
Highway Travel Subsidies

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Letters

ORSA and the ABM

In Nicholas Wade's account, "ABM debate: Learned society split by old grievance," (15 Oct. 1971, p. 276) of a report published by a committee of the Operations Research Society of America (ORSA), the emphasis is entirely on the elements of conflict that engendered and accompanied the preparation of this report, and not all on its very real achievement. In fact, one would hardly realize from reading Wade's account that the ORSA committee has taken the occasion of a dispute arising out of conflicting testimony by operations research analysts on the antiballistic missile system (ABM) to produce, as the main body of its report, an impressively balanced, conscientious, and responsible set of guidelines for the professional practice of operations research.

These guidelines confront head-on the difficult problem of the proper role of the operations analyst in an adversary process of the sort that arose in the ABM testimony. They will unquestionably prove of great value to the practicing operations analyst, who is increasingly called upon these days not only to perform analyses that illuminate major decision problems of business, industry, and government, but also to present the results of such analyses in debate within government agencies or in such formal adversary proceedings as a court case or a congressional committee hearing.

Wade comments that the committee's report did not pass through the customary refereeing process before its publication as a special September 1971 issue of ORSA's official journal *Operations Research*. It would be my guess that this report, which the committee and the ORSA council clearly realized would have controversial aspects, was subjected to a much more careful professional scrutiny than would be usual for a scientific journal article. In publishing these guidelines, along with a detailed appendix analyzing how

they should have been applied in the instance of the 1969 ABM debate, ORSA has performed a valuable service to its profession. It took courage to do it.

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I found the report of the ORSA Ad Hoc Committee on Professional Standards to be objective and evenhanded; other professional societies would do well to emulate it. Wade's charge of one-sidedness does not seem valid to me. It is clear that much "expert" testimony before the Armed Services Committee on the ABM was not very expert. Philip Morse's threat to resign notwithstanding, the report made me proud to be a member of ORSA.

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I deplore the accusatory overtones in Wade's report on ORSA and the ABM controversy. Certainly the ORSA report is controversial and unprecedented. Wade would have us believe that operations research analysts as a group are a bunch of milquetoasts so beholden to their financial sources as to be unable to render an opinion at variance with the DOD party line. ("Operations research . . . has not outgrown its military heritage . . . many members of ORSA . . . have past or present connections with the military establishment. ORSA is not ideally positioned to adjudicate. . . .")

Mr. Wade implies that ORSA accordingly conducted a kangaroo court to convict dissenters. Among its procedural shortcomings were failure to provide council to the defense ("lack of access to the arguments of those supposedly on trial"), and prejudice due to "conflict of interest." The latter apparently refers to a possible grudge that might be held by committee member Howard Berger because when he was at the

Institute for Defense Analyses (IDA) he had been "relieved . . . of responsibility" by (defendant) George Rathjens and subsequently resigned.

None of these criticisms stand up on examination. The operations research community, far from being captive to the military establishment, was as split over ABM as the country at large. Opposition was extensive and very vocal. As Wade notes, "Albert Wohlstetter . . . was *one of the few* (italics mine) scientists outside the administration to give evidence in favor of the ABM during the 1969 Senate hearings." Furthermore, although presumably Rathjens's testimony stemmed in part from IDA studies, many IDA staff differed with him.

Nor was the partiality that Wade implies actually present. Concerning the "council for the defense" (since Wade insists there was a trial), all "defendants" were invited to participate from the start and to comment on prepublication editions of the report, and all declined. What more could ORSA have done?

On the matter of Berger's conflict of interest, I can speak from firsthand knowledge. I too was at IDA at the time, a colleague of Berger and also working for Rathjens. As division director, Rathjens assigned staff to projects as new ones were authorized and old ones completed. A person reassigned could be said to be "relieved of responsibility" only in the sense that he was given a new responsibility elsewhere in the division. Such changes were commonplace events. It is ridiculous to attach significance to such an occurrence, or suggest that it implies, or could create, a grudge. It is likewise irrelevant that Berger eventually moved on. So did Rathjens. So did I.

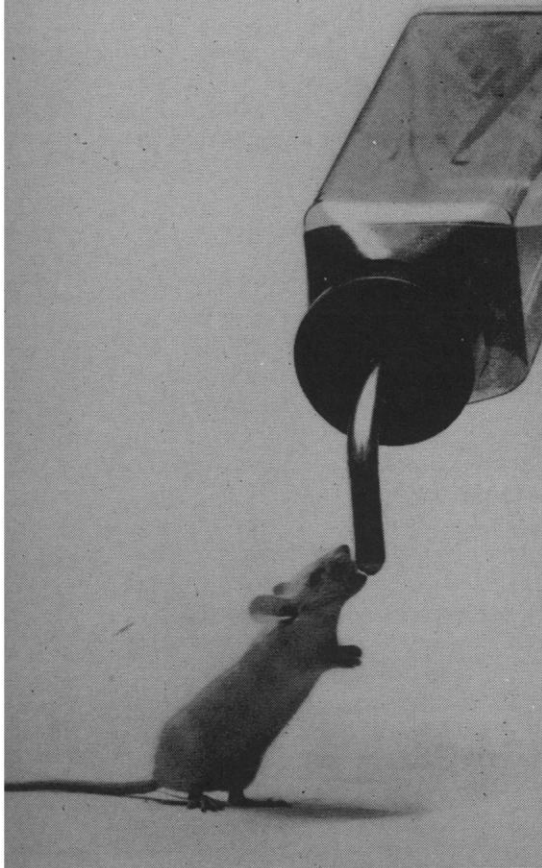
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Highway Travel Subsidies

Constance Holden is much too gentle with Frank Barr's claim that highway travel pays its own way (Letters, 17 Sept., p. 1082). Highway travel is heavily subsidized in a number of sometimes rather subtle ways, but that portion of highway travel that is most immediately competitive with mass transit, rush-hour commuting in private automobiles, is subsidized to a disastrously overwhelming extent.

a mouse-watering offer



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Urban motorists as such make only a minor contribution, if any, to such costs as urban street maintenance and repairs, street cleaning, snow removal, traffic signals, or traffic police; most of these are generally met out of general city revenues. Urban motorists use valuable land for which they pay nothing equivalent to the rent or the property taxes that other occupiers of scarce land pay. The capital invested in the streets and highways they use bears no tax comparable to the property or corporation income taxes that impinge on users of other forms of capital. Indeed, when highways are financed by borrowing, the interest cost is subsidized through its exemption from the federal income tax. Insurance premiums and other payments by motorists fall far short of providing full compensation to victims of accidents. Out of over \$10 billion a year of such damages (an amount roughly equal to the total amount spent on highway construction and maintenance) over \$1 billion is borne in ways unrelated to automobile use, through Blue Cross premiums, employers' sick pay provisions, income-tax abatements, and inadequate compensation to injured pedestrians and other non-motorist parties. It is perhaps stretching it a bit to bring in air pollution, but it has been estimated that the cost of pollution in New York City that is attributable to automobiles amounts to \$400 per year per car.

The big subsidy, however, is to the rush-hour commuter from the other contributors to highway funds. An extra lane or extra facility added primarily to take care of the rush-hour traffic and needed for only, say 18 hours a week will, for every \$1 million per lane mile of cost, at 9 percent for interest, amortization, and maintenance, cost at least 6 cents per car mile, if 1800 cars travel on one lane per hour for 18 hours a week. A 10-mile rush-hour trip over facilities that often cost \$3 million per lane mile and up can thus cost \$2 or more, compared with the 10 cents or thereabouts that would ordinarily be collected in highway-user charges (if no specific tolls are paid). It is no answer to say that the rush-hour transit rider is similarly subsidized by the off-peak transit rider; each rush-hour transit rider can usually find only one off-peak rider onto whom to shift his costs, while the rush-hour motorist can find four or more off-peak motorists in the same area and can also levy tribute on the rural highway user. To provide the transit rider a subsidy per trip comparable to that enjoyed by the peak-hour motorist, and thus enable him to make

a fair and unbiased choice between the two modes, it would be necessary not only to let the transit rider ride free but also to pay him a bonus.

The only sound solution in the long run is to levy adequate specific charges on motorists who use high-cost facilities that are threatened with congestion. Techniques exist for doing this as flexibly and automatically as we are charged for long-distance self-dialed telephone calls; the problem is to persuade the general public of the rationality, equity, and efficiency of such charges. Transit subsidy by itself cannot do the job; indeed if adequate congestion charges are levied for highway use, much, though not all, of the justification for transit subsidy would disappear. But to bring this about it is essential that there be a realization of the magnitude of the subsidy to urban rush-hour automobile commuters.

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An "Abundance of Fish"

Schubel and Pritchard (3 Sept., p. 943) imply that the "abundance of fish" reported in the upper Potomac (Patawamek) estuary by Captain John Smith (1) in 1608 was in fact a massive kill resulting from unknown (but clearly nonindustrial) causes. Is this their own judgment, or has it become established in the biological and ecological literature? It is difficult to believe that Smith and his companions could not differentiate between dead and living fish "swimming in the water."

Of course, it could have been a promotional statement, put in Smith's book to attract settlers and investors. John Cabot, in 1497, had reported that he could catch fish on the Grand Banks by letting down weighted baskets over the ship's side (2).

What seems more probable is that Smith witnessed a spawning run of alewives (since he speaks of "small fish"), or possibly shad or suckers. It is impossible to tell where he encountered this school of fish, and in fact he reports finding them in "divers places" and says they saw small cod as far up the bay as "Riccard cliffs." On his map, these cliffs were some distance north of the Patuxent. (The cod may have been what they "found dead upon the shore".)

Mid-June may be too late for anadro-

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