

PROGRAM EVALUATION AND THE PURPOSE OF RIVERS

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INTRODUCTION

As I reflect back on my involvement with water resources, it seems to me that there have been two profound changes in American water politics and policy: (1) the terms of project and program evaluation; and (2) the “purpose of the rivers” as I like to put it. I will discuss each in turn.

EVALUATION

No sooner had I accepted a faculty position at the University of Wisconsin in 1969 than I was drawn into “the water wars.” By this I mean that the U.S. Water Resources Council was under a stipulation from the Office of Management and Budget (possibly still known as the Bureau of the Budget in those days) to consider the guidelines by which federal water projects had been evaluated in the past and how they should be evaluated in the future. To a certain extent it is not unduly melodramatic to refer to these as the “water wars.” The academic community, or perhaps I should say that exceedingly minor fraction of it that paid any attention at all to federal water policy, was choosing sides.

In one camp we find the “Axis Powers” emanating from Washington, D.C. This group saw water policy as pork barrel politics that could only be stopped with hard-edged economic analysis. This was a time in American history when unnecessary dams and bizarre inland seaports such as Lewiston, Idaho and Tulsa, Oklahoma constituted the major political scandals coming out of Washington. These were indeed tame scandals by today’s standards, but then the Axis Powers did have a good point about Lewiston and Tulsa. Not that Idaho and Oklahoma do not deserve to have seaports but that discussion would take us into the realm of metaphysics rather than economics. The heavy lifters of the Axis Powers were Jack Knetsch, Bob Haveman, John Krutilla, Michael Brewer, and yes, Chuck Howe. A quite unremarkable bunch, actually. But they started the “water wars” with that old propaganda trick – a pamphlet! It was entitled, presumptuously enough, “Federal Natural Resource Development: Basic Issues in

Benefit and Cost Measurement” and it appeared in May 1969 – as if timed to upstage my graduation as a newly minted Ph.D. Here, they wanted all to believe, was the definitive word on how the federal government ought to undertake the evaluation of water resource projects.

Though we had been preempted, our side – might we call ourselves the “Allied Powers”? – made up for a slow start by our own pamphlet of impeccable logic and even better economics. Our side, and I recall them well (with the admitted help of that historic document still at my fingertips when not under my pillow), included Robert J. Kalter, William B. Lord, David J. Allee, Emery N. Castle, Maurice M. Kelso, Stephen C. Smith, S.V. Ciriacy-Wantrup, and Burton Weisbrod. Oh, and there was me – a full three months out of graduate school when our tract appeared – a mere assistant professor. My contribution to it, as I vaguely recall, was to proofread the final draft. But there can be no doubt that the Allied Powers had all of the intellectual heft. If one compiled a Hall of Fame for water resource economists in the 1960s it would assuredly include the names of Lord, Allee, Castle, Kelso, Smith, and Wantrup. Kalter was only slightly older than I at the time so I hesitate to shower him with too much praise; besides it could not possibly augment his own self-impression at the time. Bob has mellowed. And honesty compels me to point out that he (Kalter) did virtually all of the serious work on the pamphlet. Finally our trump card, to mix a metaphor, was Burt Weisbrod – a Wisconsin colleague (if an assistant professor dare say that of a full professor) who developed the theory of “option value.” We had both theoretical heft and inside knowledge of the water game and so when our pamphlet appeared in August – entitled grandly but not presumptuously “Criteria for Federal Evaluation of Resource Investments” – the war was over before it really started. Note the sweeping reach of our tract. The appearance of this seminal document, in the fullness of 10 ½ pages packed with economic insight and political wisdom, was too much for the Axis Powers (whose curious tract reached 12 pages) and most of them never

touched water policy again. Howe is still at it, but then he is unduly stubborn.

So what was the reason for the war? In essence the struggle was over the nature and scope of the role of what we call “welfare economics” (and its applied offspring benefit-cost analysis) in evaluating public investments.¹ Welfare economics, despite its name, has nothing at all to do with “welfare programs” but rather concerns a branch of economics that – in the 1960s – was thought to have something to say about social optimality and thus social welfare, broadly construed. In hindsight it seems fair to say that the Axis Powers placed more credence in welfare economics than did the Allied Powers. To the Axis Powers, welfare economics was the rigorous conceptual filter through which all public spending should pass in order to protect society from the waste, fraud, and abuse thought to emanate from the U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation. The Axis Powers were, in a sense, engaged in a kind of economic holy war against the engineers. They thought they had economic theory on their side. I say “thought” because in the ensuing three decades welfare economics has fallen on some rather difficult times.²

The Allied Powers – and I am trying to be balanced here though it is difficult – had a somewhat more nuanced intellectual view of things. We understood that water policy is a complex admixture of regional development policy, agricultural policy, transportation policy, energy policy, and even macro-economic policy. We advanced the position that the famous language in the 1936 Flood Control Act that said the federal government could undertake various water projects when the “benefits to whomsoever they may accrue are in excess of the estimated costs” was a piece of high-sounding legislative language that some economists had taken too literally. Perhaps they saw it as giving them a voice in major political decisions? Most particularly, economists in the Office of Management and Budget quickly insisted that the language meant precisely and narrowly what it said. The narrower the scope for “benefits” the easier it would be for the President to kill “wasteful” water projects. In other words the water wars arose from the political inability of the White House to confront powerful Executive branch agencies and their allies on Capitol Hill who wanted more, not fewer, water projects. What the White House could not do politically it hoped to do with the hammer of benefit-cost analysis. And the Axis Powers were right there leading the assault.

Our position was to insist that the Axis Powers were lending the good name of economics to a battle that should be fought on a different field. Besides, the Axis

Powers were invoking economics in a way that its fragile edifice could not possibly sustain. It was the wrong battle with the wrong weapons.

History will record that President Jimmy Carter’s first and most successful peace offensive brought the water wars to a halt. His budget cuts and thorough review of all federal water projects early in his presidency rendered all of our pamphleteering quite beside the point. History will also record, however, that we had the better economics and logic on our side.³

This follows from the fact that water projects are much too multifaceted to lend themselves to the reductionist accounting demanded of the Axis Powers and others who sought to impose the logic of the marginal efficiency of capital into public works programs. But there is a more compelling flaw in the approach of the Axis Powers. Welfare economics, from which benefit-cost analysis springs, is simply unable to offer coherent guidance about which actions are socially preferred. E. J. Mishan, the creator of several books on benefit-cost analysis, saw this and took the time to point out the severe value judgments and assumptions necessary to establish a connection between economic valuations of collective action and judgments about social welfare (Mishan, 1980).⁴ In a word, it cannot be done.

The evaluation of all collective action, not just water projects, must be conducted on terms that recognize this inexorable truth. Benefit-cost analysis as a decision aid – and as a structured process for highlighting all of the impacts of collective action (the primary theme of our pamphlet) – is indispensable. But calculating the Net Present Value (or its analogue the Internal Rate of Return) of a project in the hope of finding the correct answer about the social welfare implications of any particular project is incoherent and constitutes economic fraud. Which is not to say that many hours of staff time in agencies all over the world is not still devoted to this dubious pursuit. But this is simply a remnant of the prevailing doctrine in the 1960s and 1970s that benefit-cost analysis was necessary to separate good decisions from bad ones. Since a clever analyst can produce reductionist results proving whatever it is that the sponsoring agency seeks to have proven, the persistence of this activity in Executive branch agencies provides much-needed employment for the calculating classes, it makes agency administrators feel good, and it allows the politicians to sleep soundly at night knowing that with enough time some analyst someplace can produce a benefit-cost ratio (or a NPV) suitable to the task at hand. Is the financial waste worth it? Is the moon made of bleu cheese?

THE PURPOSE OF THE RIVERS⁵

The “water wars” ended just as the idea of “instream values” began to gain traction. The logical culmination of that recognition is now seen in the pressure to remove or decommission dams in many parts of America. Rivers once provided cheap waste disposal, transportation services, and power for generating electricity as well as for running grinding mills. When water was taken from rivers in the arid west it provided the necessary ingredient whereby reasonably rich soils might produce cultivated crops. The purpose of the rivers was clear, and that purpose was one of nation building. Water policy was but a part of the general notion that America was one vast frontier waiting to be conquered in the name of economic development [Hurst 1982]. Nature was here for the taking, and the taking was for the purpose of nation building.

Today there is a different purpose of the rivers. This new climate for water developments coincided with the realization that perhaps all of the viable water investments had been implemented [Bromley 1997]. This was also the beginning of the period in which traditional federal spending was coming under attack. Very soon massive federal budget deficits eliminated most non-military federal spending. This inability to continue to undertake water resource investments coincided with the growing recognition that the nation’s water resources had new purposes. The new challenge, and one that may well incite a new round of “water wars,” concerns how we assess policy and associated institutional arrangements concerning our rivers and the uses to which they shall now be put.

IMPLICATIONS

The century just ended will be recognized as the time when America’s water resources were attacked with all of the sophistication and power that one would expect of an economic and technological superpower. Unruly rivers were straightened and channelized, massive levees and dikes were thrown in the way of encroaching water, cheap electricity was wrung from falling water, harbors were carved from shallow inlets, locks and dams turned wild rivers into barge canals, salmon were butchered in turbines on their way down rivers – and are proving inconveniently resistant to lessons to teach them to climb ladders on their return journey, wetlands were drained to grow crops we probably did not need, and yes the “desert was made to bloom as the rose.” The nation grew rich as a few well-situated entrepreneurs prospered. The rivers were to foster commerce, and federal water policy was the

single-minded pursuit of that goal with the nation’s taxpayers putting up the money.

Was this history a mistake? Of course not. To insist otherwise would be Whigish. Young nations have different needs from mature ones, and America is, alas like some of us, no longer young. Now it is time to re-direct the purpose of the rivers. Dams and dynamite now conjure a very different image than in the early years of the century. But what dynamite helped to create, dynamite can help to undo. Is this transition in water policy fair to those whose lives and livelihood are inextricably bound up with the shifting purpose of the rivers? There is no easy answer to that. A civilized nation cushions the inevitable transitions for those caught in the vise of shifting priorities and purposes. Perhaps Water War II will concern the nature and scope of policies to alleviate the social and economic harm of the new purpose of the rivers. How will the Axis and the Allies align themselves this time?

AUTHOR

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ENDNOTES

- ¹ For a more elaborate discussion of this issue see Bromley [1997].
- ² For an elaboration of this point see Bromley [1990].
- ³ Since Chuck Howe is editing this volume we will get a quick sense of his intellectual honesty. If my statement remains in the final version we will have decisive proof that Howe is a gentleman and a scholar. Otherwise
- ⁴ See also Mishan's other items in References.
- ⁵ This is a brief precis of points made in greater detail in Bromley [2000].