

AMERICA'S URBAN GEOGRAPHY: WHO TEACHES AND LEARNS IT?

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John R. Borchert  
Professor of Geography, and Director, Center for Urban and Regional Affairs  
University of Minnesota

Since Thursday evening we have joined in an intensive examination of the geographic structure and problems of metropolitan Detroit. After tonight we will be taking home the facts and ideas which stick with us individually, using them, rearranging them. Some of the things we have seen and heard no doubt will not fit on the frameworks we now have in our minds. So we'll be stretching our minds to create places for troublesome new facts or ideas.

It is appropriate that we back off and look at our place in both the urban system and the educational system and think about what we are able to do with our knowledge, what we are trying to do, and why.

The ties that bind us in this effort are our common humanity and our love of maps.

Our maps of human settlement enable us to back off and look at ourselves and our fellow man on the face of the earth. They show what we really do, not what we say or think we do. They are the geographic expression of basic characteristics of the society and the land. They reflect the aspirations for personal and general welfare; the division of labor and functional specialization; social inequality; unequal distribution of natural resources; the technology of circulation and industry.

In another sense the dots, areas, and lines on the map portray a system which is a part of man's technology. The structure and flows in the system comprise a

vast machine whose purpose is to facilitate the human use of the earth. The machine can be visualized and understood only at the geographic scale. On the map of the nation the cities are nodes in a circulation system which links all of America's diverse resource regions and many more across the world. On the map of an individual metropolis, the circulation network links every type of land use or activity center.

This circulation system has inherent features which make certain that simply its operation will generate a continuous stream of management problems for the society or the nation.

For one thing the system is open. It can be disturbed by new inputs of goods or knowledge from outside the nation. It can be disturbed by changes in rainfall and water supply caused outside the country or elsewhere in the solar system. But the most important source of new energy is the frequent but irregular eruption of new knowledge and new ideas within the system. The accumulation of man's observations grows in size and diversity. There is always the chance and the need for new combinations of data, for new and disruptive knowledge within the system. As a result, new configurations keep emerging -- new functional specialties; new forms of inequality; new evaluations of resources; new technologies. We have only to try to use the census to see the endlessly unfolding problem of classifying and describing these configurations. Or to compare the mineral maps in the last half-century of school atlases to see the degree to which the resource base changes in our minds rather than in the earth.

These changes injected into the system have two especially important characteristics. They are localized in time and place. And they are essentially unpredictable in time and place, except in the very short range. Initiation and adoption of a change occurs in one element of the urban system at a time and place. That creates a sudden increase in the rate of obsolescence of other parts of the system. Then lags develop within the system. Trends become inconsistent or

conflicting; goals become confused or conflicting; in short, there are problems.

There are some outstanding examples on the current urban scene. The shift from rail to a public road transportation network drastically rearranged the pattern of accessibility and locational values. The technology of building, remodelling and demolition has not changed as rapidly as transportation technology. Consequently there is a vast standing stock of obsolete structures in places where they would not be built today and a shortage of new structures to utilize the vast array of new locational options which have been created. Someone who did not understand this constraint within the system would be puzzled by our concern with crowding and over-population at the same time that we are rapidly adding to our already colossal area of unused open space through rural land abandonment.

Equally spectacular is the way in which waste management and re-cycling technology have lagged behind production and distribution advances.

There is a notorious lag in realigning local government jurisdictions. We are failing to provide rational service areas for modern transportation technology and data management; and we are failing to use available technology to provide larger units with more equitable tax bases. So far only school districts have been modernized to a significant degree. It is notable that they have had a comparatively high level of financial support, trained management, and priority missions; and I want to come back to that point later.

Changes in industrial technology have resulted in the ability to expand the per-capita supply of goods with a sharply diminishing share of the labor force. Meanwhile, we have invented or demanded a wide array of new services. That growth of services has provided an outlet for human energies no longer needed on the farm or in the mine or factory. Hence those who could solve the technological unemployment problem did.

A few of those with unusual ability created large new service organizations and provided new opportunities for many more. But we have lagged in providing systematically for everyone to have some basic share of the production; for everyone to have the greatest possible chance to use his talents.

The first two problems - housing and waste management - result mainly from lags of one technology behind another. The latter two - local government organization and poverty - result mainly from lags of institutional change behind technologic change; they have festered longer and are harder to change. It is so hard to apply reason to realigning an institutional structure because so often the structure made little sense in the first place.

All of these problems reflect deferred expenditures. They are the inevitable results-of-change in an open system. But they have been aggravated by deferral of necessary action rather than alleviated by necessary adjustments. The problems or lags pervade the entire urban and regional structure. They have agglomerated at the urban nodes in the circulation system; and they have become more visible there. But they are not symptoms of something wrong with the cities. The cities are in fact performing one of their historic functions - to speed the rate of interaction.

One can foresee possible new lags ahead. For example, we may well see electronic communication substituted for a large share of business and professional jet plane travel. That could rapidly increase the rate of obsolescence of the airport districts of major cities. And it could strike a further blow to the traditional extreme localization of management headquarters in the major centers. Truly low-cost new housing units could sharply increase the obsolescence of old units. Or take a guaranteed minimum purchasing power, federally-administered. That could greatly increase the geographic mobility of the population, hence speed the development of new labor force agglomerations in high-amenity areas now sparsely settled, and speed the obsolescence of older cities. If problems arise from

changes such as these, it will happen because new lags have developed and the expenditures needed to compensate them have once again been deferred. Another group of buildings or people will have been discarded without consideration of the consequences.

Thus, solving a public problem in our urban system is equivalent to compensating for a lag in the adjustment of some part of the system to evolutionary change. Put another way, solving a problem requires paying up deferred costs. But we must be able to recognize the lags, determine the costs, set priorities, and be ready to shift directions when the solution of one problem sets the state for a new one. There must be management, financing, mission, and priority.

Clearly a long-term strategy for adjustment is as important as the solution of specific problems.

In such a strategy, knowledge plays a key role. This means that we make and collect observations, analyze them, and widely diffuse the findings from the analysis. So it is essential to have a concept of the problem to know what observations need to be made and to know how to analyze the observations. Geography has made notable contributions with its models of urban growth, the dispersed city, and systems of cities. It is necessary to have the findings diffused widely and clearly. For only then can there be substantial agreement that fewer costs should be ignored or deferred, that those deferred should be paid up, in what order of priority and at what rate. The widespread teaching of urban geography and adoption of a systems and problem approach are moves in this direction.

Compensating or reducing lags in the urban system is primarily an educational enterprise. And clearly part of the enterprise is geographical education. This means more and better understanding of the urban and regional structure of America, the flows through that structure, its past change, current trends, and

future possibilities. It means that those who carry forward geographic education can help to lead an urbanized America in the direction of the basic goals of mankind.

But who is going to teach geography, and where?

When we think of educating our fellow Americans about the geography of this urban nation, we think of the formal education system and our competitive role within it. This is a system which has a virtual monopoly on the certification process based on essentially unstated and untested popular belief. But monopoly of certification does not make a monopoly on teaching and learning.

Numerous groups in our society are teaching the skills, providing the practice, and diffusing the knowledge to solve the problems that plague urban America. The schools, themselves, are expanding and diversifying. Mass media, political staffs, public agencies and commissions, labor unions, citizen organizations, and business organizations are training grounds and, in some cases, continuing seminars for the study of the structure of our society. They define problems, produce and analyze maps, make recommendations, speed the diffusion of knowledge, and speed progress toward the solutions. Geography is a powerful intellectual tool for identifying problems, and guiding public policy for the voter, the technician, or the statesman. But the leadership in using geography for these purposes has probably come less from the schools, more from citizen organizations, mass media, and public agencies, in that order.

Teaching and learning are dispersing rapidly among many institutions - old and new, large and small. There are strong pressures to look upon higher education or continuing education as rights. With wider public use of democratic institutions, there is spreading open challenge of traditional, bureaucratic, authoritarian planning of major facilities in the geographic structure, such as highways, industrial plants,

or housing developments. That kind of challenge eventually demands that the parties concerned teach and learn more about the geography of the problem - as each perceives it and as it really is. Hence public policy development and public decision-making are emerging as major educational activities.

Meanwhile, formal educational institutions are trying to reach the mass of people through use of all media, programmed learning, individual study, dispersed classrooms, and more flexible definitions of admission, programs, and certification. Those institutions are also struggling to contribute more to the rising popular efforts to formulate public policy - to be "relevant". Thus the goals of educational institutions and numerous other agencies in our society are convergent.

Long ago America began the transformation from an educated elite to an educated society. Now we are attempting to complete that transformation; and at the same time we are beginning the shift from an educated society to a teaching and learning society. It seems doubtful that the monopoly of existing formal institutions in the certification process can survive this transformation.

Teachers of geography, as part of the formal education structure now, will surely see many new opportunities emerging. There will be increasing chances to serve the whole range of educational enterprises - citizen groups, agencies, business, mass media, new types of schools. There will also be a mounting challenge to sort out the high-priority tasks of formal education in this increasingly complex structure. Geographers may well find these challenges less upsetting than some of their colleagues in other disciplines. For we are only recently and only partly accepted in the formal structure. We are only a generation removed from the intellectual pioneers in the field and closer to our traditions of eclecticism and adventure.

In summary, the evolution of the urban geographic system is accompanied by the constant generation of problems. The solution of those problems requires education. Geography has a powerful intellectual tool and many insights to put into that essential education and thus speed the solution of problems. But education in America is branching into a fast-growing number of channels. I hope geographers will be able to let their energies flow without inhibition into these channels and let their knowledge and their discipline be an important component of the emerging learning society in America.