RfF

RESOURCES

Some findings and conjectures from recent research into resource development and use

The greatest problem of communication is the illusion that it has been achieved.—THOMAS H. CARROLL

NUMBER 28 RESOURCES FOR THE FUTURE, INC. MAY 1968

REVENUE SHARING AND THE CITY

REVENUE SHARING was one of the topics covered by a conference on Issues in Urban Economics, sponsored in 1967 by the RFF Committee on Urban Economics. The well-known Heller-Pechman proposal for revenue sharing was debated and the five papers dealing with this were recently published for RFF by The Johns Hopkins Press as Revenue Sharing and the City. *The following excerpts give some indication of the range of opinions on this controversial subject.*

—WALTER W. HELLER

BEFORE ANYONE reaches the complacent conclusion that state and local governments can meet future needs without undue restraint, let him knock on any fiscal door or scratch any fiscal surface at the state and local levels. Let him look beyond today's scope and quality of services to the aspirations that grow out of abundance. Let him find a single major city or state that can meet these aspirations without fiscal heroics. In his own suburb he will find unmet needs for school facilities, sewers, sidewalks, street lights, green space, more frequent garbage and trash collection. In his central city, let him look closer at the rutted streets and crumbling curbs; at the deteriorating parks and miserable housing in the urban ghettoes; at delinquency, crime, and poverty. And lest he be misled by some temporary surpluses growing out of the unexpected surge in revenues from an economy overheated by Vietnam, let him look dead ahead at the near-doubling of higher education expenditures in the next five years, at the crying needs for better prisons and mental hospitals, and at the fight—only just begun—against air, water, and land pollution.

THE CORE of the revenue-sharing plan is the regular distribution of a specified portion of the federal individual income tax to the state primarily on the basis of population and with next to no strings attached or, at least, no hamstrings attached. This distribution would be over and above existing and future conditional grants. The federal government would each year set aside and distribute to the states an eventual 2 per cent of the federal individual income base (the amount reported as net taxable income by all individuals). The states would share the income tax proceeds on the basis of population, thus transferring some funds from states with high incomes—and therefore high per capita income tax liabilities—to low-income, low-tax states. States would be given wide latitude in the use of their revenue shares. . . .

A spur to greater state-local tax effort could be

built in by weighting the per capita grants to each state by the ratio of that state's tax effort to the average tax effort in the country—tax effort being defined as the ratio of state-local general revenues to personal income. . . .

Whether to leave the fiscal claims of the localities to the mercies of the political process and the institutional realities of each state or to require a pass-through to them is not an easy question. But in the light of urgent local needs, especially in urban areas—and observing the tendency of many state legislators to hew to more generous service standards at the state than at the local level—I have been persuaded that setting a minimum percentage pass-through (preferably 50 per cent) is desirable in order to recognize the legitimate claims of local government. This would put pressure on the states to recognize local needs while letting each state adapt the precise form and division of the local share to its particular pattern of local needs. . . .

—RICHARD RUGGLES

THE CENTRAL PROBLEM is that within states and local communities, substandard schools, hospitals, prisons, and blighted areas do exist alongside wealth. Much of the increase in state and local expenditures can be demonstrated to have gone to provide better facilities in areas where the level of facilities is already high, and the problem areas continue to be neglected. Instead of suggesting that the federal government should provide state and local governments with additional resources, which would be similarly utilized, it may be more fruitful to ask whether or not some of the problems that state and local governments are currently neglecting are not in fact better solved by some other means.

As a review of the past development of federal, state, and local government functions has indicated, these functions have been subject to major evolutionary changes. For example, the introduction of the social security system in the 1930's has had considerable impact on the 1960's. The county poorhouse for the aged is essentially a thing of the past. Today, millions of aged are receiving as a matter of right a monthly social security check which supports them in their old age. More recently, the establishment of the Medicare program is also having a major impact on the need for state and local support of health services for the aged.

In effect, these federal programs are removing the problem of the aged population from the concern of state and local governments, and have made it the concern of national policy administered by the federal government. It is not only that state and local governments were relieved of expenditures in this area; they were relieved of the major responsibility of providing for the minimum level of requirements of the aged population.

ONE OF THE MAJOR FUNCTIONS of the federal government should be to guarantee every citizen access to an adequate level of education and health care. To the extent that redistribution of income is involved for the solving of social problems, the effectiveness of purely state or local programs is limited. In other problem areas, such as transportation, air and water pollution, and natural resources, the federal government should, in co-operation with state and local governments, develop co-ordinated programs aimed at solving the associated problems. . . .

Federalism as a conscious division of functions between levels of government is a reasonable approach, but the encouragement of federalism which absorbs public funds through federal tax credits and revenue sharing without meeting the critical needs of the nation constitutes an avoidance of the basic problems rather than an acceptable solution to them.

—LYLE C. FITCH

THE ESSENCE OF THE ISSUE is in the public decision-making processes of allocating resources and whether the state and local governments, *as now constituted*, are the best decision-makers we can command to dispose of the "national dividend."

The crucial question is: Who will determine the course of future urban expansion and set standards therefor? Can adequate leadership be expected from the fifty states . . . and beyond them, from the 90,000 local governments? Thus far, most of the urban population growth has been accommodated by short-run market forces. The result is the specter of endlessly sprawling urban development, careless of efficiency, indifferent to beauty, heedless of any human values save the immediate need for a roof and four walls. . . .

The questionableness of the states as instruments of fiscal salvation does not stem alone from their historic disinterest in urban affairs. They and their subordinate local governments are characterized by fragmented responsibilities, political weakness, and antiquated organization which greatly impair them for useful service as decision-making instruments to meet the problems of this high-flying age. . . .

If funds are handed out to bodies without competent planning and administrative machinery, there is no particular reason to think that they will be disbursed by any system of considered priorities. . . . If we are going to depend, as I think we must, on the decision-making and innovational capacities of state and local governments, let us seek to improve those capacities. Let us fashion federal grants to achieve this end.

—CARL S. SHOUP

THE STATES can no longer be assumed to be willing or able to pass through all the funds from the federal level that the urban areas want

to supply themselves with (using the federal taxing mechanism as an intermediary, producers' good) by their joint action. The chief reason for this unwillingness and inability on the part of any given state is that the joint action must be taken by all the urban areas of the country. It must be more than joint action of all the urban areas within any one state. The beneficial effects of reapportionment emphasized by Walter Heller will not, in this view, be enough. Accordingly, direct financial contact between the federal government and the several urban areas will have to increase if the urban centers are to act effectively in this joint effort of theirs. . . .

Annexation of suburbs to a core city is not needed, at least not universally; many other forms of joint action within a given urban area are available. . . . If a given core city and its suburbs, or a cluster of such core cities and their suburbs, are to expect all other similar aggregates in the United States to work with them through the federal machinery of increased federal taxation and increased federal grants, they must not themselves act as a jostling group of fragmented economic units.

—HARVEY S. BRAZER

DISTRIBUTION OF FUNDS to cities, or a uniform proportion required to be distributed to local governments, involves serious and perhaps insuperable difficulties. The states vary widely in the distribution of functional responsibilities between the state and its local subdivisions. In 1965, in the United States as a whole, the states accounted for 35 per cent of total state-local direct general expenditure for all functions, but this proportion ranged from 22 and 24 per cent in New York and New Jersey to between 60 and 75 per cent in West Virginia, Vermont, Alaska, and Hawaii. Thus, a requirement that, say, 50 per cent of a federal block grant be distributed to local jurisdictions within each state would be overly generous for those jurisdictions in the latter group of states, whereas it would fall far below the proportion of expenditure obligations now carried by local jurisdictions in New York and New Jersey, as well as many other states. It is only within each of the states taken as a whole that all state-local functions are more or less uniformly assumed. It follows, therefore, that block grants or unconditional subsidies should be distributed to the states for further distribution, as they may choose, to their local subdivisions. . . . In my judgment, the states and, *through the states,* the federal government should contribute far more than they do to meeting the costs of public services supplied by cities and other local jurisdictions. It seems equally clear to me, however, that direct federal grants to local governments should remain limited in scope and designed, in the form of grants-in-aid, to cope with specific deficiencies relating to functional areas that are of overwhelming concern to the nation as a whole.

Crusade for Clean Waters

IN 1948, EIGHT STATES—Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Virginia, and West Virginia—signed the Ohio River Valley Water Sanitation Compact. In The ORSANCO Story: Water Quality Management in the Ohio under an Interstate Compact, *published for RFF by The Johns Hopkins Press in 1967, Edward J. Cleary, for nineteen years executive director of the Ohio River Valley Water Sanitation Commission, tells how and why the compact came into being, what it achieved, and what may be learned from its experience in cleaning up a river basin. The following, adapted from the book, describes how ORSANCO won public support.*

IN 1948, LESS THAN one per cent of the 2,800,000 people living in sewered communities along the banks of the Ohio River had installed facilities for treatment of sewage. The almost universal indifference of communities to safeguarding the quality of their water resources was matched by the disregard of the corporations of the valley of the need to curb discharges of industrial wastes. These conditions could hardly be attributed to the lack of laws or technical know-how; there was an abundance of both. The unrestrained fouling of streams stemmed basically from public indifference. Thus this joint undertaking of the eight states became a crusade to generate support for clean streams —from millions of people and thousands of industries—and with it willingness to pay the price.

The staff began to develop a public-affairs program that could be classified in two broad categories: the "buckshot" campaign embraced components designed to be delivered broadside so as to impinge on anyone who might be within range; the "rifle-shot" procedures were directed toward specific targets. The former campaign used news releases, magazine articles, speeches, radio interviews, appearances on television programs, exhibits, films, and bulletins designed to make people aware of the pollution problem, to define what needed to be done about it, and to specify how it could be accomplished. Pollution control was identified with individual welfare and the slogan, "Clean Waters Protect Your Health —Protect Your Job—Protect Your Happiness" was developed. As time went on, it became clear that an informed citizenry would be ORSANCO's strongest ally.

The targets for rifle-shot efforts were specific communities and industries. The staff developed a "Citizens Clean Waters Committee" campaign program to help community groups in the organization and detailed conduct of an intensive campaign to win support for sewage-treatment plant bond issues. One of the services offered was the assistance of a staff member to serve as consultant, aide, and expeditor to the chairman and other members of the committee—a triune role that required considerable finesse. The aid of virtually everyone was enlisted, including local Chambers of Commerce, schools, Boy Scouts, and Girl Scouts. Store windows and libraries displayed exhibits and posters.

One of the most fruitful endeavors of the Commission was the "action" committees formed by management representatives of generic industries—steel, coal, metal-finishing, oil refining, chemical, and paper. As a result of these there was a decided change in the general attitude of industry in the Ohio Valley toward the concept of a regional pollution-control program. A liaison group of over two hundred people strategically located throughout the district communicated to all industrial entities both the goals of the interstate program and the means sought for their accomplishment.

As a result of these intensive campaigns, within eight years 3 million people along the Ohio River (85 per cent of the population) had supported the crusade by financing with local funds the construction of treatment works. To illustrate the personal sense of responsibility shown by people in the valley, ORSANCO received a letter in 1963, in which the writer stated that he had requested that his last remains be cremated and dispersed into the Ohio River and that he would like to know what liabilities would be incurred by his estate. In replying, the Commission could say only that it had not yet contemplated the promulgation of regulations suited to this situation, but it was gratified that its public-education program had evoked such a conscientious response.

OIL and the Law of Capture

MOST OIL RESERVOIRS lie under tracts of land which are held by numerous owners. In such cases, any oil produced from a reservoir is (according to the so-called "law of capture") held to belong to the owner of the particular surface area at which it issues from the ground. If oil were fixed in place, as solid minerals are, this would not lead to great complications. But, as a migratory liquid, oil will issue at the surface according to the number, location, and rates of production of the wells which are drilled to tap the reservoir.

Under the terms of the law of capture, the faster any one of the multiple owners of an underground reservoir could drill and lift on his land, the more oil he would end up with. The result, during an earlier period in the history of the oil industry, was a rush to sink wells and produce oil, with undesirable price consequences for oil producers and the producing states, rapid alternations of low and high prices for consumers, and unfortunate effects on the conservation of oil resources.

The latter was the most serious consequence from a broad social point of view. It meant that much of the underground oil would never be recovered—or recovered only at much higher costs—because the oil pool was not being drained according to efficient engineering practices which would utilize to the full the natural gas or water pressure of the reservoir. Instead, natural pressures were being prematurely dissipated through excessive drilling and production.

By the early 1930's the results of this unrestricted drilling had become serious enough to bring about governmental action, which has resulted in a system of regulation in which the decisive controls are exercised at the state level. The policies and practices of the member states are loosely co-ordinated through an Interstate Oil Compact Commission, approved by Congress in 1935. Participating states agreed to enact laws to prevent physical waste in oil production arising from certain specified causes. The Compact Commission's role was limited to fact finding and to offering recommendations to the states concerning methods for reducing waste and for achieving greater long-run recovery of oil resources. The system was rounded out by federal government responsibility for prohibiting the interstate movement of oil produced in violation of state regulations, but this activity is of small importance today. In more recent years the really significant contribution of the federal government to the maintenance of state regulation has been through the imposition of controls on the importation of lower-cost crude oil. . . .

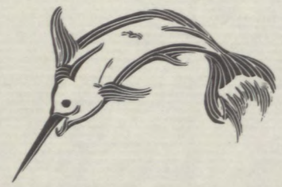
State regulation was the response to problems caused by the unrestrained pursuit of individual property interests in producing oil from a commonly held resource. Therefore, although one essential aspect of regulation is the attempt to enforce greater efficiency through the imposition of rules which all of the property owners must observe, the regulatory commissions also are required to observe established legal principles in protecting the rights of individual property holders. Consequently, although productive efficiency has improved greatly under regulation, the protection of individual property rights within the prevailing system of regulation has compromised this objective.

Amongst other solutions, a growing number of states have enacted laws empowering regulatory bodies to compel "unitization" of production when a large majority of the affected owners agree. This is a scheme, practiced also on a purely voluntary basis, whereby an oil pool is operated as a single unit, with each owner benefitting in the proceeds of production in proportion to his share in the property. In return the individual owner surren-

ders his right to carry out his own production and drilling. . . .

For the near future, however, the pattern of piecemeal reforms is likely to continue. Hundreds of thousands of wells have been drilled in the expectation that the climate of regulation would not be radically altered and there is much resistance to unitization, especially among minor producers. Present indications suggest a step-by-step process with some states taking the lead in enforcing improved practices and others following as a result of competitive pressures.

Adapted from *Energy in the United States: Sources, Uses and Policy Issues,* by Hans H. Landsberg and Sam H. Schurr, published by Random House in 1968.



Waterway Criteria

BEFORE AUTHORIZING and funding a project to develop a navigable inland waterway Congress requires that the U.S. Corps of Engineers submit a statement to the effect that the project's economic benefits to the nation are at least equal to its costs. But although a benefit-cost ratio of 1:1 or greater has attained the authority of dogma, the methods by which the national economic benefits are evaluated are not beyond question.

The Corps itself has been aware of certain deficiencies for some years, and in 1960 it started to overhaul its evaluation procedures with the intention of correcting some built-in biases.

Total navigation benefits can be thought of as the product of total freight tonnage carried by vessels on the waterway times the savings in cost per ton carried. A considerable amount of distortion enters into the calculations when savings between barge and rail transportation are measured in terms of rates rather than costs; for the amount by which freight rates exceed costs differs between railroads and bargelines. A further distortion comes about when estimates of future traffic fail to consider the competitive impact on a railroad of the newly developed waterway and the effects of improved rail technology.

BOTH ARE likely to lead to reduced rail rates, and failure to take them into account will have the effect of inflating estimates of the barge traffic expected to develop from a newly navigable waterway. Such distortions have led to the construction of waterways that remain underutilized. The national net benefits of such projects are not conspicuous, although the benefits to barge-using customers may indeed have useful consequences for local employment.

When in 1964 the Chief of Engineers put into effect some improvements in the estimating procedures, he retained (pending a solution to the difficult problem of unscrambling railroad costs) the use of rates as a basis for estimating benefits, but made two important changes that went far to correct both traditional biases. Henceforth, the directive reads: "estimates of waterway traffic will be prepared on the basis of projected 'water-compelled' rates with consideration of all data and factors that are likely to modify current rates to take account of the competitive situation anticipated with the waterway in being, and foreseeable technological developments applicable to the several transport media." And . . .

"In developing the projected rates or charges, consideration will be given to all pertinent data and factors including the competitive situation in the absence of the waterway, current rates, and foreseeable technological developments applicable to the several transport media."

These were highly rational and even courageous steps to be taken by an agency which, while serving the national interests, is the executing agency for the Congress' rivers and harbors projects.

But, as it happens, the revisions have been short-circuited by inclusion of an amendment to Section 7(a) in the Act establishing the Department of Transportation (P.L. 89-670).

Paragraph (1) of that section empowers the Secretary of Transportation to set standards for the economic evaluation of all proposals for the investment of federal funds in transportation facilities *except water resource projects.*

Paragraph (2) states that: "direct navigation benefits of a water resource project are defined as the product of the savings to shippers using the waterway and the estimated volume of traffic that would use the waterway; where the savings to shippers shall be construed to mean the difference between (a) the freight rates or charges prevailing at the time of the study for the movement by the alternative means, and (b) those which would be charged on the proposed waterway; and where the estimate of traffic that would use the waterway will be based on such freight rates. . . ."

And there the matter rests. The standards of evaluation are now so loose that it will be difficult if not impossible to discover whether the calculations supporting future waterway projects reflect some economic truth or are legal fictions.

TO AN EXTENT, the above course of events has resulted from the all too prevalent tendency to equate benefit evaluations with strictly measurable quantities; yet it is more than likely that some benefits do not lend themselves to precise qualification. Gradually ways will be found to quantify at least some of the currently unmeasurable benefits but, even so, complete dependence should not be placed on a benefit-cost ratio which for every project contrives to present benefits as being as great or greater than costs. A ratio of 0.75 : 1 might sometimes be more realistic, but still could represent a socially desirable project if the B/C ratio were backed up with a detailed statement of the unmeasurable benefits that are expected to result from a waterway (or any other water resource) project. It is useful to know, for example, that a proposed project would attract X thousand people with X dollars of income from urban areas to a sparsely populated area; or that it would stimulate farm life and income. The non-monetary benefits accruing from such social changes, when fleshed out with as much factual information as possible, are best left to speak for themselves.

Based on a paper presented by Charles W. Howe, of RFF, before the American Society of Civil Engineers Specialty Conference in 1967.

Economics and Nicotine

IT CANNOT be taken for granted that accurate and timely anticipation of the adverse consequences of a particular action necessarily produces decisions to prevent them. For example, the failure of cigarette-smoking to decline or of repeated disasters to discourage occupancy of flood plains raises doubts about the level of individual response. . . .

Beyond the need of adequate motivation and appropriate institutions, there is the great difficulty of balancing the gains and the losses. Let us look more closely at the cigarette-smoker, and let us assume that he is well informed about the effects. Presumably the smoker has achieved a balance of gains and losses: The gain from inhalation more than offsets the pain from possible illness and shorter lifetime. Arriving at the balance is likely to involve several elements—among them, the weighing of pleasure *now* against pain *later,* with the distant event, as is customary in such situations, heavily discounted; the reluctance and remoteness of applying to oneself a cause-and-effect relationship that is only statistically demonstrated, a reason for additional discounting; the calculating of odds; allowance for personal habits and characteristics; appeasement through change to presumably less harmful brands. Clearly some such calculus underlies the decision to smoke and how much to smoke.

One might go on to speculate that those smokers who have digested the new knowledge have adjusted to it by setting their daily intake at a level at which they judge further reduction would gain them less in future health than they would forego in current pleasure; a level, conversely, at which the improvement in current well-being derived from the extra cigarette, the marginal revenue, is not worth the incremental health hazard, the marginal cost. At that point, the smoker is in equilibrium. This point comes at different levels of smoking for different people, and the motivation—the type of gain extracted—differs widely among smokers. Thus, rationality of decision is not the issue. Rather, what is open to discussion and represents a proper area for education is the value scales on which pleasure from smoking and pain from ill health are traded off.

A serious economic problem arises not when an individual's actions affect adversely only himself (though costs of medical attention will in varying degrees not be defrayed by the individual, and there is, therefore, a public interest), but when those actions affect, primarily and often exclusively, other people.

This has implications not only for evaluating the cost-benefits of individual health, but for measuring society's demands for improving the quality of its environment. For we must recognize that the decision-maker can err.

LET US ASSUME, for the sake of argument, that cigarette-smoking were considered a form of pollution and its practice made subject to public regulation. In the light of the last few years' experience, there can be little doubt that any restrictions put on smoking would not be in accord with the aggregate of private valuations rationally arrived at—not only, as J. W. Milliman has suggested, because the political process is no freer from imperfection than the market mechanism, but because there is a real conflict between a theoretical cost-benefit calculus, made in all good faith, and one derived from the summation of an individual's preferences. Only by cranking in society's interest in a healthier population as a plus could one hope to redress the balance toward a net gain from restrictive regulation.

From an article by Hans H. Landsberg in the Fall 1967 issue of Daedalus.

RFF BOOKS

Issues in Urban Economics. Harvey S. Perloff and Lowdon Wingo, Jr., eds. 688 pp. June 1968 Cloth, $15.00; paper $5.00

Policy Directions for U.S. Agriculture: Long-Range Choices in Farming and Rural Living. By Marion Clawson. 448 pp. June 1968 Cloth $10.00

The Economics of Water Utilization in the Beet Sugar Industry. By George O. G. Löf and Allen V. Kneese. 144 pp. June 1968 Paper $4.00

Converting Land from Rural to Urban Uses: Economic Aspects and Research Needs. By A. Allan Schmid. 128 pp. June 1968 Paper $4.00

U.S. Energy Policies: An Agenda for Research. A Resources for the Future Staff Report. 168 pp. June 1968 Paper $4.00

Revenue Sharing and the City. By Walter W. Heller, Richard Ruggles, *et al.* 128 pp. March 1968 Cloth, $6.00; paper $2.50

Obtainable from booksellers or The Johns Hopkins Press, Baltimore, Md. 21218.

Energy in the United States: Sources, Uses and Policy Issues. By Hans H. Landsberg and Sam H. Schurr. 242 pp. May 1968 Cloth, $5.95; paper, $2.95. (Obtainable from booksellers or The College Department, Random House, Inc., 501 Madison Ave., New York, N.Y. 10022.)

PUBLISHED THREE TIMES A YEAR.

RESOURCES FOR THE FUTURE, INC. is a nonprofit corporation established in 1952 to advance the development, conservation, and use of natural resources through research and education. Its work is financed by grants from the Ford Foundation.

RESOURCES FOR THE FUTURE, INC.
1755 Massachusetts Avenue, N.W.
Washington, D. C., 20036