

BOOK REVIEWS

Emergence and Growth of an Urban Region, the Developing Urban Detroit Area. *Constantinos A. Doxiadis* and Associates. Vol. 1. **Analysis.** xx+335 p. 1966. Vol. 2. **Future Alternatives.** xxxii+408 p. 1967. Vol. 3. **A Concept for Future Development.** xxxiii+399 p. 1970. Published by The Detroit Edison Co., Detroit, Michigan. \$20.00 each volume.

Among the overwhelming man-induced environmental conditions about which man is now becoming increasingly concerned, none is more critical than the urban problem. Most Americans live in urban or suburban areas, the tight concentrations of people creating conditions that cause the more affluent to flee to the country and the poorer urban dwellers to become still poorer, while the urban center in which they live itself deteriorates.

Faced with such an urban problem in Detroit—a relatively unattractive urban center that in places verged on the squalid and an urban sprawl that promised eventually to spread halfway across the entire state—Detroit Edison called on the world-renowned urban designer, Constantinos Doxiadis, of Athens, Greece, for help. It was both a matter of a degraded urban center and the practical problem of trying to extend electrical service long expensive distances to those who had fled from the unattractive inner city. Detroit Edison has invested heavily in this complete study by Doxiadis and his associates, not only to improve electrical service, but to help solve the urban crisis facing the entire Urban Detroit Area. Doxiadis' staff was aided by specialists at Athens Technological Institute, at Wayne State University, and at Detroit Edison, but the major portion of the actual evaluation and design presented in these three books came from Doxiadis and his staff, following the science of what Doxiadis has called "ekistics" (from the Greek word for house)—the science of human settlement. The products of this five-year investment are these three large, beautiful, hard-bound books, competently prepared, well written, and strikingly illustrated, books which deal with the total urban problem of what they call the Urban Detroit Area.

The first of these books, which has now been out six years, presents an analysis of the present urban setting of Detroit considered in terms (1) of the entire "North American setting" (e.g., all the United States and the southern part of Canada), (2) of a Great Lakes Megalopolis (or large interrelated area of metropolises within the Great Lakes area), and (3) of the Urban Detroit Area itself. Study of such large areas was considered essential for defining the true extent of the Urban Detroit Area, because the ties of such urban area (economical, political, sociological, etc.), which are basic to such a study, extend far beyond the boundaries of the urban concentration of buildings. Each of these regions (North America, Great Lakes Megalopolis, and the Urban Detroit Area) is considered separately, in this first book, in the light of its existing geology, climate, water, ekistic development, socio-economic development (population, economic base), physical development (land uses, transportation, mass media, and utilities), and administrative structure (administration, government, and planning organizations). Emphasis here and throughout the three books is on aspects of population, transportation, economics, and human organization; natural features are considered only in terms of their possible use or, more casually, their beauty. (Geology was presented briefly, in very general terms, under the "North American setting" in Volume 1, and was hardly mentioned in subsequent sections of either this book or in the other two volumes, geology (like climate) not being considered to represent a restriction to development in *any* way.)

Considerable attention is given, in this first book, to the Great Lakes Megalopolis, which includes three main urban clusters: Chicago, Detroit, and Cleveland-Pittsburgh. This Megalopolis started developing more recently than the one on the east coast, but, according to Doxiadis, has grown so fast that it has almost caught up with the eastern one. These two megalopolises are almost connected by the narrow urbanized belt extending east-west through central New York state, a belt which he calls the "Mohawk Bridge."

The second book considers the future alternatives for solving the urban problems of the greater Detroit region, called by them the Urban Detroit Area. This Area, reaching far beyond what is normally considered to be "greater Detroit," extends north to include the entire Saginaw Peninsula, west to beyond Lansing and Battle Creek, south to beyond Defiance and Pindlay, and east to beyond Marblehead, almost to Sandusky. Thus, a considerable part of Ohio is involved, and the contents of these books and the proposals presented by Doxiadis and his staff are of special importance to anyone living in Ohio, and especially to those living in northwestern Ohio.

Much of this second book contains a general philosophical discussion of how such an analysis can be done, how all the wide variety of parameters so difficult to qualify are evaluated in a theoretical matrix of all the millions of alternatives (determined to total 49 million possibilities), so as to come out with only one or two meaningful solutions to a problem such as that in the Urban Detroit Area. Stated desirable goals which guided this selection involved the preservation of nature and of the region's resources, preservation of "human commodities," nature and distribution of the population, and efficient transportation ("maximization of accessibility") to

work, stores, etc., though the latter goals far outweighed the former in their importance throughout this study.

The larger area (North American setting) was considered first in this analysis, followed by evaluations of the smaller areas (the Great Lakes Megalopolis, the Urban Detroit Area, and finally small neighborhoods). Criteria considered important for evaluation for each of these areas, or ekistic units, differed. In addition, some criteria were considered in different ways for different-sized ekistic units, or in general terms for large units and in detail for smaller ones. For example, in terms of transportation, travel in small neighborhoods should be such that these areas would remain quiet and beautiful, whereas travel in urban centers should be fast and efficient. It was clearly stated here that "the criteria employed at each step [with each size of ekistic unit] are selected on the basis of our [e.g., Doxiadis, *et al.*] experience regarding their importance . . . for the best solution." Major criteria considered were basically population densities and transportation networks, considered in relation to urban centers, educational and research centers, ports and airports, and what they called "industrial poles," but the method of relating and evaluating these, so as to eliminate alternatives, was very complex and subjective. The final analysis revealed three best alternatives, which were, listed in order of estimated decreasing advantage: twin urban centers at Detroit and near Port Clinton, twin centers at Detroit and near Toledo, and twin centers at Detroit and near Flint. By the use of any one of these alternatives, the excessive pressures of growth would be released from Detroit, even while it persisted as the major urban center in the Urban Detroit Area.

The third volume, which appeared several years later than the first two, contains both a concise review of the contents of the two earlier volumes and a description of the single alternative considered to be the best solution to Detroit's urban problems. This book is the most readable and contains the most mature analysis of all the volumes. In addition, it presents in detail not only this best alternative (together with the method by which it was selected), but the description of and the methods for implementing this plan. This best alternative involves the development of twin urban centers, one in Detroit and one northeast of Detroit in St. Clair County, where a new "industrial pole," new port facilities, a new airport, and new educational and research centers would be developed. This solution also includes plans for revitalizing Detroit's central business district, and creating new, efficient urban transportation systems there.

All three books are written in clear, concise, yet detailed, unemotional scientific style. Despite the great amount of detail and the abundance of illustrations, reading is not easy because of the complexity of the problems considered and the necessity for fully understanding the implications of all the planners' terminology. However, the materials are presented in an easy-to-follow order, and summaries are used to guide the non-professional reader, so that these books represent an unusually articulate and meaningful evaluation of the very involved urban problems faced by urban Detroit and their complicated solutions. Despite his casual dismissal of geology (and climate) as of no importance in his plans, here is a magnificent example of urban planning on a grand scale by a world-renowned specialist. Anyone with any interest in urban planning or any concern for the economic or sociological future of the Great Lakes area cannot afford to be unfamiliar with at least Volume 3 of this gigantic comprehensive study.

JANE L. FORSYTH

A LIST OF REVIEWERS OF PAPERS APPEARING IN THE OHIO JOURNAL OF SCIENCE DURING 1972

In order to acknowledge their service to THE OHIO JOURNAL OF SCIENCE, the JOURNAL annually publishes a list of those who have reviewed papers during the previous year. The following list contains the names of those who have reviewed papers that either appeared in the JOURNAL during 1972 or had to be rejected during that time. By publishing this list, the Editor of the JOURNAL wishes to express her appreciation for the cooperation and assistance of each reviewer and of the institution with which he is associated.

Ahmadjian, Vernon, *Clark University*
Atkins, E. Laurence, *University of California*
(Riverside)
Babladelis, Georgia, *California State College*
at Hayward
Baer, Charles H., *West Virginia University*
Bass, Manuel N., *National Aeronautics and*
Space Administration

Beck, William M., Jr., *Florida Agricultural*
and Mechanical University
Binkley, Roger, *Cleveland State University*
Borror, Donald J., *Ohio State University*
Boucot, Arthur J., *Oregon State University*
Bradshaw, A. S., *Ohio Wesleyan University*
Bull, Colin, *Ohio State University*

- Burke, John J., *Cleveland Museum of Natural History*
- Caster, Kenneth E., *University of Cincinnati*
- Craig, John M., *Cambridge, Massachusetts*
- Crawford, Daniel J., *University of Wyoming*
- Cronkite, E. P., *Brookhaven National Laboratory*
- Crowl, George H., *Ohio Wesleyan University*
- Cruden, Robert W., *University of Iowa*
- Davis, Charles C., *Memorial University of Newfoundland*
- Dexter, Ralph W., *Kent State University*
- Diller, O. D., *Ohio Agricultural Research and Development Center*
- Faure, Gunter, *Ohio State University*
- Fisher, Stanley P., *Ohio University*
- Fisher, T. Richard, *Bowling Green State University*
- Forsyth, Jane L., *Bowling Green State University*
- Friedman, Lester, *Case-Western Reserve University*
- Gabrielson, Ira N., *Oakton, Virginia*
- Graham, James D., *Bowling Green State University*
- Green, James, *University of Missouri*
- Griffiths, John C., *Pennsylvania State University*
- Hall, John F., *Case-Western Reserve University*
- Hamilton, Ernest S., *Bowling Green State University*
- Hann, William C., *Bowling Green State University*
- Heckard, L. R., *University of California (Berkeley)*
- Herdendorf, C. E., *Center for Lake Erie Area Research*
- Hickey, Joe, *University of Wisconsin*
- Hoare, Richard D., *Bowling Green State University*
- Hobbs, Horton H., Jr., *U. S. National Museum*
- Howard, Evelyn, *John Hopkins University*
- Hurley, Patrick, *Massachusetts Institute of Technology*
- Jenness, Robert, *University of Minnesota*
- Kesling, Robert, *University of Michigan*
- Kramer, James P., *U. S. National Museum*
- Lanman, Jonathon T., *State University of New York at Brooklyn*
- Leone, Charles A., *Bowling Green State University*
- Mancuso, J. J., *Bowling Green State University*
- McCammom, Richard B., *University of Illinois (Chicago)*
- McCormick, G. R., *University of Iowa*
- McCormick, Jack, *Devon, Pennsylvania*
- Moore, Thomas E., *University of Michigan*
- Oster, Irwin T., *Bowling Green State University*
- Pallansch, M. J., *U. S. Dairy Products Laboratory*
- Palmer, C. Mervin, *Amelia, Ohio*
- Papier, David, *Ohio Department of Natural Resources*
- Richardson, D. H. S., *Laurentian University*
- Roback, Selwyn S., *Philadelphia Academy of Natural Sciences*
- Rosen, M. N., *California Department of Fish and Game*
- Sevastopulo, D. G., *Mombasa, Kenya*
- Sidowski, Joseph, *University of South Florida*
- Silver, Helenette, *New Hampshire Fish and Game Department*
- Stansbery, David H., *Ohio State University*
- Stotler, G. Chris, *Muskingum Area Technical Institute*
- Strimple, H. L., *University of Iowa*
- Stoutamire, Warren, *University of Akron*
- Stuckey, Ronald L., *Ohio State University*
- Tams, W. H. T., *British Museum of Natural History*
- Troxler, Robert F., *Boston University of Medicine*
- Valentine, Barry, *Ohio State University*
- Vogt, George B., *U. S. Southern Weed Science Laboratory*
- Voth, Paul D., *Northern Illinois University*
- Walker, J. W., *Belmar, New Jersey*
- Walters, Lester, *Bowling Green State University*
- Webb, B. H., *U. S. Dairy Products Laboratory*
- Wells, James D., *Ohio Agricultural Research and Development Center*
- Westfall, Minter J., *University of Florida*
- White, George W., *University of Illinois*
- White, Sidney E., *Ohio State University*
- Wirth, W. W., *U. S. National Museum*
- Wurster, Charles F., Jr., *State University of New York at Stony Brook*