



Spring 1962

## Errors in the Ethical and Rational Criticism of the Select Committee by Mr. Roy Hamilton

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### Recommended Citation

N. Wollman, *Errors in the Ethical and Rational Criticism of the Select Committee by Mr. Roy Hamilton*, 2 Nat. Resources J. 260 (1962).

Available at: <https://digitalrepository.unm.edu/nrj/vol2/iss2/5>

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**ERRORS  
IN THE  
"ETHICAL AND RATIONAL CRITICISM"  
OF THE SELECT COMMITTEE  
BY MR. ROY HAMILTON**

N. WOLLMAN\*

Mr. Hamilton's article in the last issue of this *Journal*<sup>1</sup> departs so far from an objective position that comment is mandatory. By vaulting from a somewhat naive preconception to a preconceived conclusion he accuses the United States Senate of subverting its responsibility, of creating within itself a special interest body, and failing to preserve the impartiality and absence of prejudice that action in the national interest entails. He accuses the Senate Select Committee on National Water Resources of having functioned as a private interest lobbying group rather than as a body truly representative of the national welfare (53-54).

He reaches his conclusion by the following route:

- (1) the resolution creating the Committee was introduced by Senator Mansfield, a westerner. (47.)
- (2) the resolution was supported by a conference of senators from eleven western states. (48.)
- (3) Senator Anderson, of New Mexico, chairman of the Irrigation and Reclamation subcommittee of the Committee on Interior and Insular Affairs approved of the resolution as did also a representative of the National Reclamation Association. (48-49.)
- (4) "Fifteen of the seventeen senatorial members of the Select Committee on National Water Resources were from western or mid-western states." (51.)
- (5) A senator from Oklahoma, Senator Kerr, was made chairman of the committee. (49.)
- (6) the "only concrete recommendations refer primarily to western water problems, while the bulk of the separate supporting studies also concentrate in this area." (50.)
- (7) "Water-oriented agencies" of the Federal Government, such as the Bureau of Reclamation and the Corps of Engineers supplied data to the committee, so that the committee's report was "self-fulfilling" so far as the programs of these agencies were concerned (50.)
- (8) The report was "written largely by the Select Committee's Staff

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1. Roy Hamilton, "The Senate Select Committee on National Water Resources: an Ethical and Rational Criticism," *Natural Resources Journal*, Vol. 2, No. 1, April 1962, (45-54).

Director, Mr. Theodore Schad, under the close direction of the Chairman, Senator Kerr." (50-51.)

- (9) Had the membership of the Committee been eastern instead of western, the report would have been different, since "most of the benefits of the western-oriented report will flow to the western states." An eastern-oriented report would have "been more concerned with such things as flood control, pollution abatement and navigation, while perhaps giving a tag-end emphasis to developing water supplies (just the opposite of the actual report)." (51.)

According to Mr. Hamilton, the committee's conclusions were foretold by its composition. By allowing itself to be dominated by western water interests, the Senate "violated every principle" of responsible mediation among conflicting interests. (53.)

Mr. Hamilton's statements on items (1), (2), (3), (4), and (5) are correct. Item (6), I believe, is incorrect, although words such as "concrete" and "bulk" are hard to pin down. Item (7) is partially correct: federal agencies did supply data. I shall comment below on their "self-fulfilling" character. Item (8) is correct: Mr. Schad drafted the Committee's report; but Mr. Hamilton fails to explain why this would have predisposed the Committee's alleged conclusions, since all of Mr. Schad's antecedents are Eastern.

Item (9), Mr. Hamilton's punch-line, is simply false. Instead of the bulk of recommended expenditures going to the West, they go to the East. Instead of the bulk of recommended expenditures being for "water development," they are for waste treatment and pollution abatement. Instead of a group of western senators legislating in favor of the West, their recommendations overwhelmingly favor the East. Instead of the Senate having created, and then given heed to, a private-interest lobbying group, the Select Committee carefully sought to avoid politics and partisanship by acquiring the best scientific data that were available.

Mr. Hamilton's little syllogism—Western senator ergo Western benefits—was so appealing that he apparently saw no reason to analyze the *Report*<sup>2</sup> once he knew who was on the Committee. Had he studied the document more carefully he could not have helped but see that of the "more than \$50 billion dollars" which he finds so unwisely divided between "developing water supplies" and other, presumably superior uses, and so unfairly divided between benefits to the West and benefits to the East, the following divisions actually were made:

*Division by type of expenditure:*<sup>3</sup>

waste collection and treatment—	\$42 billion
flow regulation	—\$12 billion

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2. Report of the Select Committee on National Water Resources, 87th Cong., 1st sess., S. Rep. No. 29 (1961). [Hereinafter cited as *Report*.]

3. *Id* at 15.

*Regional division of expenditures:*

East (Upper Mississippi, Lower Missouri, Lower AWR, and all regions to the east. This is a division that follows approximately the 96th meridian, and is, therefore, four degrees to the east of the usual division between "east" and "west" in terms of climate.)—66.4%

West (the remainder of the United States—i.e. all of the eleven western states plus most of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma, and Texas.)—33.6%

The facts that contradict Mr. Hamilton's argument are not printed in large type on the first page, but instead are contained in the tables of the *Report* itself and in the separate studies that support and augment the Committee's *Report*. Nonetheless they are there for all to see, whereas what Mr. Hamilton alleges to have found is not there at all. The Committee's *Report* was intended as a study for the Senate's own use. It was, therefore, a more serious and scholarly document than perhaps Mr. Hamilton expected to encounter.

Had Mr. Hamilton not been preoccupied with his notion of how geographic origin affected senatorial action he might have studied Tables V and XVI of the *Report*. (30, 129.) He would have seen that of the 523 billion of gallons per day of flow, (provision of which would have taken the \$12 billion capital expenditure given above for flow regulation), about 220 BGD (billions of gallons per day of flow) were for the West and 300 BGD for the East. He would also have seen that when the 523 BGD were divided according to purpose, that 190 BGD were to offset losses ("water development") and 332 BGD were to maintain water quality *after waste treatment* had already removed about 90% to 95% of putrescible organic material (i.e. biochemical oxygen demanding substances).

The facilities for treatment are budgeted at \$42 billion. The division of the costs of treatment combined with the costs of flow regulation are, as already noted, two to one in favor of the East. The division of the costs of treatment alone are as follows:<sup>4</sup>

East —72%

West—28%

The division of the costs of storage alone are:<sup>5</sup>

East —49%

West—51%

Since storage costs are a function of runoff and regularity of flow, the advantage

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4. N. Wollman, "Water Supply and Demand," Committee Print #32, Table 50 at 69, U.S. Senate Select Committee on Natural Water Resources, U.S. Govt. Printing Office, 1960. [Hereinafter cited as *Committee Print #32*]

5. *Id.*, Table 49.

given to the West relative to its proportionate share of total U.S. land area, (45%),<sup>6</sup> is hardly surprising, and scarcely a decision to be denounced as the result of geographic favoritism.

According to Mr. Hamilton, if the Committee had been more adequately representative of the East it would "have been more concerned with such things as flood control, pollution abatement and navigation, while perhaps giving a tag-end emphasis to developing water supplies (just the opposite of the actual report)."<sup>7</sup>

The route by which Mr. Hamilton reached this conclusion is obscure. Perhaps the explanation is simply that Mr. Hamilton failed to appreciate the significance of the Committee's recommendations. As already noted, he apparently did not realize that the bulk of recommended expenditures (\$42 billion out of \$54 billion) was precisely for waste treatment to abate pollution and that 60% of the recommended augmented flow provided by the remaining \$12 billion was precisely to maintain water quality after treatment. He apparently also failed to realize that the storage requirements stipulated for low flow augmentation would serve, in general at least, to meet navigation needs, eliminating, except for possible local situations, the need for a special navigation provision.<sup>8</sup>

The matter of flood control is more complex. Obviously storage for low flow augmentation will have a considerable impact on flood hazard; where full regulation is attained, the threat of flood is presumably reduced to zero. But since protection from flood for any point depends upon the location of the reservoir, and since no attempt was made to specify reservoir sites, it is not possible to do more than point out that a beneficial relationship exists. The relationship is so intimate, however, that the entire pattern of flood control techniques is likely to be drastically changed once storage to maintain water quality is in place.

Mr. Hamilton has cynically cast aside not only the work of Mr. Schad and his staff but also the invaluable research and storehouse of information made available to the Committee by the research organizations of the federal government, a contribution which I could appreciate the more as a non-governmental participant in certain phases of the research commissioned by the Committee.

My participation in the Committee's investigations grew out of an invitation by Resources for the Future, Inc. to conduct a study of the nation's supply of and demand for water. By the time the Select Committee was created in the spring of 1959 RFF's plans were well advanced and it was obvious to all concerned that without coordination there would be considerable overlap and

6. Report, *supra* Table IV at 27-28.

7. Hamilton, *supra* at 51.

8. See *Committee Print #32*. In no region were navigation requirements ruling, although Corps of Engineers estimates were given full consideration. In computing the costs of water, costs of locks and other navigational aids were not considered, but then neither were costs of irrigation channels or any other special use facility.

duplication of work. Accordingly, the Committee and RFF negotiated an agreement whereby the Committee would lend its authority to RFF's requests for data from various federal agencies in return for a preliminary report of the RFF supply-demand study.<sup>9</sup>

I do not think that it is necessary for me to expand upon the intellectual responsibility of Resources for the Future any more than upon that of the United States Senate, the staff of the Select Committee, or the research personnel within the federal government. RFF's interest and that of the Committee's coincided: both wanted as objective a picture as could be drawn with the scientific tools available. A number of meetings were called by Mr. Schad which were attended mainly by research people in the various federal agencies.<sup>10</sup> Collectively we developed a method of analysis that would yield determinate measures of water use and water availability—the first time that this had ever been done for the United States—and by letter from Senator Kerr, Chairman of the Committee, to the secretaries of the relevant federal departments and to the heads of the independent agencies the nature of the data that would be required was specified.

It is at this point that in Mr. Hamilton's words, "a self-fulfilling prophecy," of agency programs would be most apparent in the Committee's report. However, precisely at this point, Resources for the Future provided a check that no agency interest could overbalance. Since the study dealt with projected water use in the years 1980 and 2000, RFF supplied the national aggregates of GNP, population, and production by major water-related industry category. The *Report's* quantitative as well as its qualitative conclusions were largely derived from the studies which the Committee had commissioned. Mr. Hamilton would have seen, had he read the thirty-two committee prints that lay behind the *Report*, that there was little opportunity, let alone intent, for the federal agencies to impose their own "self-fulfilling" programs upon the Committee. In fact, the factual conclusions upon which the Committee's recommendations rested turned out to have been reached independently of the reports prepared by the two major construction agencies—the Corps of Engineers and the Bureau of Reclamation.

The program to which the Committee's \$54 billion capital expenditure relates was the result of estimating the water intake, the rate of water loss, the amount of waste generated, the level of treatment given to the waste, and the amount of high quality dilution water that had to be mixed with the effluent of the treated waste in order to maintain an average dissolved oxygen content of four milligrams per litre in the surface waters of each region. As already noted the projected levels of population, gross national product, and indexes of production of water-related goods and services were supplied to the federal agencies that participated in the research by Resources for the Future.<sup>12</sup> Intake

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9. RFF has continued its support of the study by a grant to the University of New Mexico.

10. See Committee Print #32 for acknowledgments.

11. See forthcoming, *Resources in America's Future*.

(or gross use) and loss (or consumption) per unit of product were estimated from available data with, in the case of agriculture at least, a built-in trend for anticipated technological improvement. The federal agencies were responsible for geographic distribution of national aggregates. Agency interests could appear here, but certainly only in attenuated form. Furthermore, as things turned out, the agency with the most obvious and staunchly built-in regional bias, the Bureau of Reclamation, did not supply the data on Western water use. A delay in appearance of the BR report made it necessary for us to rely wholly on Department of Agriculture conclusions with respect to irrigation, the major depleting use in the West. (When the Bureau's report finally appeared it revealed approximately the same projected total of irrigated acreage in the West although the regional distribution was slightly different.<sup>12</sup>) The "requirements" on which the *Report* was based consisted of the amount of water lost to the atmosphere by the projected levels of irrigation, mining, manufacturing, steam-electric power, municipal uses, soil and moisture conservation activity, and swamp and wetland habitat plus the dilution flows needed to maintain water quality. Flows for hydroelectric power, navigation, fresh water game fish habitat, and estuarine habitat were also estimated but in no case were held to be ruling. The uses that dominated the results were irrigation losses (estimated by the Department of Agriculture), swamps and wetlands losses (estimated by USGS and the Fish and Wildlife Service), and waste dilution flows (estimated by George Reid, Director, Water Resources Research Bureau, University of Oklahoma, in consultation with specialists in the United States Public Health Service).<sup>13</sup>

Mr. Hamilton's criticism might have been more perceptive had he directed his aim against the proper targets. For example, he might have objected to the projections of population and output, or he might have deplored the adoption of a given loss or waste dilution figure per unit of product; at best we can only estimate from incomplete present knowledge to a wholly uncertain future. He might have pointed out that biochemical processes of pollution treatment and the self-cleansing properties of water are only imperfectly understood. He could have noted that rates of technological change in water use and treatment can only be guessed at and that data on the elasticity of demand for water are virtually non-existent. He could have pointed out that costs of storage were estimated by generalized formulae that might prove to be wrong when specific reservoir sites, compatible with a basin-wide system of operation, had been selected. Costs of treatment, also estimated by formula, might also be in error if full account could be taken of the newer forms of pollution (which probably

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12. Estimates of water requirements prepared by the other major construction agency, the Corps of Engineers, also failed to appear in the final measure of requirements, since estimated waste dilution requirements exceeded navigation flows.

13. See Committee Print #32, Water Supply and Demand, for discussion of method and results.

will raise treatment costs) and improved technology of construction and operation of waste treatment facilities (which probably will lower treatment costs). Such criticism would hardly have been original with him, however, since these limitations were pointed out in many places throughout the reports and testimony gathered by the Committee. No one, least of all those who shared in the study, asserts that the last word has been said. The *Report* itself reiterates the need for more research, greater awareness of water resources problems by the public, and more participation by states in programming river basin development. If, as Mr. Hamilton fears, the *Report* "will have a lasting impact upon the course of federal investment in water development projects" (49.), it will be because the Committee deliberately sought to avoid partisanship and regionalism, and because it successfully minimized the intrusion of the political forces that Mr. Hamilton imagined he had discovered.