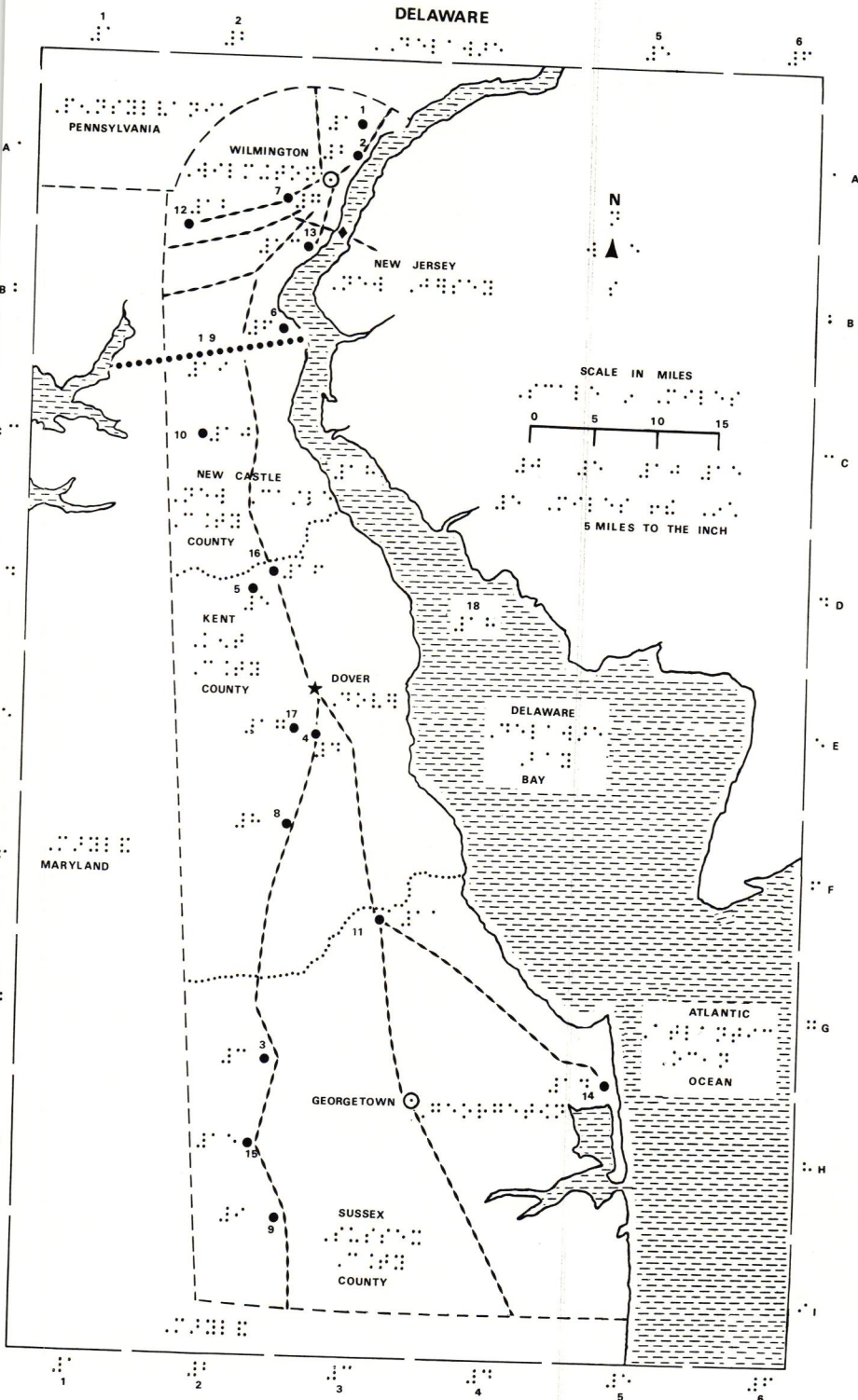
72

73

Reprinted from Chart Book  
copyright, Urban America

*This is an excellent example of what each city should have—its own visual, easily understandable chart or data book. This one was produced for the Urban America Conference in Washington in 1967. Politicians should see the value of distributing a booklet establishing their concern for making public information public during a campaign and for being identified with both that concern and with the position of being knowledgeable about urban data.*

**Chart Book**  
Urban America, Inc.  
1967  
96 pp  
8 3/4" x 8 3/4"  
\$1.00  
National Urban Coalition  
2100 M Street N.W.  
Washington, D. C. 20037



Maps for the blind are almost as old as braille itself, but the amount of effort expended to improve and standardize braille has been far greater than that devoted to other kinds of graphic communication. The first record in this country of a professional cartographer involved in graphics for the blind dates back to only 1958.

The fact that no cartographer has devoted time to maps for the blind does not mean that they were not needed. The demand has been and still is very great though standardized braille fulfills the requirements for embossed verbal communication, the means available for embossed graphic communication, i.e. maps, graphs, and diagrams, are still relatively crude.

*This is included to exemplify the concern for special devices to explain the city to the blind, deaf and immobile as well as to those who do not speak or understand the English language.*

The Howe Press  
Perkins School for the Blind  
Watertown, Massachusetts 02172

Tactual Maps for the Visually Handicapped:  
Some Developmental Problems  
Joseph W. Wiedel  
The Professional Geographer  
volume 28, number 3  
May 1966  
pp 132-139

## The School That I'd Like

I believe the actual equipment should be kept to the bare minimum but there should be raw materials in plenty. For example, in the old concept of a gymnasium, dangling ropes suggest you must climb them. Why not provide trees instead?

Judith, 18

Even a slight rearrangement of the room might stir a thought or two. When a shop wants to attract customers, they put on a bright and attractive display. Why couldn't this idea be used in school?

Peter, 15

The system of a certain set of subjects being taught is wrong; instead of, say, a child being taught geography, history and music, why can't that child do a course on making radios or studying tropical fish if he wants to? I have always been interested in engines and how to mind them, but there is unfortunately nothing like this in school.

Robin, 16

The function of a school is presumably to teach its pupils how to enjoy and how to make the best use of the world in which we live. In fact, nearly all the subjects which are taught in schools, however purely 'academic' they may seem, are fundamentally related to man or to his environment, but the relationship is often not obvious. Because what does exist, or has existed, is taught in our schools under the superficial names of 'Geography' or 'History', very little attention is paid to what might exist, and so the benefit of the acquired knowledge is never properly used. For this reason, the first requirement of the teachers in my ideal school, would be that they be interesting as people, and capable of transforming dry knowledge into the art of living.

... the main aim of my school would be that the pupils learn how to make best use of (that is, to understand) the world through effective knowledge. This would involve the breakdown of conventional subject disciplines. The new divisions would be more comprehensive; for instance, since more people are interested in themselves and other people, the study of 'Human Lives and Living' would play a large part in the curriculum. It would include psychology, human biology, geography, history and philosophy, besides aspects of human living represented in art such as family relationships in classical Greek drama. As regards the last aspect, drama, the question which the school children would be patiently but persistently asked to consider would be, 'How should I react in a similar situation?' Intimate discussion between small groups of pupils would be encouraged, it goes without saying, so that the fruits of individual work and thought could be collected and united by the children themselves. This method would teach the pupils that outside school life the class-teacher relationship is, fortunately, not a common one.

Elizabeth, 17

I would go around asking the pupils what they would like to be when they grow up and whatever someone has in mind, e.g. a nurse, I would let her work in the laboratories and I would ask the science teacher to help her with her work as much as possible. If a pupil likes a certain sport such as tennis I would ask the P.E. teacher to coach him or her as much as possible and forget useless games like rounders.

Angela, 13

In December, 1967 **The Observer** invited secondary school children to describe "The School That I'd Like". The response amounted to some half-million words, innumerable charts and drawings. It also amounts to an enormous, good humored, earnest, and intelligent plea for a new order in schools. A pervasive radical note is steady, reasonable, and supported by specific instances. The comments organized here by category are a remarkably

One of the first radical changes I should advocate would be the abolition of colleges of education for teacher training. Teaching would be reorganized on the following basis. Only heads of subject departments and headmasters would receive specialized training at full-time colleges. Other teaching would be a version of conscription, each member of society would be asked to contribute a certain proportion of his time to take a course and teach and educate others in his particular skill. In this way those at places of education would receive fresh information from a variety of people, learning at the same time to accept people with their own enthusiasms and shortcomings. This system would also help ease the shortage of teachers and the constant bickering about wages and hours.

Mary, 16

There should be extensive departments for every possible subject range, and the choices and combinations of subjects should be entirely unrestricted. For example, no pupils would be flatly informed that he or she must study one of the following: music, history or geography. I am quoting this case from my experience. Marvellous it may have been for those few brilliantly gifted musicians, or for those natural historians, or for those to whom geographical features come as easily as breathing. However, geography, music, history and chemistry and physics just are not my gifted subjects. I have very little or no interest in any of them, and about as much ability. The only way high marks can be gained in these unwanted subjects is to learn parrot-fashion all the facts and notes dictated by the member of staff concerned. In my opinion this is pointless and is the worst way of educating any intelligent human being. The sub-

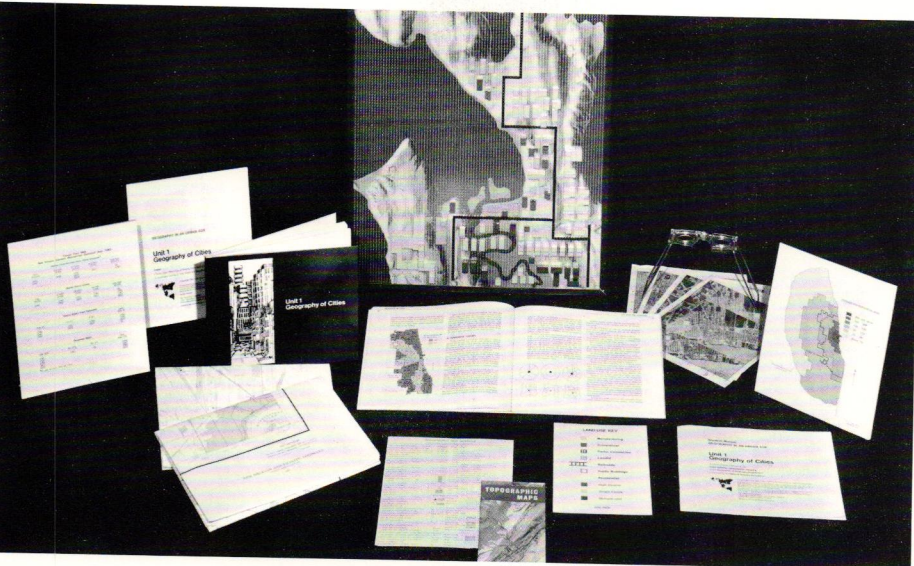
ject should be studied, explored, practiced and experiments should be carried out. It should not be learned just to be recited; it must be understood. If we were not obliged, or rather compelled, to take the subjects which we have no inclination for, we could use the valuable time to supplement that spent on more favourable topics. For this reason I think that, if desired by the individual, he should spend all his time on his chosen subjects and not waste it on those which hold no interest for him. Then fewer subjects could be worked on in greater detail and to a more advanced depth. Of course, the pupil has the choice: either to take several subjects generally, or to specialize in one or two.

Patricia, 15

copyright Penguin Books and the Contributors, 1969

**The School That I'd Like**  
Edited by Edward Blishen  
1969  
171 pp  
4 1/4" x 7"  
\$.95  
Penguin Books Inc.  
7110 Ambassador Road  
Baltimore, Maryland 21207

honest and sober collection of complaints, criticisms, and schemes for imaginative innovation.



**'Geography in An Urban Age** is a one-year, multi-media geography course prepared by the High School Geography Project of the Association of American Geographers, supported by the National Science Foundation." Through a series of 6 units, students "investigate the many reasons why things, people, and events have developed where they are rather than in some other place." Students become involved in group activities, role-

playing, games, model-building, discussions, film strips, recordings, readings, and emphasis is on the development of conceptual thinking, student inquiry and analysis. Units include: 1) Geography of Cities, 2) Manufacturing and Agriculture, 3) Cultural Geography, 4) Political Geography, 5) Habitat and Resources, and 6) Japan.

*Much of the Urban Geography Kit is excellent fun and informative. I object to the building block device of the lego type boards which allow for land use in lumps, rather than in the mixed plaid pattern it should be understood as being. This is the problem with many other programs that have exercises describing cities in terms of wooden blocks and sugar cubes to be manipulated.*

**Geography in an Urban Age**  
High School Geography Project  
1965  
Unit 1: Geography of Cities  
Students' materials kit  
(for two students)  
\$5.97  
Teacher's materials kit  
(accommodates 30 students)  
\$240.00  
Macmillan Co.  
866 Third Avenue  
New York, New York 10022



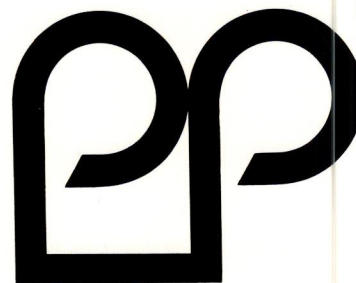
The Parkway Program, Philadelphia's "School without walls," is an innovative program of public education for high school students, and in Philadelphia provides one of the few alternatives to a regular public high school. It now includes 540 students divided equally into 3 units or "communities," each with its own staff and headquarters at different locations in the city. The program is open to any student who submits his name and parent's signature;

students are then chosen by public lottery from all eight Philadelphia school districts.

Conceived originally by Cliff Brenner, the Parkway Program was put into operation in February 1969 by John Bremer, director until June 1970. The program is based on the idea that the city—any city—is a vast resource for learning and that education takes place in many places other than the classroom. Courses,

Contact	Course Title	Place Held in Philadelphia
William Addams University of Pennsylvania	Audit Freshman English classes	University of Pennsylvania
Dr. Humphrey Tomkins Director-Freshman English	Audit Freshman English classes	University of Pennsylvania
Peter Arfae	History of Architecture	26 South 20th Street
Richard Ash Plaza Apartments	The Law and You	Plaza Apartments 18th and The Parkway
Mrs. E. Ballard, Director, with Steve Cooper	Green in City	Pennsylvania Horticultural Society 325 Walnut
Julie Morris Pennsylvania Horticultural Society		
Bob Brinkley	Sound Tape Work	Board of Education Building
Winnie Binkley Spring Garden Community Center	Day Care	Spring Garden Community Center
Mrs. Bobrowicz	Weaving	Nesbitt Hall Textile Room Drexel University 34th and Market
Jean Bockenbauer	Cooking	121 N. Lambert Street
Ron Bond	Swimming	Hutchinson Gym 33rd and Chancellor
Mrs. J. Bonner	Music Appreciation	4047 Pine
Betty Bromnick	Adult Basic Education	Location undetermined
Douglas Brown	Physics	Science Resource Center
H. Brownstein	Economics	Houston Hall University of Pennsylvania
Andrea Burns Carolyn Snyder	Project Learn	Epiphany Church Carpenter Lane and Lincoln Drive
Laurie Burstein Peter Berger (students)	The Individual and the Collective Staff	4000 Pine Street
Gene Castellano	The Written Word	1700 Pine Street
Donna Cavallaro Andy Scherer Betsy Pelcrlft	Psychology	Experimental College University of Pennsylvania 4000 Pine Evans House
Fran Ciurlino Tyler Student	Design College	Swedenborgian Church
Leon Cohen Board of Education Division of Art Education	School Art League	Location undetermined
Henry George School of Economics	Economics	413 South 10th Street
Barbara Crocken Philadelphia Services to Parent and Children	Social Working Course	Location undetermined
Howard Dalton	Teaching Reading	Stetson Jr. High School Allegheny and B Street
Nancy Daniels	Personality and Adjustment Fundamentals of Communication	Location undetermined
Mrs. Ida Davis	Modeling, Sewing Designing Clothes	West Philadelphia Group 4601 Spruce
Bill Davol WIP	WIP - Radio	WIP 19th and Walnut
John Donne	Communication Experience	Paxson 3rd Floor
Dr. Edenbaum and staff	Audit Freshman English class	Temple University
Dr. Elkins University of Pennsylvania Medical School	Laboratory Technician	Location undetermined
Dr. Ezekiel Einstein Medical Center (North)	Science	Einstein Medical Center
Carl Feldbaum Assistant District Attorney	Constitutional Rights and Reality	Paxson Room 105
Fleisher Art Memorial	Art Courses	715 Catherine
Susan Gallagher Penn Graduate Student	Survey of Language in Society	47 Springfield Avenue
Miss Tara Glass Mrs. M. Oravetz	Art and History	Philadelphia Art Museum
Mrs. Alvia Golden Lane, Golden, Phillips Advertising, Inc.	Advertising	1737 Chestnut Street 7th Floor
M. Gorsky	Teen Arts Council	YMHA Broad and Pine
Charles Gray Sally Connolly	Learn by Teaching	Children's TV Workshop 3236 North Broad
Terry Hatcher GLCA student	Basic Drawing	Swedenborgian Church

class space, and activities come from city resources: businesses, cultural centers, public services, craftsmen and industry.



Contact	Course Title	Place Held in Philadelphia	Contact	Course Title	Place Held in Philadelphia
Art Hauptman Swarthmore College	Economic issues and problems	Paxson Room 105	Carolyn Rodia	Consumer Credit	Philadelphia Credit Bureau 1211 Chestnut Street
Ilisa Hutkin	Creative Conceptual Conjecture	4032 Spruce	Landon Rose	Auto Mechanics	3301 Cherry Street Cherry Street Garage
Mrs. Barbara Johnson	Games, Simulations	Friends Meeting House 20 South 12th	Harry Sautter James Pinkney Bob Limerick	Applied Advanced Electricity	Philadelphia Gas Works 1800 North 9th Street
Victor Johnson Young Great Society	Arts and Architecture	Location undetermined	Harry Sautter James Pinkney Bob Limerick	Basic Electricity	Philadelphia Gas Works 1800 North 9th Street
Jane D. Kent Day School Mrs. Johnson	Early Childhood Development	2218 Lombard Street	Mr. Schulman Bob Seely	Court Reporting Draft Counseling	Location undetermined Central Committee for Conscientious Objectors 2016 Walnut Street
Sol Kessler Kessler's Supply Store	Retail Merchant and Management	1216 Girard Avenue	Dr. Shubin Center City Hospital	What Goes on in a Hospital	19th and Pine
Seymour Kronblum	Social Policy and Political Action Among the Aged	401 South Broad Street	George Singleton Institute of Afro- Asian Studies Temple University	Audit classes 1) Black Experience 2) Black Literature 3) Afro-American Liberation Troubles 4) African Nationalism 5) Pan Africanism 6) Great Powers in Africa	Temple University 1900 Park Mall
Mrs. C. Kalick, Counselor, Planned Parenthood	Sex Education Social Relationships	Art Alliance 251 South 18th	Bradley Smith Tyler School of Art	Temple Talent Workshop	Tyler School of Art
Michael Kean	Hemingway: The Man and the Myth	Board of Education Room 207	William Smyser Retired Foreign Service Officer	U.S. and World Affairs	Art Alliance 251 South 18th Street
David King	General Chemistry Experimental Chemistry	University of Pennsylvania	Mrs. Dorothy Stewart Miss Anna Glacken Mrs. Bernadette Jones Mrs. Susan Schmehl	Home Economics 1401 Arch	Philadelphia Gas Works 1401 Arch Home Service Station
Nancy Kirby Planned Parenthood	Human Sexuality and/or Advice	1400 Spruce Street	Nancy Stiles Lisa Strick	Beginning French Communications Resource Center	1637 Race Street Franklin Institute
Oscar Knade Inten. Learning Center	Child Development and Innovation	5th and Luzerne 6th Floor	Kippy Stroud Beth Kron Michael Shelton	Graphic Design and Silkscreen Printing	Spring Garden Community Services Center 1812 Green
Jeanne Kyle	Ideas in Advanced Math	2040 Cherry Street	Melvina Taiz Dance Instructor Parkway House	Creative Dance	Weightman Hall University of Pennsylvania
Randy Libros	International Simulations	1801 Market	Mrs. Termini Language Staff Magnet School of Languages South Philadelphia High School	Language Courses	South Philadelphia High School
Cindy Locke Sharon Frant Bob Friar	Theatre Arts	4000 Pine Street	Jim Thomson	Architecture Studio classes	705 North 25th Street Philadelphia Institute of Art 125 South 9th Street
Dick Lewis	General Math	2530 Waverly	Philip Trachtman Dean Philadelphia Institute of Art	Language I	Philadelphia College of Art
Betsy Longstreth	Volunteer Program	1400 Spruce Street	John Troxell Nancy Santamaria	Culture of Revolution in SE Asia	1736 Naudain
Longstreth Elementary School	Intern Program	Franklin Institute	Le Anh Tu	Gemology	Location undetermined
Bob Loudin, Director, KYW-TV	Television Work-Study	KYW 1619 Walnut	Hanna Waldman	Work study at Christ Church Tutoring Program	1520 Green
Lisa Lyons	Topics in Ancient History	3900 Spruce University of Pennsylvania	Susan Walton Community Worker Christ Church Center	Teaching Reading	Howard and Ontario
Lisa Lyons	Tutoring all subjects S.A.T. prep	2101 Chestnut	Mrs. Webb Cramp Elementary School	Social Problems A Militant Awareness	Experimental College University of Pennsylvania 4000 Pine Street
Miss Mariset Mrs. Smith Hartranst Corp.	Infant Stimulation	Day Care Center across from Hartranst 911 West Boston	Reg Weatherby	Germantown Community Involvement	Suite 509 916 E. Chelton
Jill Marti, Producer, Betty Hughes Show WCAU-TV	Why is TV Such a Mouthwash?	WCAU City Line Avenue	Mark Weisman	Photography	1801 Market
Bruce Maryanoff Mrs. McAdams	Chemistry II Infant Stimulation	2040 Cherry Street YWCA 20th and Chestnut	Barbara Wilson Carol Drobeck Moore College, Interns, Photography Dept.	Understanding of College Placement Procedures and Office Operations	1603 Columbia
Lynn McElroy Westchester State College-student	American Counter Culture and Cosmology	2040 Cherry Street	George Wilson Model Cities College Placement	Television and Film Proc.	Channel 12 46th and Market
Bridget McKey Friends Peace Comm.	Nonviolence, Revolution and Power	Friends Peace Comm. 1520 Race Street	WHYY-TV Art Wolf John Zeh	Alternatives in Journalism Media and Message	Franklin Institute Resource Center
E. Matthew Miller	Semantics	307 S. 3rd Street down steps	John Zaccaria Share Time Bok High School	Variety of Vocational Courses	Location undetermined
Mrs. Moultrie	Afro-American Art and Culture	Stoddart Fleisher Jr. High School 13th and Green	Rae Zielin, Institutional Coordinator, Parkway Program	How to Get a Job	Franklin Institute Little Theatre
Bretchen Neidermayer Committee of 70	Municipal Affairs	1420 Walnut Street Suite 910			
Carolyn Namiroff Leaves of Grass Nursery School	Observation of pre-school children	1727 Pine			
Antos Narvaez Training Department Gaudenzia House	Outreach 1	Gaudenzia House 1834 W. Tioga Street			
John Packel Defenders Association of Philadelphia	Experience in law office	Defenders Association 1526 Chestnut Street			
Registrar Philadelphia College of Art	Studio Classes	Philadelphia College of Art Broad and Pine			
Mathy Raymond University Student	Algebra I	3900 Spruce Street			
Michelle Reitenberg	Spanish I	1st Presbyterian Church 21st and Walnut			
Richardson Director Systems Planning and Development	Games Computers Play	Board of Education Administration Building			
Mr. Roberts Mrs. Davis Ball Mercer Pennsylvania Hospital	Tutorial space	Location undetermined			

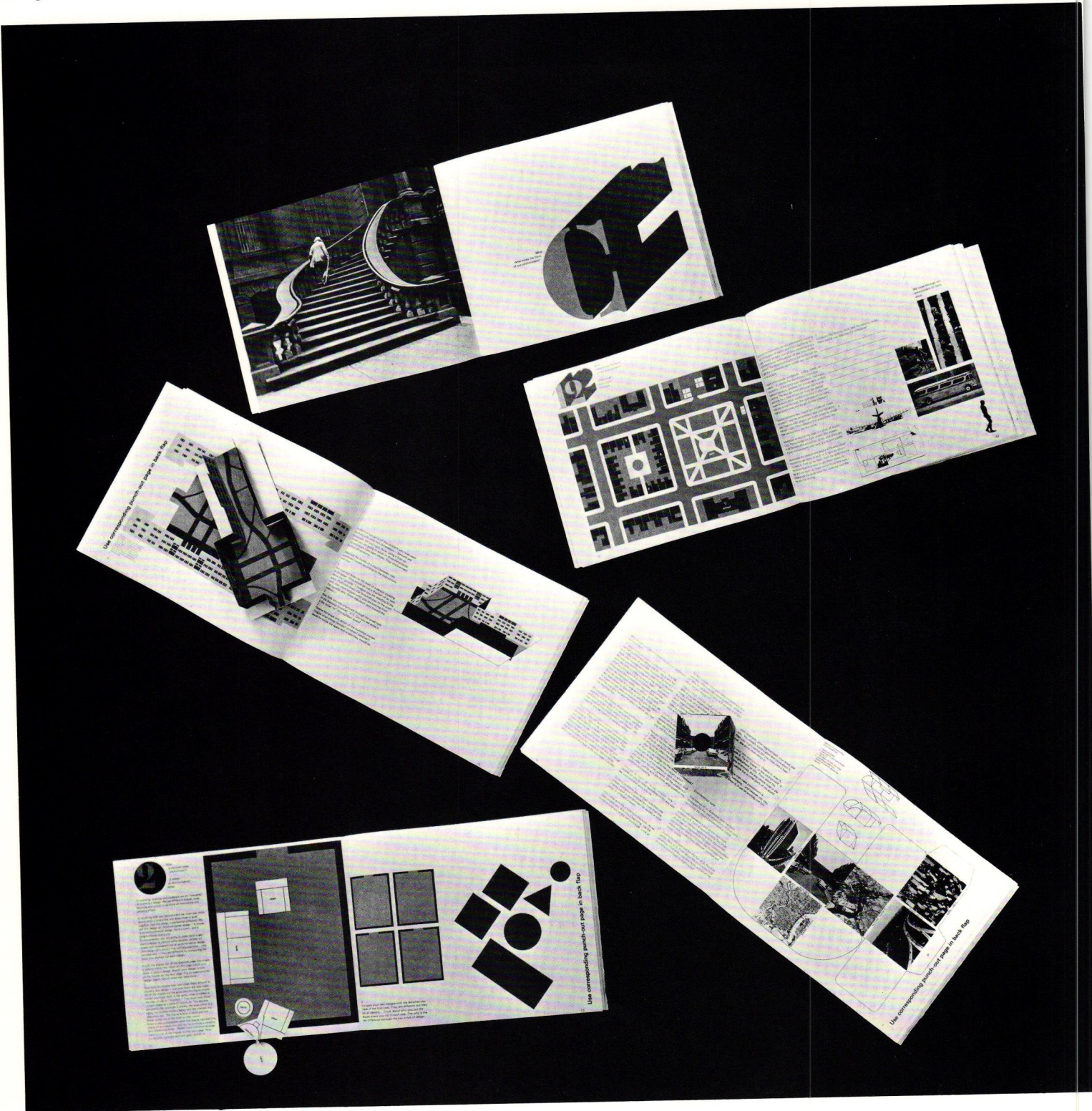
*This is a partial list of current resource options from which the students of the Parkway Program choose their curricula. As you can see, they are taught all over the city by many talents.*

*Basically people telling other people what and why they're doing what they're doing and where they're doing it.*

*Ideally this would be a pervasive commitment of the entire citizenry.*

*Ideally it would be people who don't know they are teachers holding conversations with people who don't know they are students about their mutual concerns in places where the "show and tell" is the city.*

Parkway Program  
The School District of  
Philadelphia  
c/o Franklin Institute  
20th and the Parkway  
Philadelphia, Pennsylvania 19103



The Group for Environmental Education—GEE!, a non-profit corporation, was started a couple of years ago in Philadelphia by Alan Levy, Bill Chapman and Richard Saul Wurman. Their goals and aims were several:

1. To make the child aware of his man-made environment, aware that it was, or should be, a response to his needs, and that man was responsible for creating it . . . to help him become able to identify and subsequently com-

2. To create in the student confidence in making his own judgments and to enable him to develop the criteria that might be used in the evaluation or creation of his own environment.
3. To give him greater aspirations, to broaden his alternatives, to help him reach beyond the limits of his immediate world.

The group's intentions were to motivate the child and to insure his direct participation through problem-solving. Toward these ends the program proceeded along two parallel paths: teacher training and the development of resource materials.

They found that teachers had to be made confident in their ability to handle the program. GEE! sought to provide teachers with a solid framework, a basic introduc-

tion into the subject as well as the benefit of other teachers' experiences.

To provide the jumping off point, an invitation to the program, and a basic introduction, a workbook was produced: **Our Man-Made Environment: Book 7**

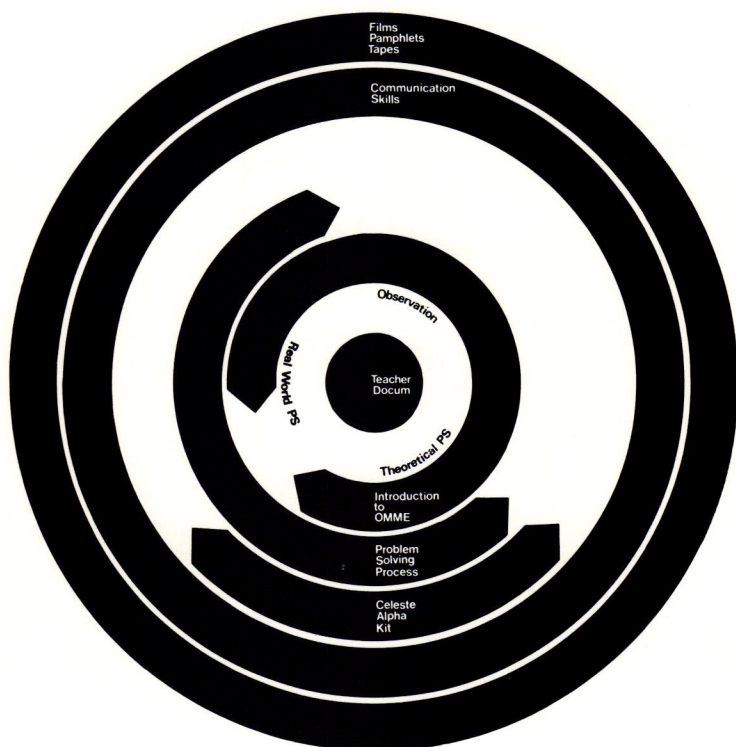


**Our Man-Made Environment  
Book 7**

Alan Levy, William B. Chapman  
and Richard Saul Wurman  
1970

80 pp plus 10 diecut sheets  
11 1/2" x 9 1/2"

Price varies from \$4.75 each  
plus postage for 1-4 copies to  
\$1.50 each plus postage for  
50 copies or more.



left:

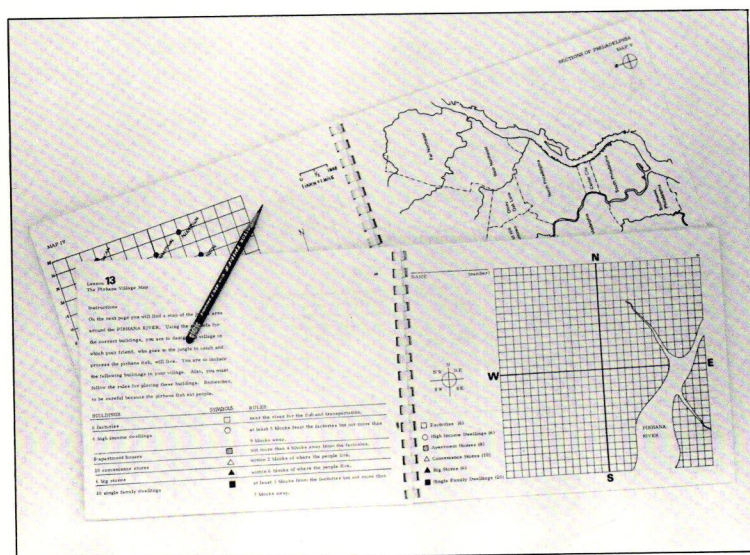
Any program in the man-made environment must be learned through activities. These activities will most likely relate to one of these three broad categories:

1. Observation and communication (learning from one's own environment through mapping, photographing, interviewing, etc.)
2. Theoretical problem-solving
3. Real world problem-solving

Activities in these general categories can occur sequentially, irregularly or in any way that works.

right:

**Our Man-Made Environment: Book 8** is a book about the process of environmental change. It is intended as a supporting resource to a problem-solving activity whether real or theoretical. **Book 7** concludes with the concept of change; **Book 8** is entirely concerned with understanding our role in effecting change. It tries to reveal the components of the process, the way they relate, not as change occurs mysteriously in real life, but as it must be seen to be understood so that the mystery will no longer obstruct understanding. It directs us to question the things we take for granted, such as the kind of environment we want—or say we want; such as what resources we have available and our need to understand, to face up to our priorities; who are the "they" that write the rules that restrict environmental change and what would we do in their place. But, most important, it asks us to face up to the fact that to get something, somewhere, we usually must be willing to trade-off something. The lack of something to trade-off, the absence of an alternative, is the ghetto.



left:

**Learning to Get Around**  
 Urban Environmental  
 Mapping Unit  
 The Urban Environment  
 Collaborative  
 School District of Philadelphia  
 Pennsylvania Advancement School  
 1971  
 79 pp plus maps  
 11" x 8 1/2"  
 available soon  
 Group for Environmental  
 Education, Inc.  
 1214 Arch Street  
 Philadelphia, Pennsylvania 19107

Following a pre-test in 1968 **Book 7** was published in Spring 1969. It is organized as a series of problems in response to basic questions:

1. What is the man-made environment?
  2. Why do we build it?
  3. What are the factors that influence it?
  4. How do we change it?
- There is also a supporting document for teachers; a how-to-do-it guide which sets down general

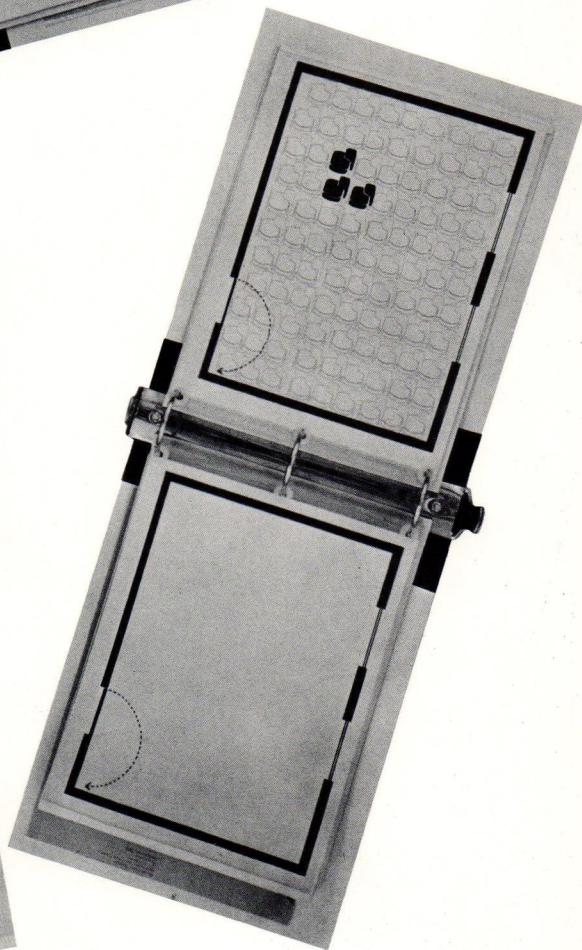
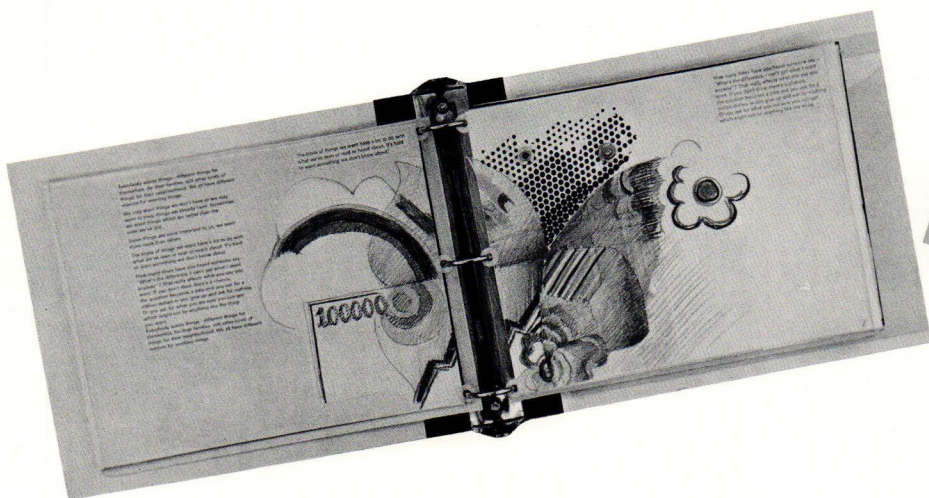
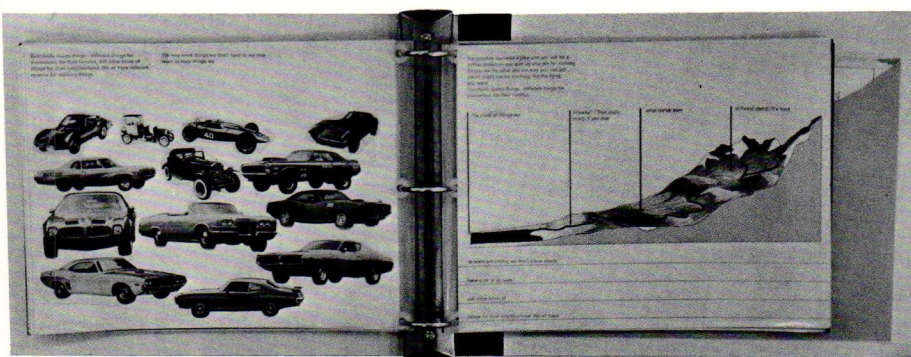
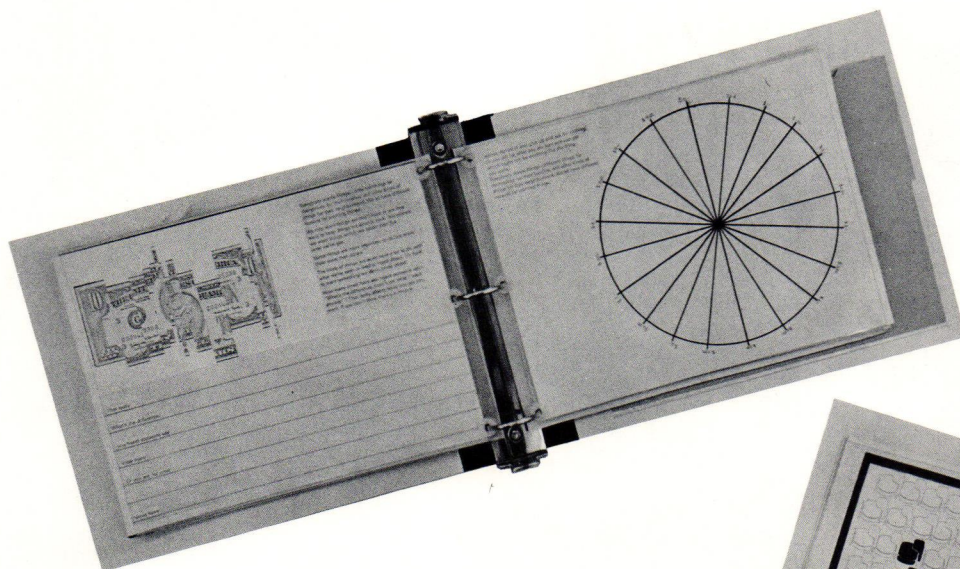
and specific objectives and describes each problem in detail. It describes classroom activities such as field trips, mapping, and model building, which though related to the book are actually self-sufficient.

In the Spring of 1969 7,000 children took part in a test-program in the Philadelphia schools. This was followed by teacher seminars in Houston, Columbus, Newark, Delaware and seven

districts in New Jersey. Through individual meetings and correspondence many other schools have become involved.

Over 20,000 students have received copies of the workbooks to date. They include grades 4 through 9 and some college freshmen as well, and are taught with a variety of subjects such as social studies, art, English, math and science.

Working with teachers involves workshops, seminars, follow-up conferences and most important the dissemination of curricula ideas and activities developed by the teachers involved. One such association with a group of Philadelphia teachers resulted in five classroom programs, written by them, ranging from mapping through pollution.



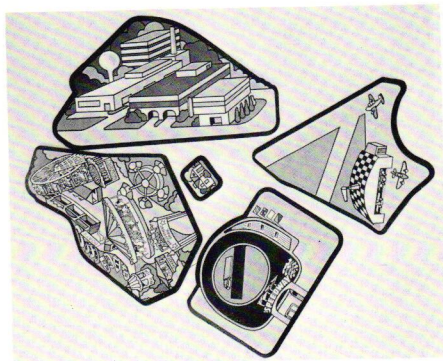
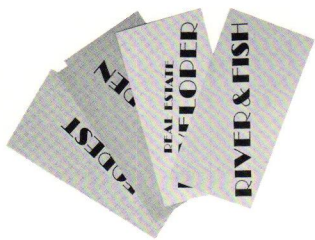
This idea of advising, cooperating with and learning from teachers must be advanced along with the development of new resource materials. The last two workbooks of the 7-8-9 cycle are now in preparation as well as other activity oriented materials seen as important supporting materials in communications, theoretical and real world problems and research techniques.

Efforts are now being made to

expand the program into the elementary grades using the school building, the classroom itself, as well as the immediate environs of the school as a laboratory.

Exercises and materials that help the city to become observable give its citizens another incredibly abundant gift—that of an unlimited curriculum as the city becomes an environment for learning.

**Our Man-Made Environment Book 8**  
available soon  
Group for Environmental Education, Inc.  
1214 Arch Street  
Philadelphia  
Pennsylvania 19107



Developed by Coca Cola, this teaching kit has three purposes:

"First, to help children become more aware of their environment; second, to help children to appreciate their interdependence with their environment; and third, to help children realize that, as human beings, they can make decisions which will affect their environment for better or worse.

The exercises involve the children in discussion and debate, and encourage them to make independent decisions about the world in which they live."

*The corporate gesture here is exemplary. Coca Cola, perhaps, is reacting to the major fuss now current, concerning their no deposit—no return bottles. The drawings, particularly in the large playing board, resemble a cartoon of the way adults think children would like adults to draw, rather than the more informative tool for playing the game that could have been produced to hold greater interest for children.*

**Man in His Environment**  
A classroom ecology kit  
1970  
Free to school boards from  
local participating bottlers  
The Coca Cola Company  
P.O. Drawer 1734  
Atlanta, Georgia 30301

Infants may not experience or comprehend the city as such, but they actively develop the foundations of the intellect which in later life patterns or at least influences this comprehension. Indeed, the preception, schematization and general comprehension of the form, organization and functional potential of the physical environment may be more easily assisted in infancy and early childhood than in later life. Through direct physical experience the infant builds the cognitive foundations for the more abstract knowledge of urban form and space of his later years.

The consequences of the perceptions of infancy on an adults orientation in, and comprehension of, the city may be significant. Yet, the environmental learning of infants has not been adequately considered by existing disciplines.

The Infant Learning Landscape to be installed at the Durham Child Development Center in Philadelphia has been designed to facilitate the care and development of fifteen infants under eighteen months of age. This highly symbolic, clearly articulated yet meaningfully organized, three-dimensional playscape has been designed to provide the sensorimotor learning style of the infant with a physical setting in which distinct and significant visual forms are reinforced by sound, touch and color and carefully related spatially to provide symbolically meaningful sequences of experience. The symbolic elements of this learning playscape are of an archetypal character providing forms symbolic of nature (river, plain, tree, mountain, cave) and the man-made environment (house, wall, road, tower, bridge). Appropriately scaled three-dimensional representations of these images are carefully differentiated and related or juxtaposed spatially for maximum clarity and significance. They are organized to reflect

later experience in the world at large (work, travel, recreation, socialization, individual achievement) in appropriate physical surroundings (city, country, sociopetal and sociofugal spaces). In particular, an open box with a roof (house) is situated in an enclosure (fence, wall, boundary) with gates, openings and stored toys (artifacts, industry) which the infant may freely explore. A hard surfaced road leads from this enclosure (city surrogate), forks at a sign post before passing under a bridge to arrive at a natural glade (country surrogate) containing a soft grass-like area (field, marsh) bordering a very flat, winding water table (river) feeding into the bottom of a "tree." Back at the fork the road rises by steps to the base of a ball (bell) tower (flag, maypole, man) atop a mound (centrifugal form) all reinforcing and encouraging ascent, individual achievement, physical effort and verticality. The opposite fork ramps down into a round well, hearth-like, centripetal chamber topped by a dome, a mystical cave symbolizing and fostering shared experience, mystery and passivity. The bridge linking these more or less ceremonial spaces passes by steps from the tower mound but ends in a slide which interjects the enterprising infant into the cave chamber, an initially aggressive, exciting yet ultimately compliant experience.

This entire playscape is carefully scaled to the infant, yet no infant is beyond the reach of adults. It provides the opportunity for an endless spatial odyssey, crawling or toddling through a rich variety of clearly differentiated forms. Individual toy play, exercise, the observation of other infants and socialization of all sorts are also facilitated.

It is hypothesized that the clarity and richness of this environment will help those infants to more

quickly form meaningful schemata about their environment. The important effect on later learning, of early, thorough, mastery of body skills is recognized and will, it is hoped, also be aided (leading perhaps to greater body utility through more immediate recognition of the fit between skill and form).

It is also hoped that such an environment might provide the basis for a deeper understanding and appreciation of both the probabilities and the possibilities, the use and meaning, of later environmental settings. Just as children who have never flown may read aerial photographs on the basis of spatial understandings derived from toy play so children exposed to a coherent, symbolically structured and sensorily reinforced environment at the beginning of their perceptions may become better able to orient themselves in the city, more understanding of architectural and urban form and more demanding with respect to both the richness and the **distinction** of their environment.

All of these spaces and forms are reinforced by appropriate sounds, textures and colors. The cacophonous sounds, geometric forms and hard surfaces of the city surrogate (house, yard, store, work) are differentiated from the melodic, softness, flowing lines and natural movements of the country surrogate (river, marsh, tree, fish pond) while the symbol of individuality, physical prowess and achievement (stair, tower, bridge) are hard against a soft base (mound) while the social, unifying, passive and mystical place (cave, hearth, chamber) is soft against a hard base.

## Background Information

An Infant Learning Environment was originally conceived as an individual play/sleep place for the author's children (who grew up faster than it could be made). The design reflects a theory for the coding of visual information which is correlated with a comprehensive information system for design reported on in the **Proceedings of the Second Annual Environmental Design Research Association Conference**, October 1970, Pittsburgh, Pa., John Archea, Charles Eastman, Editors, and in other papers. The entire theory drawing on Piaget, Bruner, Jung, Miller, Simon, Lynch, Norberg-Schultz and others is forthcoming in a book on design linguistics. The immediate work of this project located at the Durham Child Development Center, an inner city unit of the Philadelphia Public School System, originated through the Graduate Program in Community Design, Philadelphia College of Art, a social action program directed, by the author. The school age mothers of the fifteen children who will experience this environment are actively participating in the design and use of the facility as part of their own education in the same building. A developmental psychologist, the infant care staff, representatives of the Pennsylvania State Department of Public Welfare, the administration of the Durham Child Development Center, of the Learning Center and students at the College of Art are also participating.

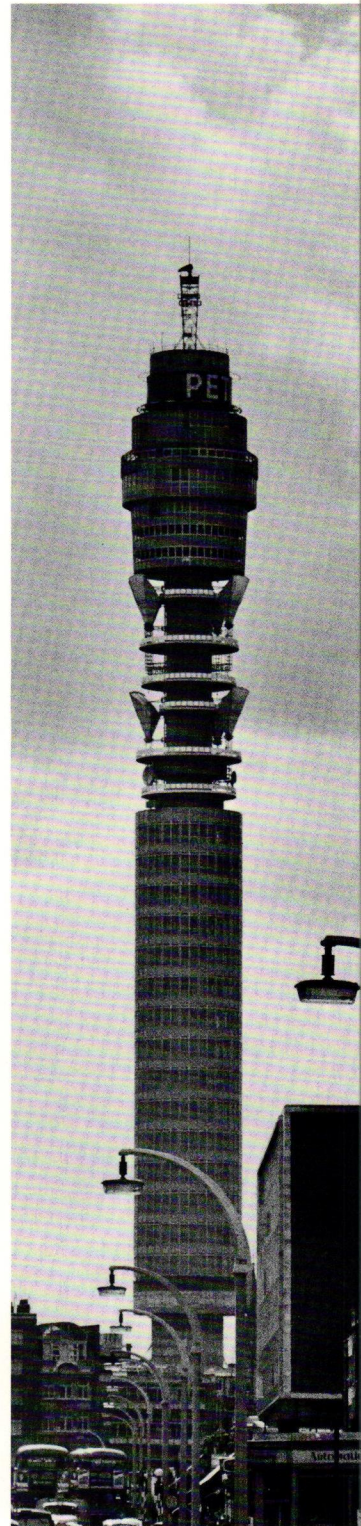
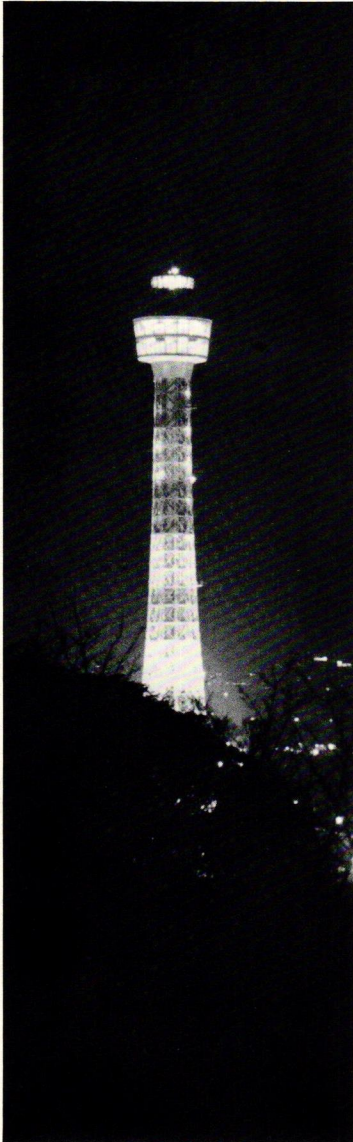
## The Beginning of Observation in the City

An Infant Learning Landscape  
Chuck Burnette  
234 South 3rd Street  
Philadelphia, Pennsylvania 19106

**Towers  
and building top  
observatories**

"TOWERS was initially presented as an exhibition of 400 photos, 600 slides and 30 models at the Museum of Contemporary Art, Chicago, in September and October of 1969.

"The original exhibition sections of the publication are devoted to:  
1. Watch towers – the simplest and most basic type of tower – offering security and knowledge as a function of elevation – a passive information-absorbing unit.



- 2. Communication towers – active transmitters of information (by means of light, sound, electricity or radio) also providing security or information by virtue of their height.
- 3. Engineering towers – a survey of towers that perform services for materials. They are unencumbered by human needs. Smokestacks and, for the most part, poles, have not been included since they are virtually simple shafts.
- 4. Restaurant-Observation-TV

towers (Status Towers): Planned to impress the visitor, serve sight seers, or create a landmark.  
5. Towers in Architecture – A selection of early 20th Century office towers by Frank Lloyd Wright and Louis Kahn; circular tower buildings; and a grouping of the tallest buildings in the world.  
6. Fantastic towers, artist's towers, including many exotic and overtly symbolic concepts make explicit what is implicit in the tower form."

*These are some illustrations from an excellent exhibition that is still available from the Museum of Contemporary Art in Chicago. The ability to observe the city from above and the possibility of locating classrooms in the tops of buildings is worth noting. The following pages describe the urban observatory and postulate its location in an area that would allow the use with the ability of a tower from which to see the city.*

**Towers Exhibition**  
David Katzive  
1969  
Museum of Contemporary Art  
237 East Ontario  
Chicago, Illinois 60611  
55 4' x 8' panels  
15 3' x 8' panels  
rent: approximately \$750.00



In 1967 I wrote a proposal for an urban observatory. Simplified, this project called for making public information public. It would appreciably change our city government and practically re-order the current *modus operandi* of our City Planning Commission, Department of Streets, and Department of Public Property.

The institutions and public meeting places in our cities are but extensions, natural extensions, of the street. The street is a necklace of rooms, changing character block by block from the changing demands which interface along its facades. The street is a room with a stupendous ceiling—the sky. Its windows are the windows of all the buildings that frame its space, and the measure of its quality is the measure of the city itself.

## More Urban Observatory

The museum of the living city, or the urban observatory, should be the visual data center of the city and region.

Movies and models would describe the growth of the region from the 17th century to the present and postulate ten and twenty-year future growth patterns in population, land coverage, higher education and recreation facilities.

Visitors would be able to "dial" any relationship among these aforementioned elements, even those from the past and thereby understand the various relationships and correlations. Any narration accompanying exhibits on growth should be steeped in the history of the region thus enabling school children to sense the present in an historical context. There should be current maps and models of all kinds describing quickly, clearly, and tangibly things such as houses for sale and their price ranges so that someone moving into or about the city might select a place to live. This might even facilitate open housing. There should be similar displays showing industrial land and plant facilities, their size and cost, the location of the unemployed, substandard housing, personal income levels, tax assessments, and age and population density. There should be listings locating all public amenities, medical facilities, social agencies, etc.

The museum should be a working, educational center for the development of information, where all city plans and proposals for change would first be introduced to the public.

It would ideally be located in the center of the city, and contain the following:

1. On the ground floor, the urban observatory's nucleus.

2. On the second level, a place for activities including a library containing material related to the events of the moment: the city's waiting room, an urban theater of news.
3. Above might be an area that would contain accommodations for special guests of the city.

The observatory should extend a supplemental network throughout the city, with major nodes on the ground floor of all public buildings. Here, city departments would assume their responsibility of describing aspects of the city to its citizens. Through this means the city departments could explain what they do and why they do it.

A city or a region must describe itself to its citizenry. It should do this with enthusiasm, honesty, clarity and humor. Historically, people have chosen to set aside places (now known as museums) for objects and information pertaining to particular phases or aspects of their civilization. Without any doubt, the most significant part of civilization— that which touches all aspects of our lives— is our urbanized environment. In a new kind of museum, the city and its man-made environment with its sociological, economic and political realities should be clearly described to the people living in it. This should be done in a manner allowing everyone to sense the constants of growth and change and the inter-relationships of elements of the community.

The museum of which I speak should embody three major concerns:

*formation*

*situation*

*aspiration*

### *Formation*

Formation is the historical determinant of the region.

*Formation* includes the form and make-up of the region and the various relationships between political, social, economic, scientific and historical events. Two essential aspects of formation are growth and change, and the concurrent idea of time. Where time is of overriding importance,

*Situation* is the present condition of the region.

*Situation* is the annual, seasonal and daily life of the city. It describes what is presently happening in our schools, our people and our institutions. It includes the way we use our money, land, air and water. *Situation* is also concerned with the location of housing types, urban renewal areas and all the movement systems lacing the city.

In this section of the museum, one should be able to "dial" certain relationships: the inter-relationship between a highway program and residential development, or a school and the school-age population. The staff of the department of streets and board of education, as well as other city officials, should be invited to use this section to make it a live, working place. This would also be the location of the urban gaming center.

*Aspiration* embodies future possibilities.

*Aspiration* embodies the long and short range desires and plans of all institutions and departments of city government. This section of the museum becomes the public forum for the display and public testing of ideas. This display can also educate the public as to what might be, what should be, what could be.

## The Place—City Hall

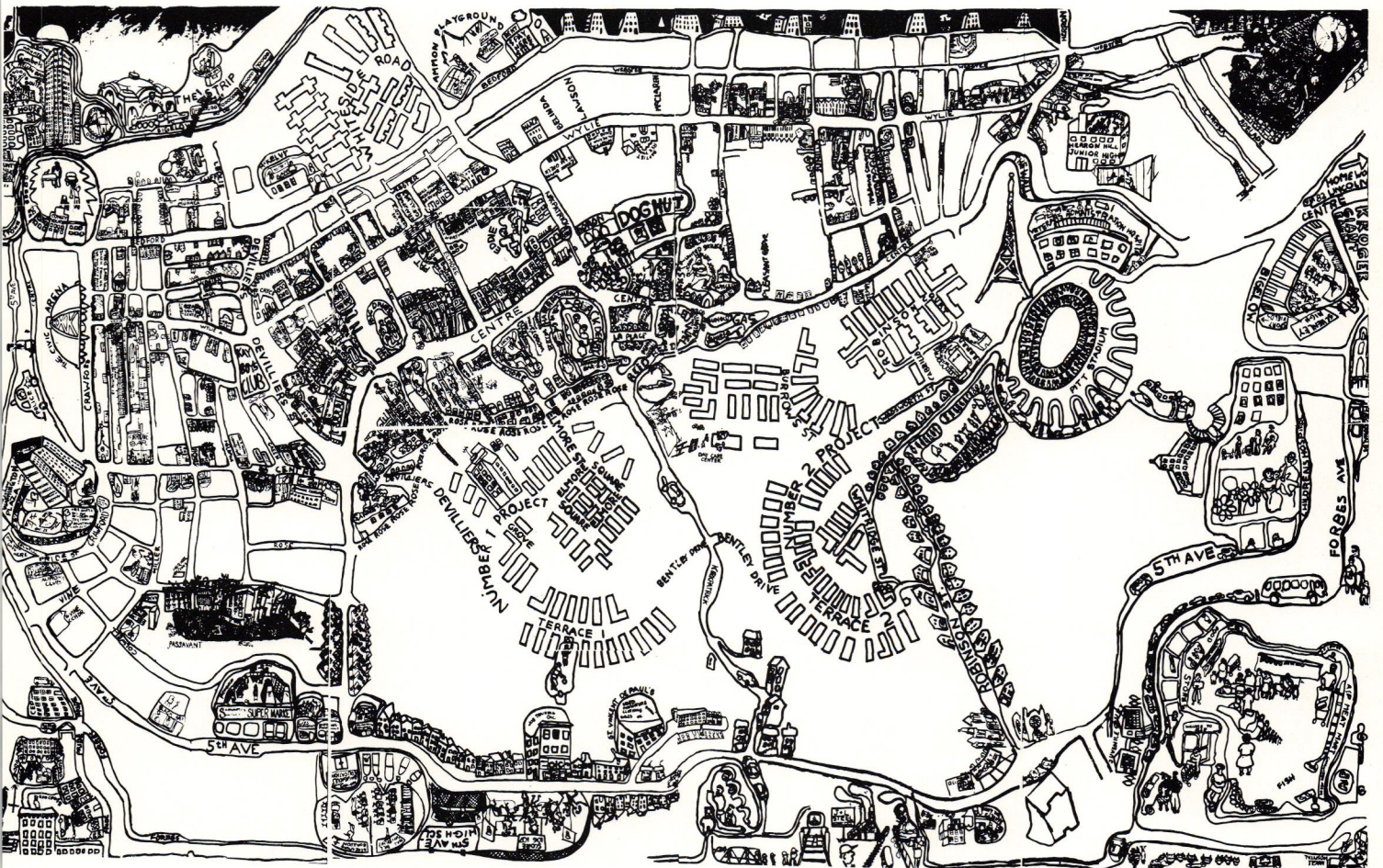
Philadelphia's City Hall, symbolically and functionally the most prominent structure in the city, is centrally located and faces a busy plaza at the crossroads of major vehicular, pedestrian and mass transit routes.

City Hall is owned by the city and based on recent studies, has enormous amounts of unspecified space soon to be available. This building combines the urban spatial characteristics of the Campo of Siena, the governmental symbolism and bulk of the Kremlin, the movement foci of Grand Central Station and the physical prominence of the Eiffel Tower.

An urban museum would fill the enormous gap in public relations and public education now existing in the region, a gap felt strongly by the Chamber of Commerce, the Office of the City Representative and the Philadelphia Industrial Development Corporation. Along with the attraction of valuable people and valuable industry, such a demonstration of awareness by the city would serve to establish once again Philadelphia's leadership in urban thought and development.

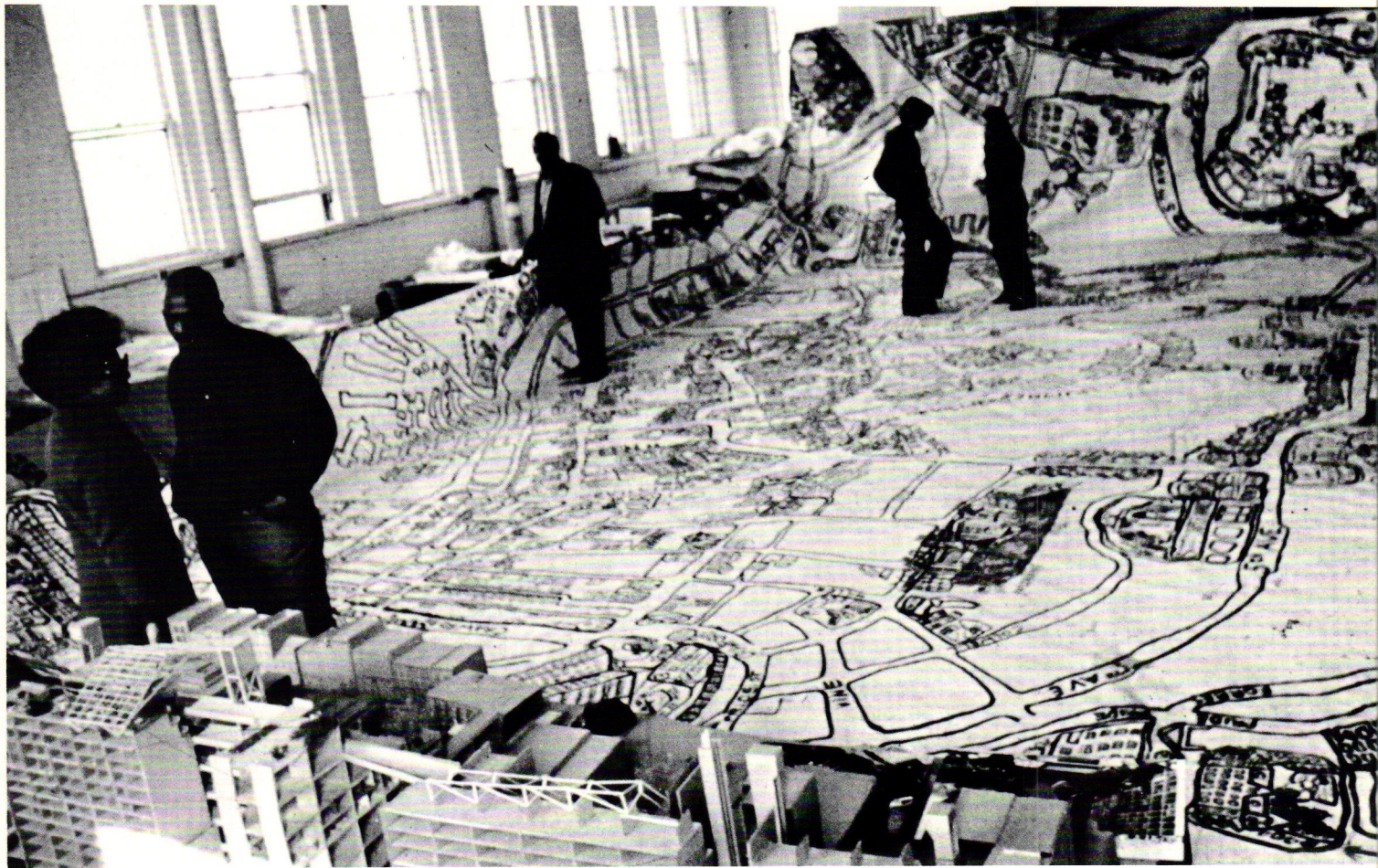
## Urban Observatory

Richard Saul Wurman  
1214 Arch Street  
Philadelphia, Pennsylvania 19107



"The problem was to find a way to make a document that people in the community could understand and use in order to participate in the planning and making of their community. It had to be a map that showed how things were in the community and where they could go — like uphill or downhill or tight or strung out. The finished map measures twenty-four feet by forty feet. It is on the floor and people walk on it.

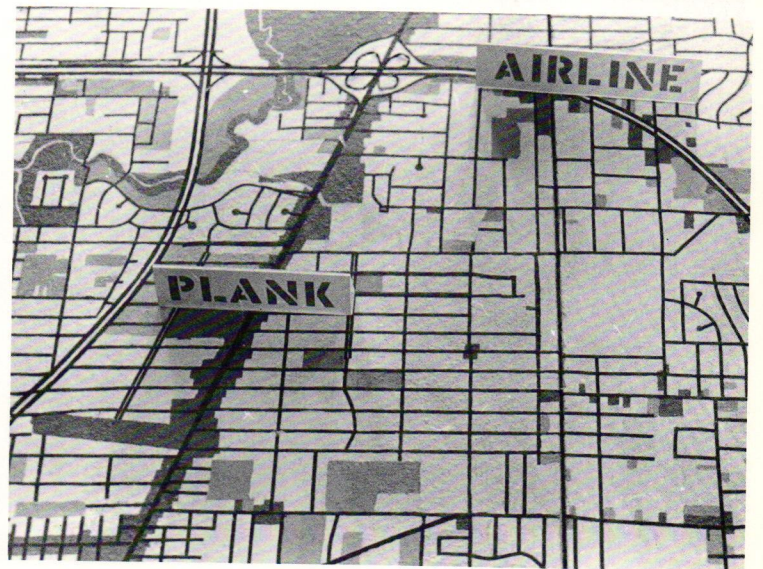
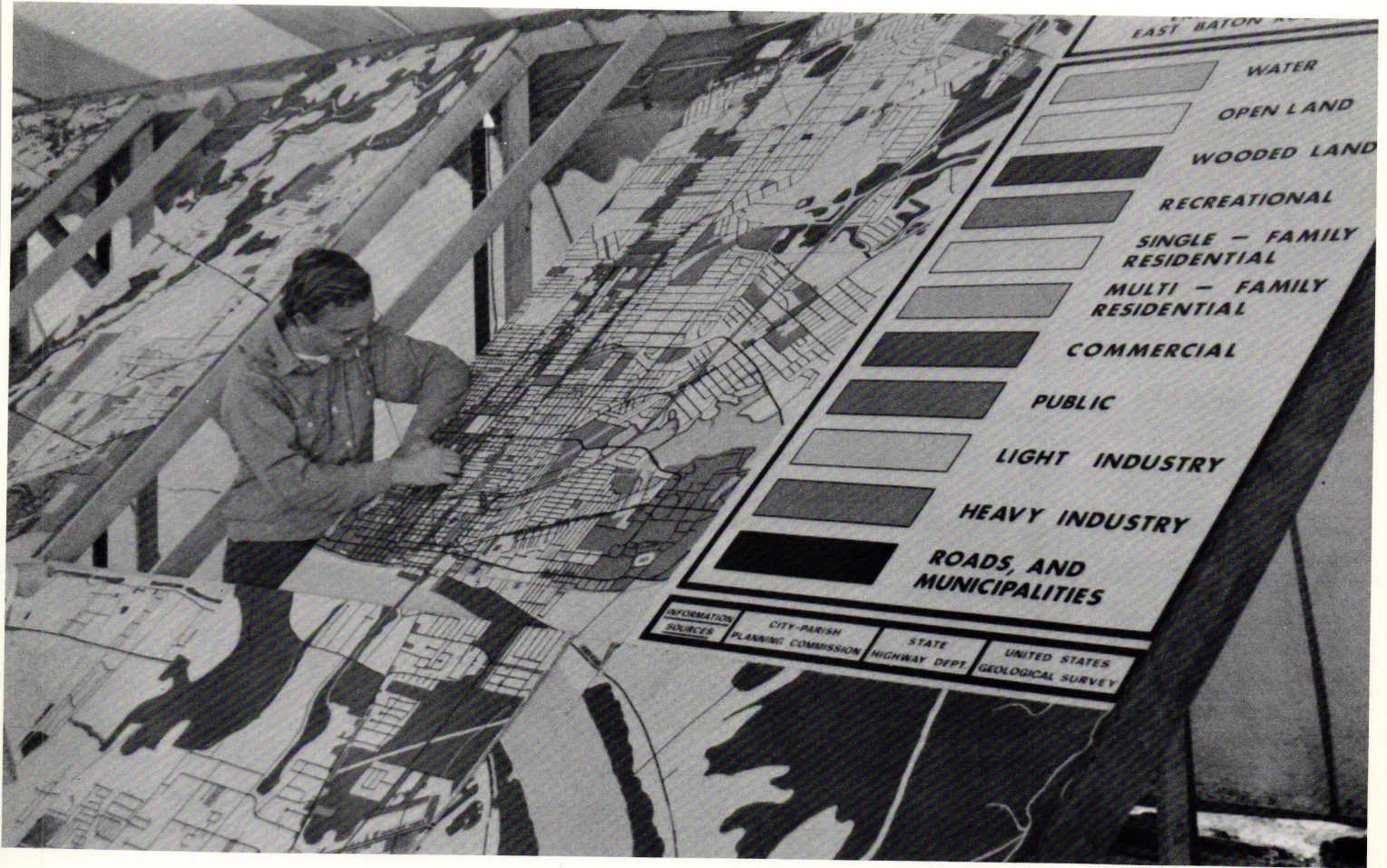
Presently, the map is being used by Community Design Associates to involve its clients in the planning and design of their projects: they use it as a general ground on which to base their decisions. C.D.A. is also using it for a transportation study of the Hill. It has been submitted to Pittsburgh Model Cities for use as a community directory of services and, again, as a general ground on which to base planning decisions."



*Why doesn't every community make its own?*

*This is a marvelous example of what could be the nature of a local map for every community, continuously updated, showing the resources available as well as the location of problem pockets.*

**Community Map, Hill District,  
Pittsburgh**  
1970  
25" x 40"  
Community Design Associates  
2012 Wylie Avenue  
Pittsburgh, Pennsylvania 15219



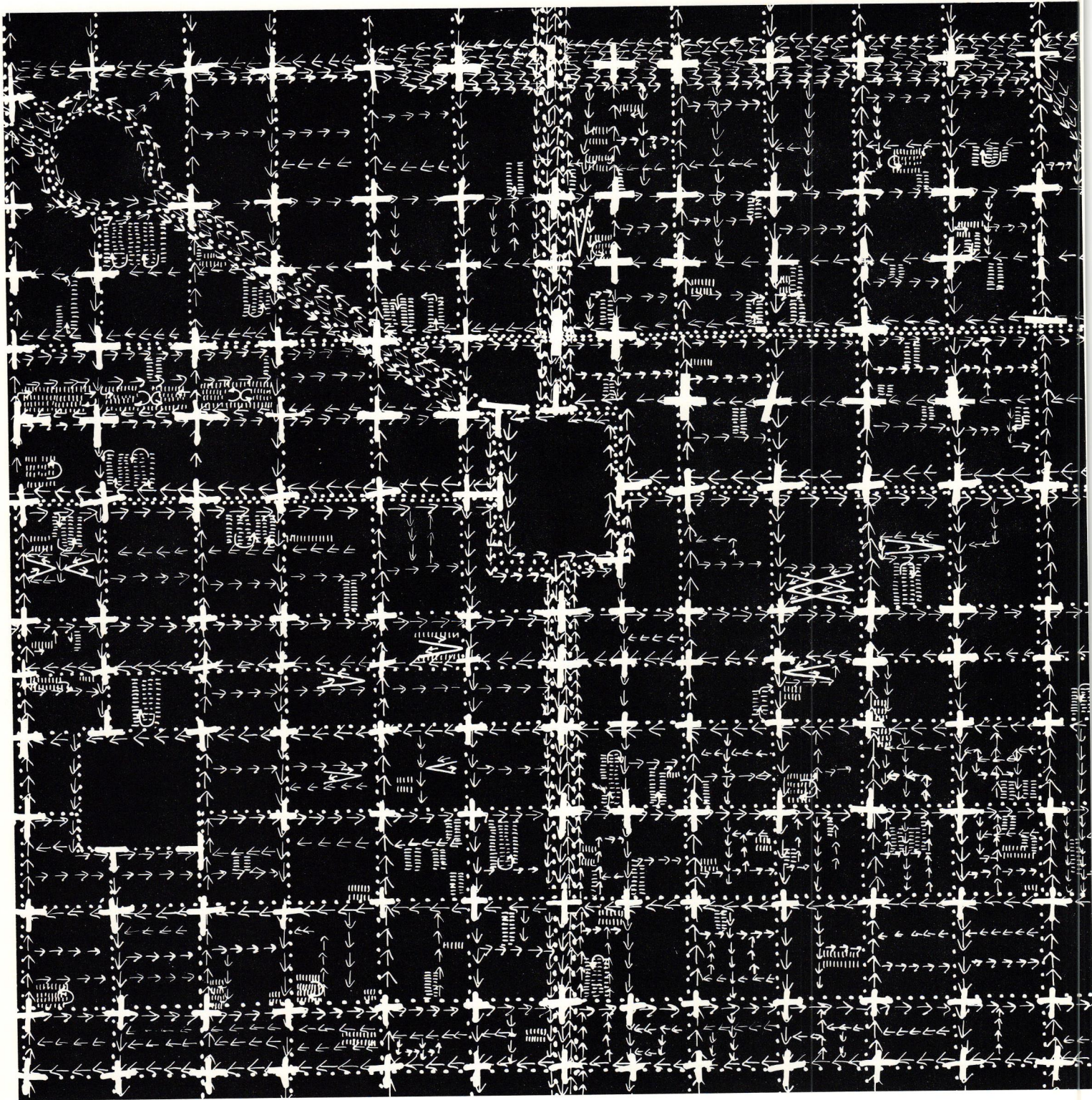
In May 1969, the East Baton Rouge City Parish Beautification Commission began an extensive research effort whose major thrust was the development of effective ways of presenting material about the parish to the general public.

The first step in this program was the presentation of land-use information in an understandable form. A color-coded land-use model, 32' x 32' at 1" = 400',

was constructed by the staff. Since its completion, it has been used extensively in sessions with mayors, department heads, civic groups, and the general public. The staff continues to develop other visual material such as a color-coded zoning map (12' x 12') and a topography map (8' x 8').

*Although the specific technique leaves something to be desired the gesture to the community is very worthwhile. I understand the map is well used and has had a positive effect on the community's understanding of its surroundings.*

**City Parish Beautification Commission**  
Box 458  
Baton Rouge, Louisiana



*Lou Kahn developed this shorthand method of showing traffic movement and vehicles storage. It remains an evocative exercise and a lesson in the need to describe complicated information in a form that allows for understanding and the further development of ideas. This is a section of one of a set of drawings, the others describe the then existing movement pattern.*

Louis I. Kahn  
1501 Walnut Street  
Philadelphia, Pennsylvania 19102

The Notebooks and Drawings  
of Louis I. Kahn  
edited and designed by  
Richard Saul Wurman and  
Eugene Feldman  
The Falcon Press  
1962  
75 Drawings  
11" x 15"  
\$14.50  
Wittenborn and Company  
1018 Madison Avenue  
New York, New York 10021



9/67

Richard,

I've got an idea for a series of destination films on major cities throughout the world.

Not travelogues or guided tours. A real communication service for passengers from an airline.

If you're on a plane its not usually by choice, but necessity. If the airlines could understand this as well as they do the mechanics of flying---

The in-flight systems can inform as well as entertain.

1/68

Richard,

----a film that feels the way people are in their own habitat----the way they speak----the jobs they do----the detours that fill out what the tours leave out. After all, the cities we visit are people, not just monuments, museums and restaurants.

5/68

----From the experience on the plane the passenger will know that there is an empathy on the part of the airline for the whole. The film should divert or take the tedium out of a long flight. That doesn't have to be its only purpose----we can come closer to truth in the cliché that you are actually in the country you're headed for the moment you step on to the plane.

Where do the Romans really eat spaghetti after Sunday going to mass----why are the gendarmes carrying those flowers on the left bank----

2/69

Richard,

Other destination films can be shown in-flight to promote the carriers' different ports of call. These same films could be made available to schools, theaters, TV, clubs, travel agents and tourist offices in portable projection units or cassettes.

In addition to in-flight films a total package on board the aircraft would include language brush-up phrases and practice (beginner and advanced) on the earphone system. And a small paperback on the destination, designed to work with the audio-video material. Of course the entirety can become a strong promotion for the airline. It needn't make claims for prettier stewardesses, softer slippers or (?) just-broiled steaks.

The idea has so much to do with why the passenger is on the plane in the first place.

We shouldn't limit the idea to foreign travel. Its needed for intra-continental flights in this country.

9/69

Richard,

----the audio we discussed for the in-flight idea a few months ago could also discuss (in some

detail) information in the guide-notebook. It could also bring local programming from the destination point. It could tell children a story----

12/70

Richard,

I read within the last week that some airlines were going to innovate in their passenger service by having the pilot's and stewardess's occasional speeches spiked with a little copywriting help. Some more description (voice-over) of the topography beneath the plane (to our left the giant firey gizzard creek-). Of course, if you happen to be seated on the right--Have you ever thought about what you would do if you had to use the oxygen apparatus or the emergency exit or the lifejacket (?) under your seat? Its all explained in clear English and other languages in plain view by the nearest stewardess or that card somewhere in the pocket near the vomit bag.

We can present all of this information and more clearly and interestingly on the in-flight equipment.

We can do more than flood the cabin with the scent of mother's breast milk to give the passenger a feeling of security----

9/70

Richard,

Thinking about your ideas on the "observable city" and the City/2 planning. I've seen a relationship to some of my ideas on the presentation of television information.

Primarily the news, weather and other public offerings.

A way to use the medium for itself--why should we look at the radio? Cable television (specifically) is a perfect vehicle for a newer approach to what up until

*Bill and I have been discussing the above issues for some time and these are one side of our verbal doodles.*

now has been the province of the magazines. Not a trick or translation of the format but a more visible and understandable use of todays' media to make the city around us more observable.

An inside "look" becomes a restaurant review. Theaters and shops and more are easily presented and analyzed on videotape.

As a primary service function, cable TV reaches the traveler in his hotel room and the inevitable home cable audience with repeated viewings of clearly visualized information as current as today.

1/71

Richard,

Maybe the idea we've been discussing becomes more of a TV guidebook to the city parks, the zoo, the museums, the best way to get to special events, the institutional buildings--the land.

Television can help us to better use the city we live in.

Portraits.

The unglamorous jobs. Whats going on every day that we don't see, right before our eyes.

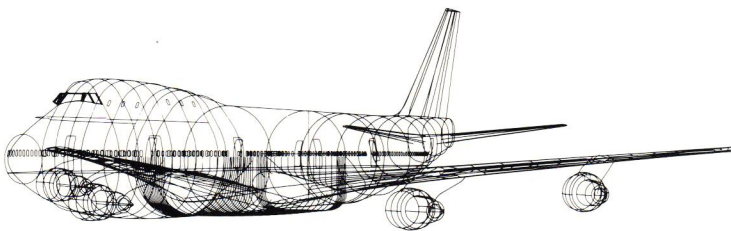
The Last Cookbook.

What equipment you need, what it looks like, what ingredients you need, what they look like, step by step the way it looks, instant replays, cook it, the finished dish, what it should look like, instant replay, what it should look like on the table, how to serve it.

Make it all available in cassettes.

Excerpts from notes and letters from Bill McCaffery to Richard Wurman 1967 to 1971

William McCaffery  
William McCaffery Inc.  
1200 Fifth Avenue  
New York, New York 10029



747 by computer with the assistance of William Fetter. See page 29.

# and don't forget to vote on the propositions and amendments.



Next Tuesday, you'll step into the voting booth and they'll be there again—a whole line-up of propositions and amendments you'd swear were written by some Philadelphia lawyer.

You'll read most of them for the first time. You won't be able to figure out half of what they say. And many of you won't bother to vote on them. Or you'll figure it's a safe bet to vote "No" across the board.

Watch out. Sometimes "No" means "Yes."

As if the normal confusion of legal double-talk were not enough, some of the propositions are written backwards. New York's Civilian Review Board and Detroit's fluoridation questions, for example. "No" means "No, I don't want to vote against."

In spite of all this, there is a way to

beat the "system." Go to the voting booth informed.

This year, the five ABC Owned Television Stations are again trying to eliminate most of the "Huh's" and "What-do-they-mean-by-that's."

In New York, Chicago, Detroit, Los Angeles and San Francisco, we are continuing until election day to broadcast discussion shows, interviews, news programs, editorials and to make time available for rebuttals so that our millions of viewers can vote more intelligently.

We believe it is part of our responsibility to keep you up-to-date on community problems and suggest solutions. One of our suggestions is that you read the propositions and amendments now.

Here are all of them translated into English for you.

**Proposition 1:** A Yes vote would allow the State to borrow up to \$200 million to buy and develop lands for outdoor recreation, including local and state parks, forest recreation areas, boating facilities, and historic sites. Bonds would be repaid with money from gasoline and motor fuel tax, motor boat licenses, and charges for use of facilities.  yes  no

**Amendment 1:** The New York Job Development Authority makes loans to non-profit corporations to finance new industries and expand existing ones. Money from Authority bonds backed by state credit is loaned at reduced interest rates, but only in areas of critical unemployment. A Yes vote would increase from \$50 million to \$75 million the amount of state credit the Legislature could authorize to back Authority bonds.  yes  no

**Amendment 2:** A Yes vote would permit the funds from state-guaranteed Authority bonds to be used anywhere in the State whether or not the employment situation is critical.  yes  no

**Amendment 3:** Cities, towns and villages are presently permitted to base the amount of their debts for low rent housing, slum clearance and urban renewal on the assessed valuation of all of the real estate they can tax. (Assessed valuation ranges from 50 to 98% of full value.) A Yes vote will permit them to base their debt on full valuation.  yes  no

**Amendment 4:** A Yes vote would permit the State to loan money to private, non-profit organizations and associations for mental health facilities. The State would be able to use the resources of these organizations.  yes  no

**Amendment 5:** A Yes vote would authorize the Legislature to provide increased pension payments to widows of retired teachers who had been members of the State or New York City retirement systems.  yes  no

**Amendment 6:** A Yes vote would permit citizens to vote after living in the State 3 months (instead of 1 year) and in their county, city or village 3 months (instead of 4). Also, it would permit newly naturalized citizens to vote immediately instead of having to wait 90 days.  yes  no

**Amendment 7:** A Yes vote would allow the State to operate lotteries to raise money to support education. The Legislature would decide how many lotteries to hold, what the conditions are, and how to spend the money.  yes  no

**Amendment 8:** A Yes vote would permit persons away from their counties (or if New York City residents, out of the City) at the time of election registration to be eligible for absentee registration.  yes  no

**Amendment 9:** A Yes vote would allow Buffalo to decide at a local election whether or not the City and its School District should have separate taxing and borrowing powers. This separation would make the City school board independent of the city government. The Legislature would determine the amounts the City and school board, separately, could tax and borrow within maximum limits.  yes  no

**Amendments 10 & 11:** A Yes vote on these would permit judges who have reached the retirement age of 70 to continue to serve, when needed, on the State Court of Appeals (Amendment 10) and the Appellate Divisions (Amendment 11) for 2 year periods until the age of 76.  yes  no

**Question 1:** A Yes vote would prohibit civilians from serving on a board to review civilian complaints against the Police Department. Only full-time members or administrative employees of the Police Department who have been in the Department for at least one year would be eligible. It would also prohibit the Mayor, Police Commissioner or any City official from authorizing any other investigation or review of civilian complaints.  yes  no



ABC-0/0-210

This is one of a series of ads conceived by deGamo, McCaffery, Inc. developed from the idea that the media have a responsibility to make information clear. The advertisement for ABC owned and operated television stations appeared as a full page.

*Maybe some city will follow the lead and make its next November ballot understandable. That the ballot is not now understandable is to me a high level civic crime.*

client: ABC owned and operated stations  
agency: deGamo, McCaffery Inc.  
creative director: William McCaffery  
art director: Jay Beckerman  
copywriter: Jerry Hubschman

copyright 1967  
St. Regis Paper Company  
all rights reserved

**This tree is 62 years old. It's been through fire and drought, plague and plenty. And all of this is recorded in its rings.**

Each spring and summer a tree adds new layers of wood to its trunk. The soft inner wood is called sapwood and is lighter because it consists of large cells. As summer dries up, the wood turns into a darker, denser wood called heartwood. The heartwood is made of smaller cells and is no longer growing. Study the rings, and you can learn much more. Measure the rings, and you know the tree's age. Study the rings, and you can learn much more. Measure the rings, and you know the tree's age. Study the rings, and you can learn much more. Measure the rings, and you know the tree's age.

St. Regis is interested in the life of the forest to St. Regis. The trees we log together with the other members of the forest produce products that are vital to our lives. The trees we log together with the other members of the forest produce products that are vital to our lives. The trees we log together with the other members of the forest produce products that are vital to our lives.

**ST REGIS**

**A tree is born. It grows. It dies. But a forest can go on forever.**

St. Regis is interested in the life of the forest to St. Regis. The trees we log together with the other members of the forest produce products that are vital to our lives. The trees we log together with the other members of the forest produce products that are vital to our lives. The trees we log together with the other members of the forest produce products that are vital to our lives.

**ST REGIS**

**Hardwood? Softwood? Evergreen? Deciduous? Which is which? And what's the difference?**

The deciduous tree sheds its leaves. The evergreen tree keeps its leaves. The deciduous tree sheds its leaves. The evergreen tree keeps its leaves. The deciduous tree sheds its leaves. The evergreen tree keeps its leaves. The deciduous tree sheds its leaves. The evergreen tree keeps its leaves.

**ST REGIS**

**How does a tree build a trunk that can live for centuries—and hold up a weight of many tons?**

St. Regis is interested in the life of the forest to St. Regis. The trees we log together with the other members of the forest produce products that are vital to our lives. The trees we log together with the other members of the forest produce products that are vital to our lives. The trees we log together with the other members of the forest produce products that are vital to our lives.

**ST REGIS**

"Five years ago, St. Regis commissioned the first piece of art for a series of advertisements based on the hidden world existing in our woodlands. The campaign was directed toward informing the public about little known and interesting facts of forest life. The criteria set for the illustrations were that each should be accurate, informative, and totally the finest botanical art available."

"We've tried to make our corporate campaign memorable. We want our ads to do two things: Serve the reader by providing him with useful information presented imaginatively. Serve ourselves by strengthening the reader's awareness of St. Regis as a responsible, progressive industry leader."

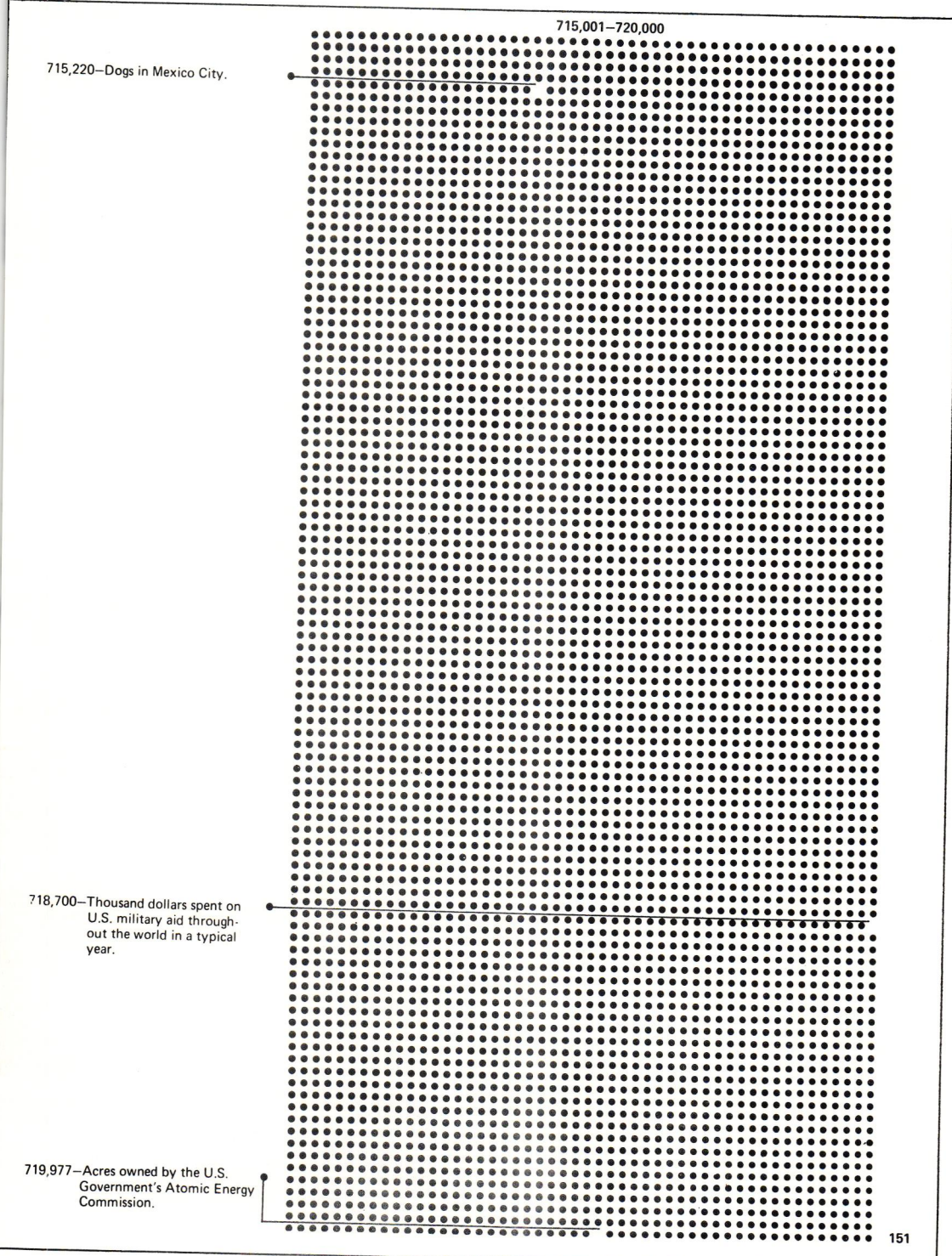
William R. Adams  
President

St. Regis Paper Company  
150 East 42nd Street  
New York, New York 10017

The series of advertisements was illustrated by Jack J. Kunz, a Swiss designer who works as a specialist on scientific and natural history subjects.

*St. Regis did it. They used their advertising budget to describe constructive information about their area of concern.*

**The Secret Life of the Forest**  
by Richard M. Ketchum  
illustrations by  
Jack Kunz  
1970  
112 pp  
8 1/2" x 11"  
\$7.95  
plus postage and handling  
American Heritage Press  
551 Fifth Avenue  
New York, New York



FEBRUARY 2, 1971

*Business Summary*

## Lockheed to Take \$200 Million Loss In Plane Dispute

*Compiled by The Inquirer Staff*  
BURBANK, Calif. — Lockheed Aircraft said it will accept a \$200 million loss on the C-5A transport imposed by the Defense Department as the price of resolving contract disputes.  
It also announced tentative agreement to settle its ship construction claims for \$62 million.  
Lockheed chairman Daniel J. Haughton said the settlements will complete Lockheed's four major contractual disputes over the C-5A transport. Navy construction contracts with Lockheed will change at the end of the year.

## Tax-Sharing Offers \$35 Million for City

By JAMES B. STEELE  
*Urban Affairs Writer*  
Philadelphia could receive as much as \$35 million in additional Federal funds if President Nixon's revenue-sharing proposal gains Congressional approval.  
The figure is based on several factors including Congressional approval of the full \$5 billion "general" revenue-sharing program, a guarantee that would assure the cities of receiving their share, and no cutbacks in existing urban aid programs.  
The estimated share, roughly equal to Philadelphia General Hospital's budget last year, would "help," one city official commented.  
But he added that the city would not come out ahead of the state, he said.  
Thus, by a 1967 census of governments, he continued, Philadelphia accounted for about a third of the \$954 million in tax and fee revenues generated by cities in the state.

This money was supposed to come from three sources: a 10 percent across-the-bar liquor tax was supposed to bring in \$14.8 million, but was declared illegal by the State Supreme Court; a commercial real estate levy was designed to raise \$13.3 million but late collections have reduced the estimates to about \$7 million, and the school board is expecting a repeat of a \$15 million special grant from the state.

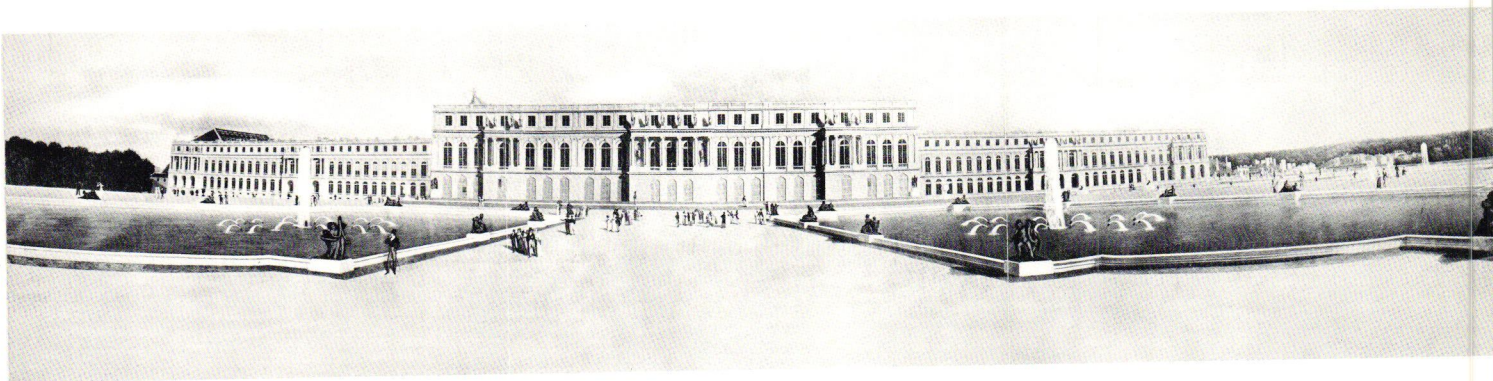
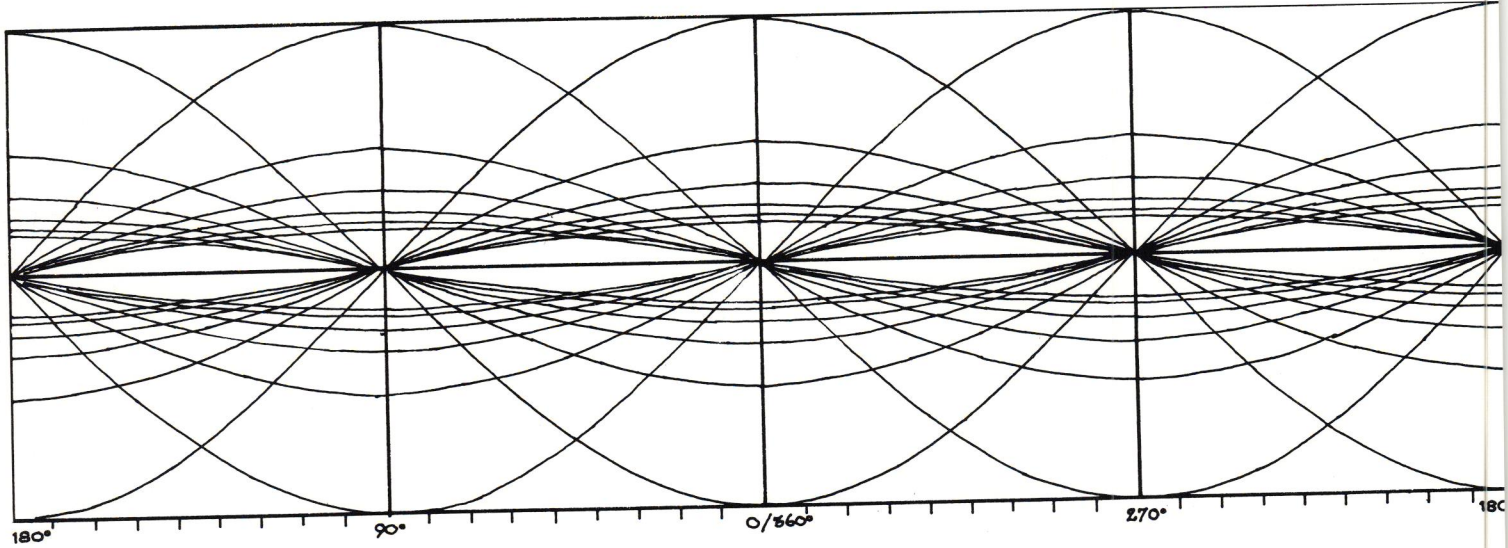
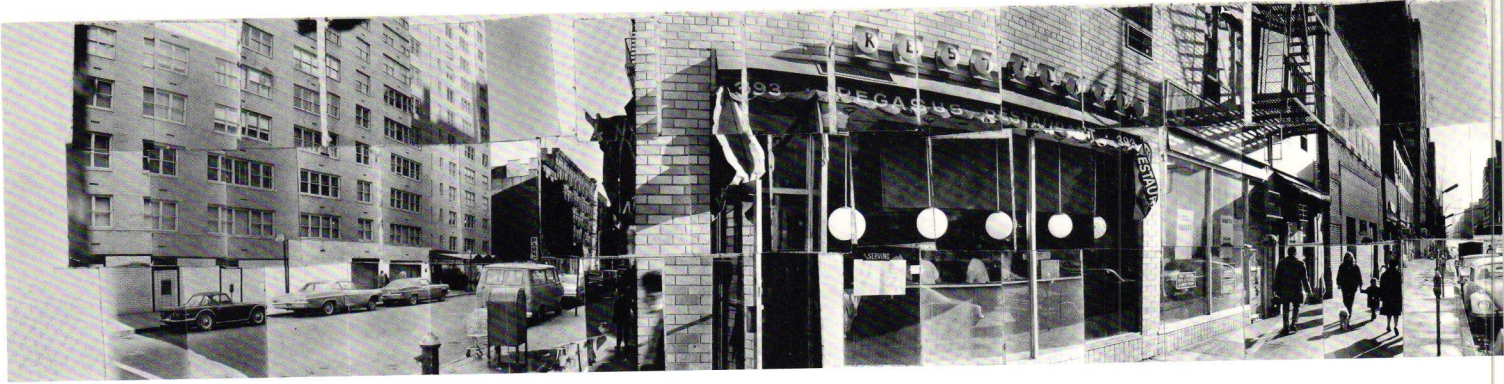
**One Million**  
Hendrick Hertzburg  
1970  
211 pp  
8 1/2" x 11"  
\$3.95  
Simon and Schuster  
630 Fifth Avenue  
New York, New York 10020

This book is a yardstick, a ruler divided into a million parts instead of a dozen. The reader may use it to measure any quantity between one and one million: it will provide a visual equivalent thereof.

There are 5,000 dots to a page — 10,000 on each double-page spread. The progression is marked, and a little counting and multiplying will yield the dot that corresponds to any number one sees.

"The chief value of the book is as an aid to comprehension, and to contemplation. By riffling slowly through its pages, the reader may discover precisely what is meant by one million."

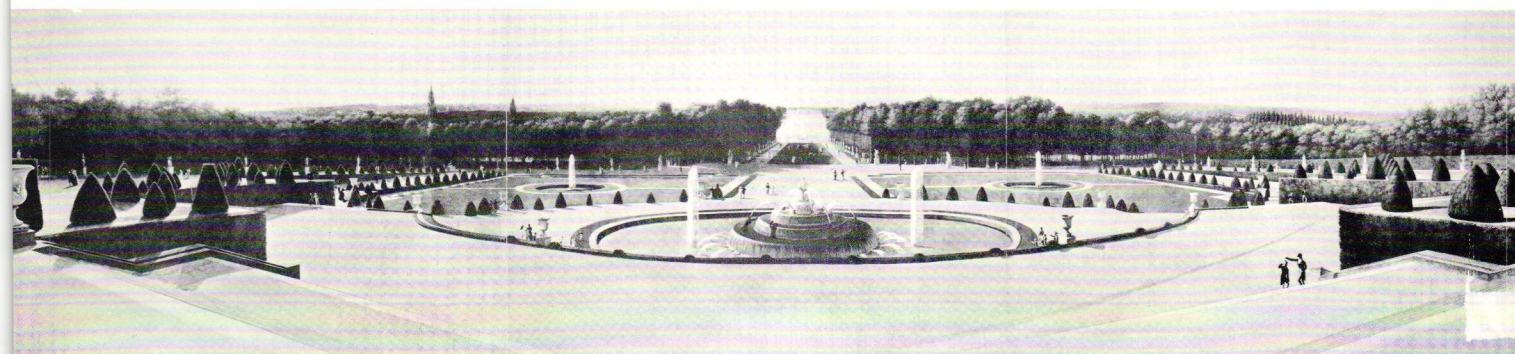
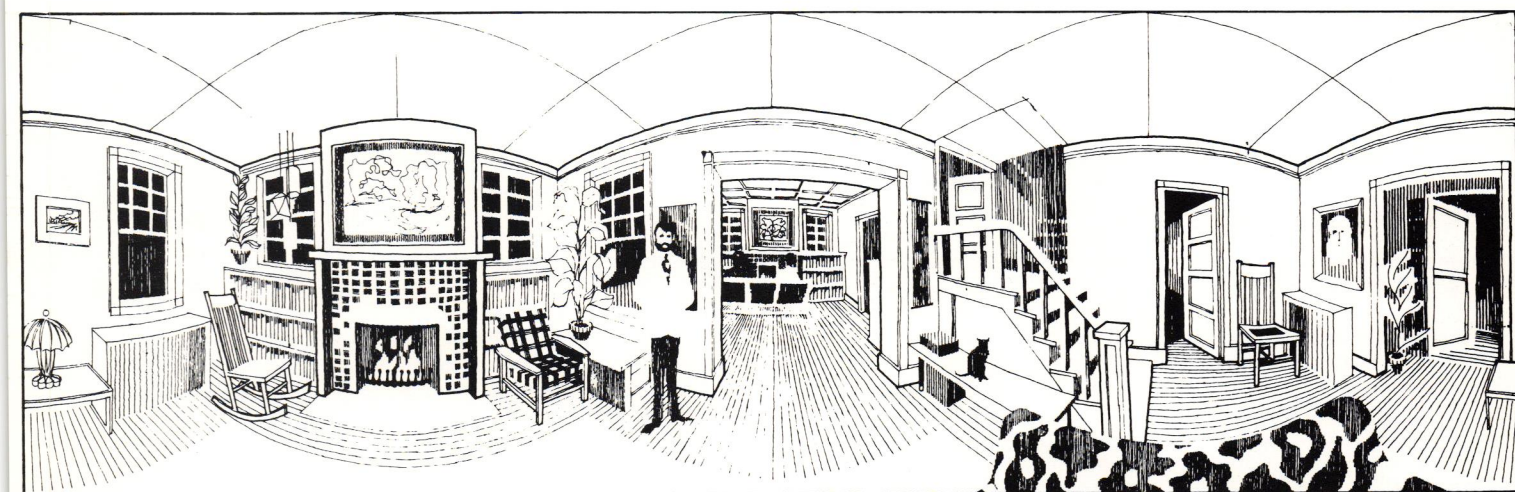
*We talk in numbers we can't comprehend about sizes we can't visualize. This book is a revelation to the understanding of what 1,000,000 is. I've included some random samples from a local newspaper. We must use numbers relative to things we understand— to note that we have 1255 policemen holds far less meaning than to say that we have one policeman for each eight city blocks during each shift.*



This panoramic photo-montage represents a 360° view of the intersection of Third Avenue and East Twenty-eighth Street, Manhattan. The right and left margins are to the northeast. The camera is set fifteen feet south of the southeast corner. Points of interest include, from left to right, the New York Life Insurance Company tower, the Empire State Building, and in midtown we see, among others, the Pan Am and Chrysler buildings.

A photograph records what was in front of us at a certain time. Perspective is a function of distance and point of view. But one can make the time less certain, the point of view varied. The distance is always a radius, and we can record the inside surface of our sphere.

*Part of our ability to design, comprehend and evaluate space is dependent on our ability to describe it. Here are three examples. The system developed by Duncan Stuart is surprisingly simple to actually achieve.*



Dave Sagarin  
 photographer  
 232 East 26th Street  
 New York, New York 10010

**Wide Angle Perspective Systems**  
 Fred Eichenberger, Duncan Stuart  
 and James Braden  
 1970  
 34 pp  
 11" x 8 1/4"  
 available on request  
 The School of Design  
 North Carolina State University  
 Box 5398  
 Raleigh, North Carolina 27607

**Panoramic View of the Palace  
 and Gardens of Versailles**  
 John Vanderlyn  
 1814  
 165' x 11'-12'  
 43" strips of canvas  
 The Metropolitan Museum of Art  
 New York, New York 10028  
 Gift of the Senate House Assoc.  
 Kingston, New York, 1952

### The City as a Message System

It is one of the functions of the city to convey information. It has been the custom, in the physical environment to interpret this as a question of products—traffic signs, direction signs, identification signs.

How does the city describe itself and make itself intelligible to visitor and resident. This is a more fundamental question than a choice of type face for a direction sign.

City Hall tower, the river edges, the bridge gateways to the city, the grain of buildings are colossal elements of a ready-made city-wide sign system.

The city-as-a-message-system is a proposal for a life-size route, destination and actual location map of the city—the city itself. (The city of Philadelphia is used as an example here.)

### Performance Criteria for the City vs. Rules for Products

The real responsibility of the city is the establishment of performance criteria for the public environment—not for the multitude of individual products contained within the city but for the city itself.

### A Life-size Route Map

Inside the city, the street network assumes the role of a guidance system. Elements of the movement system are articulated. Streets assume graphically, spatially and by light, relative status in the movement hierarchy.

The spatial domain of the highway becomes a surface for the presentation of information—route, destination, speed, safety.

### Streets Between the Rivers

Routes running between the rivers framing the center city regularly punctuate north-south movement—orientate movement in the downtown, clarify the elements of the street grid, indicate paths to river crossings.

### City Edges

Large-scale geographic or man-made features describe the edges and articulate sections of the city.

Identified and given visual recognition, they are signs to destinations, routes—a framework for the visual comprehension of the city.

### The Subconscious Message System of the City

General architectural or spatial events throughout the city, by concentration, become significant or particular to a single area—identify activities, uses, services. They are part of the city dwellers' subconscious pattern of associations—roof top water tanks and the fringe-downtown manufacturing district, subway stops and the predictability of a shopping concentration above the stop—a subconscious message system giving information about what sort of activities to expect, what sort of services are performed in a particular area—where it is, how to get there.

Where the haphazard mural painting of urban cosmetics would confuse, systematic and insistent color coding would clarify and amplify their power as elements of the sign system.

### An Idea for a Three-foot High Wall Along Chestnut Street

Modification of a single street element, the curb, could have positive repercussions in four areas of concern.

#### Traffic Movement

A continuous three foot high curb-wall along center city sidewalks would eliminate the possibility of parking along the curb except at certain locations—nearside car doors cannot be opened, it is difficult and embarrassing to climb the wall. Breaks in the wall would establish bus, taxi, and essential delivery stops. All lanes becoming moving lanes.

#### Pedestrian Safety

Jaywalking or children straying into the street become next to impossible. No splashing on pedestrians.

#### Integration of Sidewalk Elements

Trash cans, mail pickup and delivery, telephones, signs, benches and sidewalk vending are taken care of within the fabric of the wall. This does not mean standardization of these elements, simply, giving them a place, a territory within the street environment which neither inhibits their functioning nor allows them to interfere with movement.

#### Lighting

Use of the wall as a light source—throws light onto the surfaces that require light, from the shortest distance—sidewalk, road surface, the ground floor facade of the street. With lights hung on poles, we are really lighting the tops of cars and people's heads.

### An Idea for Alleviating Pain in the Subway System

The system should be comprehensible both above and below the ground—above to identify entrances and routes; below to identify what the stop relates to above ground, a sense of direction and distance.

#### Distance

Projection of the color spectrum along the tunnel in modules corresponding to city blocks above ground—seen from car windows as a travel-distance clock.

#### Stops

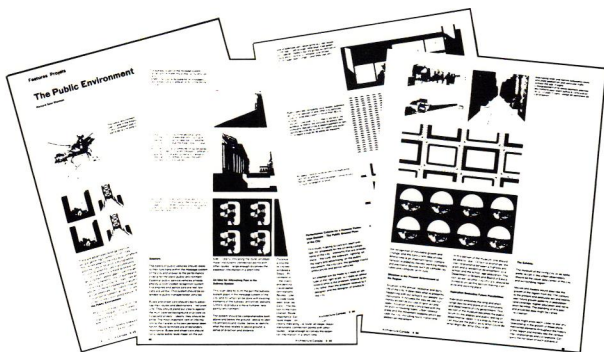
Projection of the above-ground environment into the subway stations by prisms—the injection of a live sense of orientation and destination, weather, conditions, into the claustrophobia and directionlessness of current stations.

#### Routes

Use of sidewalk ventilation grills to code routes—north, red; south, orange; west, blue; east, green.

### An Idea for Arcading the City

Performance criteria for humane pedestrian domain must include weather protection criteria—protection from wind, rain, snow and sun. The creation of a new zoning ordinance could make this possible by encouraging developers to regard the street curb as the building line for all construction above the second floor. This would establish with relative ease a city-wide sidewalk arcade on south and west sides of the street. The additional square footage attainable would be offered as an incentive to developer cooperation.



*These two articles (only one is here summarized) are heavily illustrated and have many thoughts that parallel DQ 80. The Visual Systems article is in color and constituted a survey of the state of the art several years ago. The PE article is a description of the viable nature of the publicly owned part of the city based on the use of Philadelphia, as a vehicle for description and example.*

Public Environment  
Richard Saul Wurman  
Architecture Canada  
160 Eglinton Avenue East  
Toronto 12, Ontario  
June 1969  
pp 43–50

see also  
Visual Information Systems  
Richard Saul Wurman and  
Scott W. Killinger  
Architecture Canada  
March 1967 pp 37–56

Special subject maps depict national, physical, historical, economic, socio-cultural and administrative characteristics.

Also included is an index of 41,000 place names with geographical coordinates, populations, and other information, and a series of aerial photographs, maps and charts. References are provided to more detailed sources of information.

**Midtown Blight** is the title of the audio visual presentation prepared for the people of New York City. This slide-tape show is designed to run continuously through the day in a centrally located public space in Midtown Manhattan.

The project developed from the feeling that the incredible vitality of the building boom in New York poses a serious problem to the future of the area.

#### **National Atlas**

U.S. Department of the Interior  
Geological Survey  
1970  
355 pp  
14" x 19"  
\$100.00  
Washington Distribution Section  
U.S. Geological Survey  
1200 South Eads Street  
Arlington, Virginia 22202

#### **Midtown Blight**

Scott Sebastian and  
Elias Vassiliades  
4711 Springfield Avenue  
Philadelphia, Pennsylvania 19143

#### **Various Dwellings Described in a Comparative Manner**

Richard Saul Wurman and students  
1964  
64 pp  
11" x 8 1/2"  
\$6.65  
Joshua Press  
1214 Arch Street  
Philadelphia, Pennsylvania 19107

#### **New Horizons**

Maps of the World  
Pan American Airways  
1968  
334 pp  
4" x 6"  
\$5.95  
Pan American  
Pan Am Building  
New York, New York 10020

#### **The Schaefer Guide to New York Landmarks**

1965  
32 pp  
3 3/4" x 8 1/2"  
free  
Landmarks Preservation  
Commission  
Parks, Recreation and  
Cultural Affairs Administration  
of the City of New York

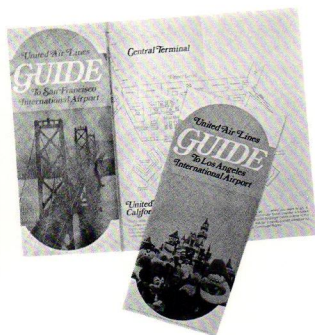
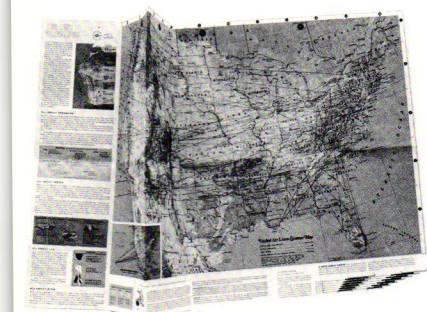
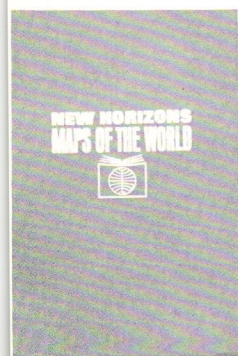
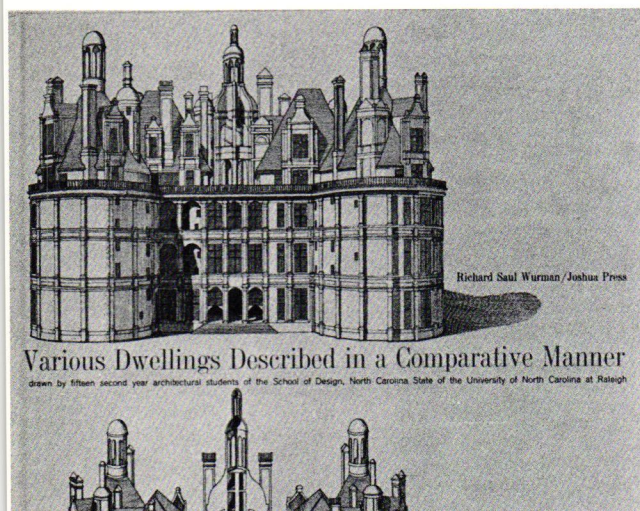
#### **Air Atlas**

United Airlines  
35" x 21"  
Free  
277 Park Avenue  
New York, New York 10017

The compact collection of maps of 46 counties is perhaps the only world travel guide to include so many city maps. Each of these is accompanied by a listing of major landmarks.

This 26-page booklet was prepared by New York's Landmarks Preservation Commission to help locate 300 New York Landmarks and a dozen historic districts. An alphabetical listing within geographical areas of New York ("Canal to 14th St.", "14th to 59th St.") is included.

*These free maps produced in varying quality by various airlines are of much higher quality than any I know that are freely distributed by cities or gasoline companies. I understand the Canadian Pacific Airlines in Canada has particularly fine maps also.*



courtesy of New York  
Magazine

JANUARY, 1971

VOL. 1, NO. 2



NEW YORK

# HANDBOOK

## Free Health Care: Why Pay an Arm and a Leg?

By Carol Kahn

In his anxiety to get the best care available, the American has developed a costly medical mystique which requires his going to a private practitioner for the simplest procedures. No one wants to crowd out those who need health care and cannot afford to pay for it. But there are also a number of free services such as vaccinations or flu injections which any New Yorker, blue-collar, white-collar, or silk-cravated, can avail himself of in good conscience, if he is not afraid to leave the comfortable but more costly lap of his private physician. Some alternatives available in New York are listed below.

In addition to these facilities, there are many clinics that offer care in specific areas that is not free, but is less costly than its private equivalent. The New York League for the Hard of Hearing (924-3230), for example, gives a complete basic hearing examination for \$25, which would cost considerably more from a private physician. And for almost every disease, there is a non-profit foundation that can provide free counseling and referral. For further informa-

tion, call or write the Community Council of Greater New York (225 Park Avenue, N.Y. 10003, 777-5000).

### Alcoholism

The Alcohol Clinic, operated jointly by the city and state of New York, provides free counseling and treatment on an out-patient basis to chronic alcoholics or those likely to become so. After getting an appointment, an applicant is extensively interviewed by a psychiatric social worker, who writes up a detailed case history, and is examined by a doctor for physical condition and any necessary medication, such as vitamins or tranquilizers. He is then referred to individual or group therapy. Group therapy currently meets Wednesday evenings from 7 to 8:30 p.m. The Alcohol Clinic is located at 514 49th St., Brooklyn, TR 1-6160.

Alcoholics Anonymous has approximately 500 member groups in New York City. For information, call GR 3-6200 between 10 a.m. and midnight. (Sundays and holidays, noon to 8 p.m.)

### Blood

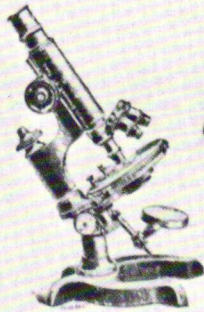
Blood can be obtained "at cost" from the Greater New York Blood Program, in unlimited quantity, for individuals who belong to the program by depositing one pint of blood per year in their blood bank. The Agency

charges a processing fee of \$17.50 a pint to hospitals, which is what you as a member will pay for it; hospitals generally charge patients from \$30 to \$55 a pint. You can also get blood at cost by replacing at the Blood Program the amount you have used. Blue Cross plans offer blood at no charge to members who join their blood program and deposit a pint annually. The Greater New York Blood Program of the Community Blood Council is located at 310 East 67th Street, UN 1-7200.

About 25 per cent of the population possesses rare blood. To supply these persons, particularly in an emergency, the National Rare Blood Club, 164 Fifth Avenue, calls a series of listed donors who will usually drop everything at a moment's notice to donate their matching pints. Service is free to any hospital. The NRBC "hot line" is CH 3-8037.

### Cancer Detection

The Department of Health provides full-scale cancer screening for men over 35 and for women over 30 at three locations in the city. The West Side Center has a long waiting list. Call for an appointment: Lower West Side District Health Center, 303 Ninth Avenue, 524-2537; East Harlem District Health



### IN THIS ISSUE:

- Free Health Care
- Handyman of the Month: the small contractor
- Buying Time: where to find a baby-sitter
- Consumer Report Card: Father James J. Gilhooley
- A Guide to the Consumer Guides
- Luxury Service of the Month: art restoration

NEW YORK 31

New York Magazine is featuring a serialized handbook of services available in New York City. The January 25, 1971 issue is the second entry in the series, and includes 8 pages of information about free (and nominal fee) health care services available in New York, including dental care, birth control, immunization, alcoholism, and weightwatchers, among others. Each item describes the service, who is eligible, the agency name, address, and phone.

Also in this issue are "Where to find a Baby-sitter" and "A Guide to Consumer Guides" both with accompanying complete information on how to obtain the services.

**New York—Handbook**  
1970—1971  
Section of New York Magazine  
8 1/2" x 11"  
\$.40 per issue — published weekly  
one year subscription \$8.00  
New York Magazine  
NYM Corporation  
207 East 32nd Street  
New York, New York 10016

City/2

1/2 the city belongs to you

If you think all you own is the small plot of land on which your house is built...you couldn't be more wrong. You own more than half your city. You own the streets — the pot-holed streets and the tree-lined parkways...you own City Hall and the corner of 8th and Market. You own the buses and the bus stops...the sidewalks and the parks...the rivers and the expressways.

You own it all — 55 percent of Philadelphia, to be specific — and what that 55 percent looks like and works like reflects your demands and...your indifference.

Maybe you didn't know you owned it all. Now you do.

Maybe you didn't know you could change it. Now you do.

Maybe you don't know how it works and how it could or should be changed. Now you can find out.

The City/2 exhibition

You can see first how your half of the city functions now — the growth and change in your land and public environment...utilities, parking, streets, sidewalks, community facilities, recreation areas, water...all of it.

Then you can see the kind of performances that go on in these facilities — riots, parades, rain, snow, garbage collecting, walking, stickball, traffic jams, shopping — and how they compare with other cities. In special films you will see the action speeded up or slowed down to show patterns of movement you were never aware of before — and how the form of the environment affects the movement of your city.

A third section of the exhibition will show how a change in the design of environment can affect the activities and the way of life. How even the width of a sidewalk can change walking or, for example, how covered arcades can protect from the climate and stimulate business and city life and make a safer city.

And in a fourth area City/2 will display concrete ideas for changing your half of the city to make your life style more what you would like it to be. This portion will also allow for the participation of the viewer, for the recording of his ideas, comments, and criticisms.

City/2 was designed to show urban dwellers what they can demand if they want it, as the articulate demands of the public are the only sensible way to change the form of a city.

You can have a higher standard of performance, a finer quality of life in your city. Will you start by making the City/2 exhibition happen?

A typical visitor to City/2 at the Museum would see four distinct kinds of communication techniques in use — one for each of the basic divisions of the exhibition.

The first of these subjects the spectator to a highly participatory, highly energized, visually exciting environment. As he moves through the exhibition, the shift in display techniques is from the sensual to the cerebral (from the hot to the cool). The second area is a lively five-screen cinema presentation followed in the third area by a low-key television environment. The final section of the exhibition encourages the spectator to apply the ideas he has absorbed to practical situations. At this stage, instead of receiving information, he has the opportunity to supply his own ideas or criticisms and to judge the projects of designers and architects responding to the challenge of the City/2 idea.

The sequence of spaces in the exhibition moves from simplicity to complexity — one basic idea, five movie screens, twelve television screens, 20 civic urban projects.

Festival of the City

During the six-month period of City/2, the Museum's Department of Urban Outreach will actively bring the message of City/2 to public areas throughout the greater Philadelphia area. People will be encouraged to make something special out of their street. The Museum will also focus attention on street activities that normally occur and inform visitors to the City/2 exhibition of their occurrence. A special media truck will be outfitted as a mobile version of the exhibition. Every two weeks, events will be staged at different locations throughout the city to engage people in community art and environment experiences. Chalk-in drawing festivals, Polaroid photography projects, sound and light programs, and similar events that are both entertaining and eye-opening will be scheduled in coordination with the outreach plans of other agencies.



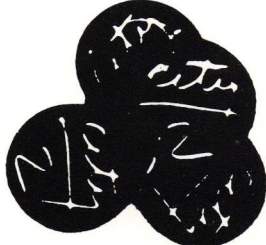
The street is a community room.

Its design and use must be determined by the people who use it.

The people who use it have responsibility for its design and performance.

The responsibility to determine its use is in the hands of the people who own it.

The people own the streets.



**City/2 Exhibition**  
 Murphy Levy Wurman  
 Architects and Urban Planners  
 1214 Arch Street  
 Philadelphia, Pennsylvania 19107  
 and  
 The Philadelphia Museum of Art  
 25th and the Parkway  
 Philadelphia, Pennsylvania 19103

FROM: GEE! Group for Environmental Education

DATE: 26 October 1970

SUBJECT: Proposal for Urban Guides

We anguish over more school facilities and ignore the unlimited classroom that is our city.

Allowing the city to become observable gives its citizens the incredibly abundant gift of unlimited classrooms and the creation of an environment for learning.

Previously we have ignored the responsibility to describe particular aspects of the city to the public. We should create an invitation to comprehend the growth, scale, statistics, patterning and the aspirations of future plans for our urbanized world.

An urban guide could be a valuable resource for most teachers. They would see the value of understanding electricity by understanding power distribution in the city, or mathematical concepts by urban statistics or history by the understanding of urban settlements and concentrations.

Exercises and materials that help the city to become observable give its citizens another incredibly abundant gift—that of an unlimited curriculum as the city becomes an environment for learning.

Historically learning has been considered to take place mainly within the classroom and the school building has been regarded as the citadel of truth and the repository of educational procedures.

The most viable facility for learning is held within the elements that make up our urbanized environment and that by allowing them to become comprehensible, observable and understandable, we will then have an unlimited resource. . . a continuous environment for learning.

There are many ways to make the city observable.

The long-term means is to generate the necessary responsibility in the citizenry to make understandable the city's ground floor so that a walk through the city becomes an endless learning experience.

Another and more immediate way to make the city observable is the production of a unique group of urban guides that make the elements of our environment understandable.

These guides would allow the personal environments of the student to become meaningful experiences. His school building should become an environmental laboratory allowing the student to become aware of:

—The arrangement and relation of rooms and a way to analyze them.

—The electrical system and power distribution to the building.

—The corridors and stairways as examples of horizontal and vertical movement systems.

—The water and waste systems explaining where water comes from and where it goes, including ground water and drainage of the school yard.

—The places where social interaction occur.

—The quality of natural light and of artificial light.

—The relation of the school building to the school yard and the immediate neighborhood.

—The materials and method of construction used.

—The teacher environment and areas.

—The student environment and areas.

—The spaces used for Mechanical Equipment—Storage, Eating, Classrooms, Administration.

—As an introduction to land use concepts.

The other series of guides would be on the city itself making the student aware of:

—The determination and patterning of land use based on:

Politics—wards, Congressional districts, etc., Performance, Generative uses, Zoning, Transportation.

—Understanding of controls and regulations.

—Awareness and analysis of the various urban networks: Power,

Sewage, Communications, Movement of all kinds

—The census explored and urban statistics.

—Municipal departments and their responsibilities.

—Community organization and their activities.

The above listings for both series of guides are not meant to be all inclusive.

We suggest that these guides should initially be aimed at the seventh, eighth and ninth grade levels.

The series on the school building in many ways represents a set of concerns paralleling in miniature the groups of urban topics of the other series.

The guides should be devised so that they are generally applicable for any locale with ancillary materials allowing for the development with ease of particular exercises and information directed at specific schools or cities.

FROM: GEE! Group for Environmental Education

DATE: 9 December 1970

SUBJECT: The Schoolhouse as a Laboratory for Environmental Education—as a Self-Revealing Facility

1. We shall select two middle schools in the Philadelphia vicinity for case studies.

2. One shall be representative of an older three-story urban plant with a hard school yard and tight physical relationship to the adjacent community.

3. The other shall be representative of the suburban one-story finger plan with green surrounds, parking, etc.

4. The case studies will specifically show how these two buildings can be made observable, understandable, and useful to the comprehension of our man-made environment. We shall be concerned with representing the various systems and uses as miniature manifestations of our larger urbanized environment. We shall be concerned with many of the following (no priority intended in the listing—see enclosure memo 26 October 1970):

—Plumbing system—where the water comes from and where it goes

—Electrical system—power distribution

—Corridor—as streets

—Quality of natural light

—Quality of artificial light

—Vertical movement

—Horizontal movement

—Services

—Servicing

—Relation of rooms to each other and to the corridor

—Use patterns over time (a day, a week, etc.)

—Exterior spaces

—Furniture arrangement

—Storage

—Special use rooms

—The car

—The pedestrian

—Entrances

—Communications

—Privacy—noise and visual

—Ventilation

—A day in the life of a student

—A day in the life of a teacher

—Who owns the school building and its equipment

—A day in the life of the janitor

—Safety

—Relation to community

—Where people meet, gather, talk—the social environment

—Costs in running the physical plant

—Costs in constructing the facilities

—Where the monies come from

—Numbers of students

Summary: A six-month project whose end goal is the development (ready for printing) of two distinct products.

A) Two specific case studies describing how two particular school facilities can be made understandable laboratories for environmental education.

B) A workbook kit of resource tools that would enable a school anywhere to describe itself to itself and act as a laboratory in miniature of our man-made environment.

The audiences and participants for these studies would include students, teachers, professionals, para-professionals and architectural students.

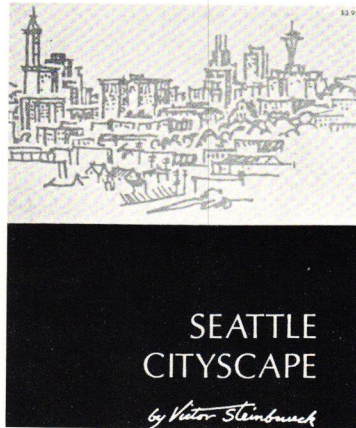
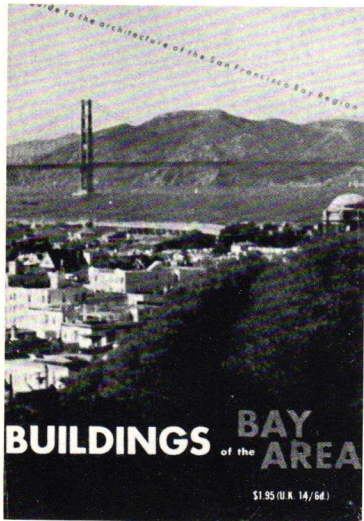


The Nolli map of Rome produced by Giovanni Battista Nolli and his son, Carlo, was drawn between 1736 and 1744. The original is 165 x 187 cm. The plan was drawn with a tinted pen and uses a vertical iconography with a northern, bird's-eye orientation. The monuments, ruins and buildings are all numbered and referred to a descriptive index never completed.

*Nolli's plan is a 1748 City/2 display. It describes the public environment of the streets and the ground floor of public buildings in white. It would be exciting to see city maps drawn today in which the ground floor of public buildings and quasi-public lobbies were drawn as a continuation of the streets and sidewalks.*

**La Pianta d'Roma**

Giovanni Battista Nolli  
1748  
56 x 36 cm  
1932  
Citta de Vaticano  
Biblioteca Apostolica Vaticana



### Buildings of the Bay Area

John and Sally Woodbridge  
1960  
unnumbered  
5 3/8" x 8"  
\$1.95  
Grove Press, Inc.  
53 East 11th Street  
New York, New York 10003

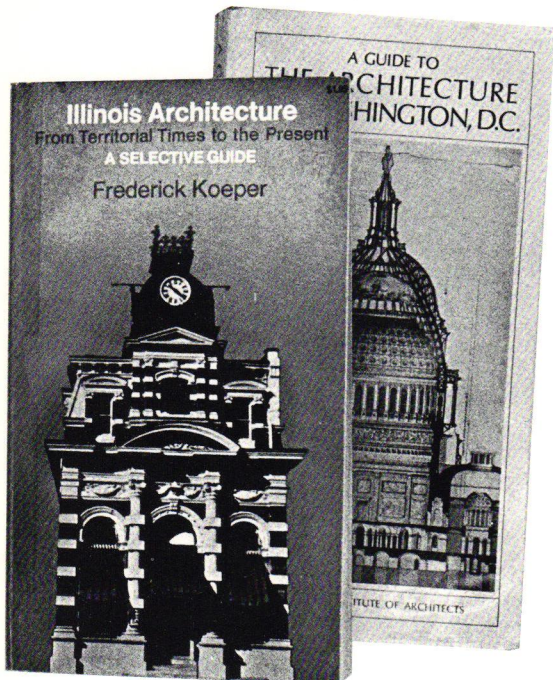
### Seattle Landscape

Victor Steinbrueck  
1962  
192 pp  
7" x 8 1/2"  
\$3.95  
The University of Washington  
Press  
Seattle, Washington

Sponsored by the City Council and the Graham Foundation for Advanced Studies in the Fine Arts, this picture guide shows each of the outstanding structures of Chicago, with a text by Carson Webster stating its important features. It includes floor plans of original landmark buildings.

### Chicago's Famous Buildings

Edited by Arthur Siegel  
1965  
230 pp  
4 5/8" x 8"  
\$2.95  
University of Chicago Press  
Chicago, Illinois 60637



This guide is arranged alphabetically by towns, with accompanying text pointing out the historical significance of landmark buildings.

"The selections in this book are intended to convey the history of architecture as developed in Illinois. Partiality has been shown for diverse geographical and chronological representation as well as a variety of buildings. Historical significance has sometimes been a heavy factor in the selection, but always where the monument itself was architecturally appealing as well. Attention has been paid to architects whose contribution is identified with the growth of the state. Architecture has always been a single expression of a many-sided condition; the social pattern of life, the aesthetic and emotional response of environment, the economic and technological factors — all varying with the decades — have made their impact on Illinois architecture."

### Illinois Architecture

A Selective Guide  
Frederick Koepfer  
1968  
304 pp  
4 5/8" x 8"  
\$1.95  
A Phoenix Book  
University of Chicago Press  
Chicago, Illinois 60637

Architecture of Washington, D. C. is a compilation for professional architects of significant structures, organized into walking and motoring tours.

### A Guide to the Architecture of Washington, D. C.

Washington Metropolitan Chapter of the AIA  
1965  
211 pp  
4 3/8" x 8 1/2"  
\$2.87  
AIA Foundation  
The Octagon  
1799 New York Avenue N. W.  
Washington, D. C. 20036

COPE

"The environment is now on the public mind. Channels to information on environmental education are needed. This collection of sources will only function if we continue to have input for better resources. Both additional materials and criticisms of the ones included here are solicited. This guide to environmental education is considered as a working tool to be refined as more becomes known about this infant subject. The guide attempts to provide a spectrum of viewpoints to suit various tastes. It makes no attempt to be inclusive, being only a body of information contributed by various knowledgeable individuals and groups.

It is organized in two parts—one for the interested design professional and the other for his use with educators. While there are a variety of vehicles for public education, this one stresses education through primary and secondary levels."

SEE

"The materials which we have assembled are a program for building a program. They could also be viewed as a workbook for building a workbook. . .but we hope not. The underlying premise which has guided our efforts in developing the program is that the teacher is in control, that he is in the position of immediate decision making in the classroom and will choose and select not only what will be taught, what will be emphasized, and how it will be taught, but also, but equally important, what kind of atmosphere will exist in the classes. With this prior understanding of the teacher's role, we are not advocating any particular program, lessons or materials. Rather, we are asking only that you plan to include some study of environmental topics in your classes.

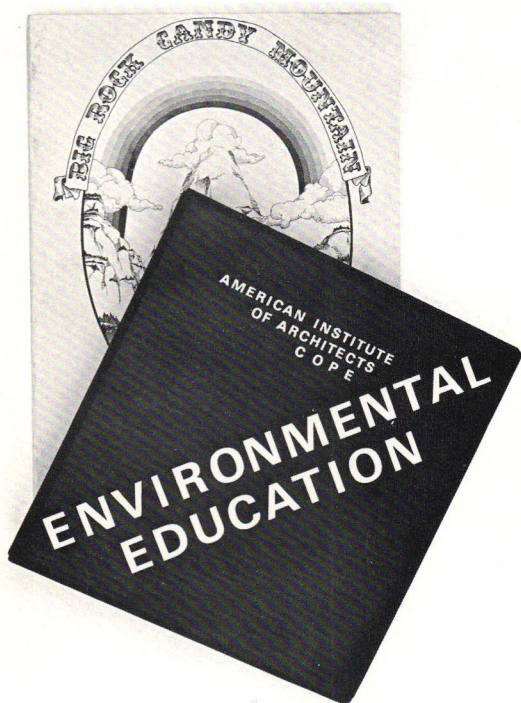
If you do not choose to use one of these prepared courses of study, you can make use of many

of the ideas contained in this booklet to build your own program. You might take one class period each week for a discussion or activity in an environmental topic, or a week long investigation of some particular local environmental problem. You might carry on a series of group projects in environmental investigation and development, perhaps culminating in actually bringing about positive changes in the community. You might experiment with the classroom or the school building as a model environment, changing it in various ways and discussing the effects of the changes.

Programs of environmental understanding have been introduced in a variety of courses on a variety of levels. Many of the basic goals are the same, but the particular skills which are developed and the difficulty of the tasks presented to the student are adapted to suit the capabilities of the students. English classes have done descriptive writing assignments and research papers on problems in the environment as well as discuss pieces of literature which have application to environmental sensitivities. In social studies, classes have undertaken a variety of activities from reading and discussing books which are addressed to environmental problems to playing environmental games which continue for several weeks. Science classes have devoted time to a study of air and water pollution, conducting laboratory experiments which illustrate the chemistry of certain types of pollutants. Other teachers in a variety of subject areas have found other ways for introducing environmental lessons in their classes including walking tours of a neighborhood, interviews with neighborhood citizens, trips to areas of natural beauty and to areas where redevelopment is taking place. Some classes have made actual presentations to city councils, representing their

concern for the environment and their desire to do something about improving it. There is an almost boundless variety of things which various schools are trying out. Many have been generated on a local level and have produced enthusiastic reactions from students and teachers.

These materials and programs share many of the same qualities. They have grown up in response to a growing crisis and are directed towards an awakening of sensitivities and sensibilities and a rebuilding of values. They employ activities which build and reinforce skills to assist the student in understanding concepts. Processes are the subject matter, for change is the field of study. Our environment, both the man-made and the natural, is ever-changing. It changes under its own power, usually slowly and gracefully, and it changes more rapidly with the help of man. As it changes it constantly redefines the context in which we live our lives."



A periodical catalogue of educational resource materials published six times a year in two large catalogues (June and December) and four smaller ones (August, October, February, April).

The BRCM also reviews games, books, equipment and curricula ideas. Contents include information about process learning, educational environments, classroom materials and home learning.

*Big Rock Candy Mountain is the educationally directed spin-off of the Whole Earth Catalogue. As with the earlier effort, listings are uneven, sometimes fresh and exciting but sometimes described so poorly that they preclude curiosity. Their gesture at making information known is exciting and this DQ has felt their influence.*

*SEE and COPE are two recent efforts to develop bibliographies of environmental educational projects, materials and attitudes. Some of the material is listed somewhat indiscriminately. The SEE effort is quite a remarkable project by four AIA Scholars in the summer of 1970 and is continuing through the auspices of the AIA Student Chapters and Bruce Webb. Their views of the state of the art are worth finding out about.*

**Environmental Education  
AIA COPE**

Committee on Public Education  
1970  
3 units  
8 1/2" x 11"  
out of print  
AIA Washington  
1785 Massachusetts Avenue N.W.  
Washington, D. C. 20036

**SEE  
Structure for Environmental  
Education**

The Institute Scholars of the AIA  
Dan Conrad, Susan Jones,  
Janet Null and Bruce Webb  
1970  
8 1/2" x 11"  
Bruce Webb  
Vice President, Public Education  
Association of Student Chapters  
AIA  
601 West Main  
Bozeman, Montana 59715

**Big Rock Candy Mountain**

1970  
56 pp  
10 1/2" x 14 1/2"  
\$4.00  
Big Rock Candy Mountain  
1115 Merrill Street  
Menlo Park, California 94025



Richard Saul Wurman, 35, is a partner in the architecture and urban planning firm Murphy Levy Wurman in Philadelphia.

He is among those young architects and planners who give real time to activities related only indirectly to the practice of architecture. His outside involvements, primarily educational, include writing, teaching and the development of exhibitions. Several of his projects are included in this publication.

Mr. Wurman is Vice President of GEE! Group for Environmental Education, Inc., a non-profit corporation developing **Our Man-Made Environment**, a program for secondary schools. He is a board member of the International Design Conference in Aspen. A student and former employee of Louis I. Kahn, Mr. Wurman produced with Gene Feldman **The Notebooks of Louis I. Kahn** in 1963.

Wurman, a graduate of the University of Pennsylvania, received Chandler Fellowships in 1959 and 1968, a Graham Fellowship in 1966 and was a Guggenheim Fellow in 1969.

Currently he is a professor and chairman of the freshman year in architecture at the City College of New York having served previously on the faculties of Princeton University, Cornell University, Cambridge University (England) and the University of North Carolina at Raleigh.

Murphy Levy Wurman, the urban design consultant for the center city waterfront project in Philadelphia called Penn's Landing, has also participated in a wide range of architectural, planning, graphics and interior design projects. They are the developers of a temporary information system for the Philadelphia International Airport and are the planning consultants to the Delaware Port Authority on the route location and station design criteria for the high-speed mass transit network from New Jersey into Philadelphia. Recently they completed the center-city IVB banking space and a series of beach houses in Long Beach Island, New Jersey. Wurman's commitment to the public environment has led to the development of the forthcoming exhibition *City/2* at the Philadelphia Museum of Art.

"Men may find God in nature, but when they look at cities, they are viewing themselves."

Paul Ylivosaker  
**Old Cities and New Towns**,  
Alvin Schwartz, p. 7.

*Doxiadis's Ekistics Center in Athens has model displays at the ekistics scales of towns, cities and regions in Greece. The models can be called for and moved into position by overhead crane.*

*The Athens Center of Ekistics*  
Box 471  
Athens, Greece

*Ira Baker has created a Micro Michelin in his Walks for Architects in Chicago.*

*In the Hansa district of Berlin I understand there is a pavillion of urban information as well as models of the varying districts throughout the city.*

*In Chicago at the civic center complex and adjacent to the square dominated by the sculpture by Picasso is a miniature in bronze of the sculpture used by the blind.*

*The Philadelphia City Planning Commission developed a fine map widely distributed of a walking tour through the redeveloped Society Hill Area.*

*Philadelphia City Planning Commission*  
City Hall Annex  
13th Floor  
Philadelphia, Pennsylvania

*The Philadelphia Panorama exhibit at the Museum of the Civic Center is an outgrowth of a fine public exhibit held at Gimbel's in the late forties and marked a rebirth of activities in the city. The Panorama is a collective exhibition including a massive turnover model of the city then, now and perhaps.*

*The Museum of the Civic Center*  
34th and Civic Center Boulevard  
Philadelphia, Pennsylvania

*Open: Tuesday through Saturday*  
9 AM to 5 PM  
Sunday, 1 PM to 5 PM  
Tuesday till 10 PM  
Closed Monday

*Admission free*

*The Institute for Advanced Studies in the Fine Arts at MIT and its director Gyorgy Kepes proposed a responsive light and water display for Boston Harbor— responsive to city movement, city information and city sounds.*

*Your comments, questions, corrections and in particular additions and actual materials are invited. I would welcome your responses and I entertain the possibility of an enlarged and more accurate second edition.*

Although we have attempted to make information concerning cost and credits exact, we cannot be responsible for difficulties resulting from their inaccuracy. We apologize to individuals we failed to properly credit; most costs given do not include postage or handling. In addition, costs today are not what costs will be tomorrow.