Letters

We welcome letters from readers, particularly commentaries that reflect upon or take issue with material we have published. The writer's name, affiliation, address, and telephone number should be included. Because of space limitations, letters are subject to abridgment.

'Round and 'Round on Resale Price Maintenance

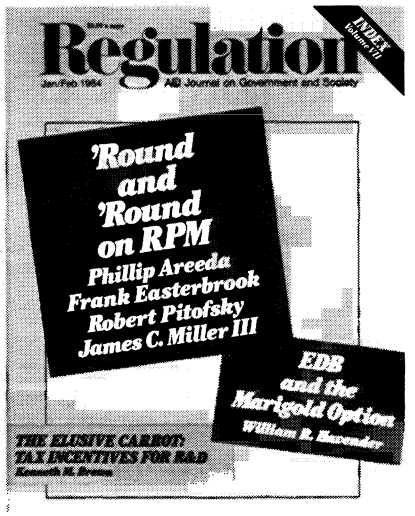
TO THE EDITOR:

Much of the RPM debate centers on the existence or nonexistence of the so-called free rider. This miscreant, according to Frank Easterbrook, is often a "low-service outlet [that] slowly undermines the full-service stores" ("Restricted Dealing Is a Way to Compete," *Regulation*, January/February 1984). Easterbrook warns that a customer "may soak up all that information in the 'full-service' store and then order the [good] from a mail-order outlet." His theory goes on to justify RPM as a way to rid the marketplace of this villain: if higher prices are made mandatory, the free rider cannot undercut the full-service provider.

While Easterbrook's theory has a logical elegance, it has no empirical basis. A recent customer survey detailed in *Computer and Software News* says: "If there is one widely held misconception about the home computer market . . . it is that shoppers exploit the information and sales assistance available at specialty stores before actually buying where the price is right." The *C&SN* survey found that consumers tend to buy in the same type of outlet where they shopped for the computer. This finding was in fact endorsed by a prominent marketing executive of Apple Computer, the firm Easterbrook uses as an example.

Empirical evidence aside, the per se rule makes sound sense: even Easterbrook acknowledges that RPM raises consumer prices, which unquestionably diminishes consumer welfare and adds to inflation. Fixing a retailer's profit margin does not, either logically or practically, lead to better performance.

Nor is RPM needed to accomplish any legitimate goals. Even the advocates of the per se rule can readily admit that it is sometimes important for retailers to provide information to consumers, but manufacturers have many direct ways to accomplish that goal. For example, they may ordinarily give dealers exclusive territories, prohibit them from transshipping goods to unauthorized dealers, and impose various other nonprice restraints on dealers for safety and other service reasons. The only distribution restraint that is never available to a manufacturer under present law is the fixing or maintenance of the resale price by coercion or agreement with distributors. That rule works little hardship.



Easterbrook's theory erroneously equates discounting with poor service. The success of the discount industry, however, is a testimonial that it has offered a desired blend of service and price. It has prospered because it is willing to move a high volume of goods at lower profit margins, while offering those services customers find necessary. Other retailers, opting for lower volume and higher mark-up, have not fared as well in a price-conscious society. The computer survey demonstrates the intelligence of consumers: Consumers who want cachet will shop at a higher-priced store. Consumers who do not wish to purchase frills, carpeted floors, and the attention of well-manicured hovering sales staff will shop elsewhere.

Should antitrust policy be redesigned to protect inefficient merchants against the speculative villain of the marketplace, the "free rider"? I submit not. Instead, the phantom free rider should be returned to *Grimm's Fairy Tales* along with the other hobgoblins of the past.

William D. Coston,
Peabody, Lambert & Meyers,
Counsel to the National
Mass Retailing Institute

TO THE EDITOR:

Since there is reason to believe that RPM provides a fertile ground for horizontal cartelization, the costs of enforcing the antitrust laws (which concern James C. Miller III) might actually increase rather than decrease following its legalization. Thus the current per se rule can be seen as a cost-effective tool in the enforcement of other, more important, aspects of antitrust policy.

The "free-rider" problem is not the sole, or even most important, motivation for reaching RPM agreements. Other things being equal, I believe that manufacturers and dealers both prefer "soft" (nonprice) to "hard" (price) competition. However, it is not obvious that their interests in this respect are, as Frank Easterbrook maintains, "the same as consumers."

Free-riding may seem "unfair," but in only a few cases will it be inefficient or inimical to the consumer's interest. If the full-service dealer (or its supplier) is driven out of business and if consumers really want these services, the survivors will be compelled to spruce up their own service. New and more imaginative entrepreneurs will find a way. One can now buy the same brand of gasoline at the same station with or without the service. RPM may well foreclose more marketing innovations than it creates.

The test for an improvement in consumer welfare is conceptually simple: RPM must lead to more *physical* units being sold (higher sales revenue is not relevant).

Another, perhaps better, policy option was suggested many years ago by Donald Dewey: The manufacturer should be free to exercise as much control as it can over resale price by threats, boycott, and cajolery. The courts, however, should be directed to refrain from enforcing such contracts. This change would remove the state's patronage of price-fixing and relieve the antitrust agencies of a problem not worth solving.

Milton Z. Kafoglis,
Emory University

TO THE EDITOR:

There are few, if any, products for which the possibility of "free riding" justifies the price increase that results from resale price maintenance. Most instances of RPM have involved common consumer goods, such as underwear and boxed candy, for which manufacturers can hardly cite a need for technical sales information. Even for products for which information is important, RPM would force consumers to pay the cost of providing information whether they need it or not. Moreover, it has been my experience that discount sellers of high-tech goods such as stereos are often more knowledgeable than salespeople in full-price department stores.

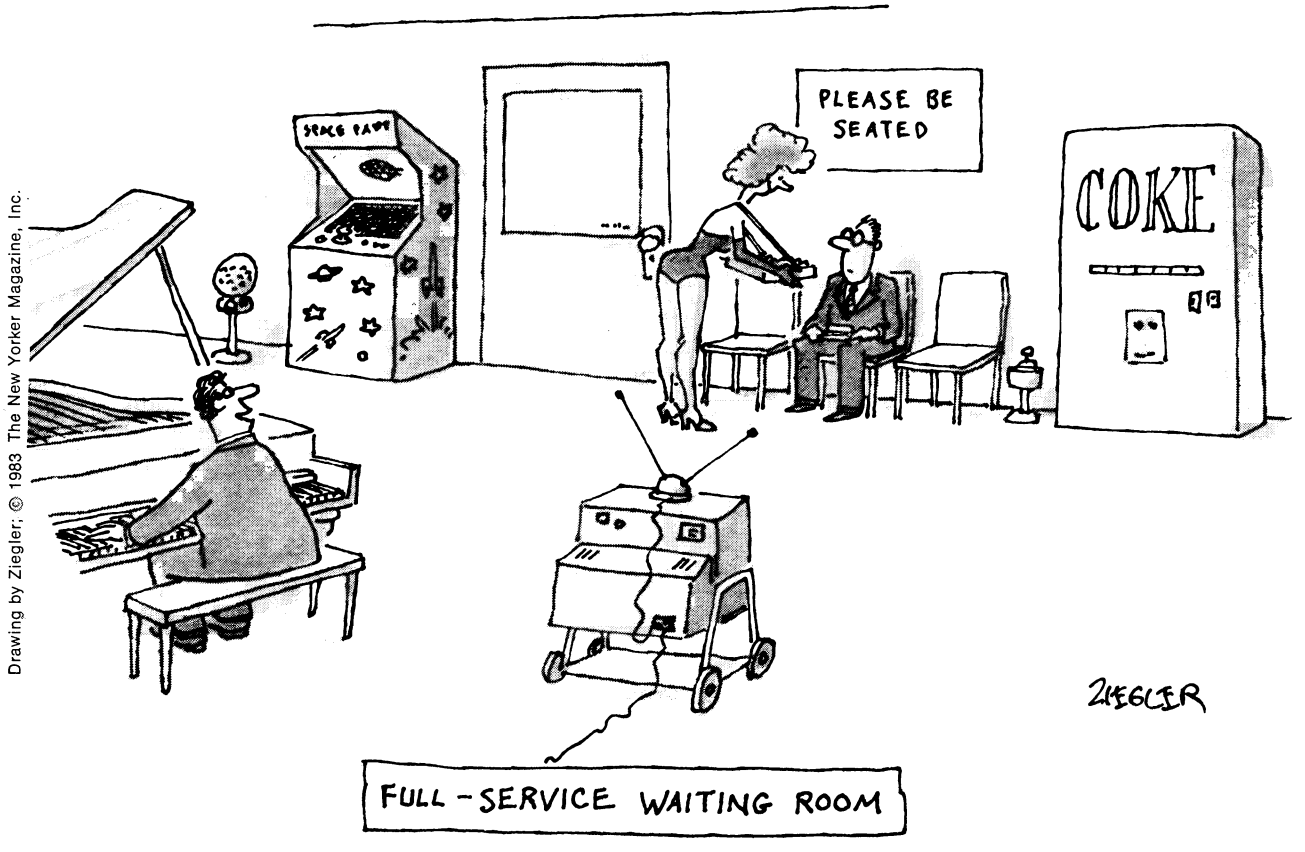
Both Easterbrook and James C. Miller III ("An Analytical Framework") acknowledge that the practice is a tool for forming and maintaining a cartel. Easterbrook responds that cartels have always been violations of the Sherman Act and should be prosecuted as such. As an official charged with state enforcement of the antitrust laws, however, I know how difficult it can be to detect and prove the existence of a cartel. A far more practical approach is to deny competitors this important tool of collusion.

Charles O. Monk, II
Deputy Attorney General,
State of Maryland

TO THE EDITOR:

Robert Pitofsky's defense of the per se illegality of RPM demonstrates again how easy it is to cross the thin line between procompetitive antitrust enforcement and liberal paternalism in antitrust guise. His attack on RPM is premised on a "jeans are jeans" view of merchandising. Yet it is readily apparent that in fashion merchandising the value of a product to consumers reflects not only its physical characteristics but also its perceived desirability or "image." Consumers simply derive more satisfaction, for example, from smartly promoted high-fashion jeans carried in stores like Saks than they do from physically similar unbranded denim garments laid on the table at K-Mart. Indeed, the key to the success of "discount fashion" marketers is not that they offer absolute low prices but rather that they exploit the consumer's desire to obtain image goods at less than their "regular" cost. Discount marketers—if not their intellectual defenders—clearly recognize that the overall selling environment maintained by fashionable distributors, and manufacturer promotion geared to that environment, create product value on which they can trade.

Pitofsky's failure to comprehend —or more probably his visceral unwillingness to acknowledge—this phenomenon wrongly leads him to reject a "free-rider" analysis in



fashion merchandise even while acknowledging its importance in computers and other hard goods. In fact, however, free-rider problems are most severe in the fashion area and hardest for manufacturers to deal with by measures other than RPM. Because "image" value is environmental, and largely reflected in such overhead items as layout, sales force ratios, fashion shows, and catalogues, consumers can readily obtain that value (by browsing, for example) while purchasing from discount outlets. Manufacturers, on the other hand, can neither supply the added value themselves nor contract to pay for it (at least without violating the Robinson-Patman Act's rules on price discrimination). Without RPM, manufacturers resort to selective distribution as a second-best solution. Unfortunately, this invites the burdensome legal tangles over cut-offs, anti-diversion restrictions, and refusals to deal that Phillip Areeda's essay highlights ("The State of the Law," *Regulation*, January/February 1984).

Pitofsky is willing to force this distortion in the name of antitrust because he believes that RPM eliminates competition at the retail level. He ignores the evidence that unless there is a comprehensive retail cartel, uniformity in retail prices simply channels competition into the services desired by consumers (and manufacturers), with retailers' net margins normalized through the competitive process. Similarly, when he contends that RPM lessens price pressure on wholesalers and thus increases their profits, he ignores the question of how a competitive wholesaler can be forced to reduce prices without reducing product quality.

Pitofsky should be free to act on his abhorrence of "image" value by buying all the generic jeans, underwear, and shampoo that the market will produce. His liberal credo, however, should not be enshrined in the antitrust laws to deprive other consumers of the satisfaction they get from high-fashion image merchandise.

Bert W. Rein,
Wiley, Johnson & Rein

FRANK EASTERBROOK responds:

Coston and I do not disagree about the value of discounters. Many consumers value the combination of price and service they provide. May they thrive and multiply! The question is not whether discounters are valuable but whether it should be a crime for some manufacturers to decide that *their* products should be sold in other ways. The principle on which we welcome discounters —let diversity increase, and let the consumer decide—also shows the value of the existence of other ways to sell products. If a manufacturer hits on a combination of product, price, and service that attracts buyers, but at the expense of discounters, what concern is this of the law? Or do discounters claim legal protection from particular choices? Once some manufacturers sell without vertical restraints, consumers have protection from cartels. Once consumers are protected, on what account should the law protect discounters?

I'm not sure what Coston means when he says that the free-rider argument has "no empirical basis." Suppose a perfectly valid survey shows that 90 percent of all computer buyers place their orders with the same full-service outlets where they obtain information and service. It is the other 10 percent we worry about. Most merchants would not take comfort from a survey showing that 90 percent of all customers are not shoplifters.

Coston's argument displays a common fallacy—he confuses average effects with marginal effects. A retailer responds to the productivity of his efforts at the margin. The fact that there are some or many intramarginal customers will not cause the retailer to render the service that the marginal customer wants. The only evidence worth knowing is whether those who use restricted distribution please enough customers to increase their sales. Sometimes they do, and such systems flourish; sometimes they don't, and these manufacturers impose no restrictions (or pay the price of failure). There are no universally right answers here, certainly nothing that supports sending people to jail for choosing a particular method of distribution, as Coston proposes.

The Hazards Of Ethylene Dibromide

TO THE EDITOR:

William Havender raises some of the appropriate issues in his discussion of the Environmental Protection Agency's handling of ethylene dibromide ("EDB and the Marigold Option," *Regulation*, January/February 1984). Unfortunately, he also misses some critical points. Part of the problem with the article can be seen in the title itself. Havender has taken an inadvisable remark by a relatively minor EPA employee, who had nothing to do with the decision-making process on EDB, and used it as a derisory example of an argument supporting a ban on EDB.

Havender states that the human dose of EDB is "far too small to be seen with the unaided eye" and that humans would have to eat "at least 250,000 times as much food every day over a lifetime" to equal the dose of EDB that produced cancer in rats. These arguments speciously ignore legitimate issues of potency and the widely accepted premise that a carcinogenesis bioassay is not intended to simulate human exposure levels.

Certainly, as Havender implies, the EDB situation raises serious questions about how the agency arrives at determinations of risk and risk acceptability. A most important and disconcerting observation is that all of EPA's risk estimates were based on data unsuitable to the estimation methods used and the conclusions reached.

In the study on which EPA based its decision, EDB was administered to rats through a tube inserted directly into the stomach, a technique known as "gavage." Approximately half the tumors ascribed to EDB were localized in the forestomach, which was exposed to high concentrations of the chemical. EDB is an irritant that causes cell death and damage at high concentrations. Current concepts of chemical carcinogenesis suggest that high levels of such local tissue irritation disproportionately increase the incidence of tumors at the site of administration. This fact argues against inferring from the test results the likely risks arising from actual dietary exposure.

Another serious fault with the EDB gavage study was that, because of acute toxicity problems, it was necessary to interrupt the dosing of the animals. EPA attempted to correct for this interruption by using a computational method that treated the study as if there had been no interruption. Such an adjustment leads to an overstatement of the test substance's toxicity. Moreover, the agency's method of estimating risk included a modification that had not undergone peer review by the risk assessment community and that at this date has not been accepted.

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The means by which the EPA approached the matter of substitutes for EDB is also an appropriate subject for criticism, although Havender appears to have reached one of his conclusions on this matter with the same impetuosity which he rightly condemns in the agency. For example, one of his footnotes cites a recent study from the Netherlands from which he concludes that methyl bromide—which EPA proposed as an alternative for one of the uses of EDB—"is indeed a carcinogen, with a potency similar to that of EDB." In fact, when methyl bromide was given to rats by gavage, tumors developed in the forestomachs of the animals, but there were no tumors remote from the site of administration as there had been in the EDB study. Tumor development remote from the site of administration is highly significant in assigning the label "carcinogen" to a substance for purposes of risk estimation. The authors of the article themselves denied the applicability of the study for risk estimation purposes.

EPA is required to evaluate alternatives when it considers banning a pesticide. Unfortunately the agency too often considers the absence of toxicity data for the alternative to be the regulatory equivalent of negative data. I think this is the point Havender was trying to make. It is an appropriate one and has significant implications with respect to the public's exposure to unknown risks.

Of course, public and political pressure can lead any regulatory agency to respond impetuously, and Havender deserves credit for attempting to show some of the fallacies that can result. I am afraid, however, that the problem ultimately lies not with the public or the politicians, but with the scientists (the Pogovian "us"). We are asked to inject the analytic dispassion of science into the political process of regulation. A disturbing trend is developing in the opposite direction—that is, the politics are modifying the science and critical judgment is suffering.

Sorell L. Schwartz,
Department of Pharmacology,
Georgetown University

TO THE EDITOR:

I think your readers should know that Havender "bills" himself as a consultant to the American Council on Science and Health. This industry-backed organization promotes a number of "scientific" claims on behalf of its "clients," such as the claim that formaldehyde, high cholesterol, and junk food are harmless.

Havender's assertion that I recommended using marigolds as a substitute for EDB as a grain fumigant is patently absurd. In fact, I recommended and continue to recommend the use of carbon dioxide as a nontoxic alternative to EDB grain fumigation. Specifically, it has been demonstrated that maintaining a 60 percent carbon dioxide atmosphere in a storage bin at or above 60 degrees Fahrenheit for at least four days affords a cost-effective, nontoxic alternative to chemical treatment.

Hugh B. Kaufman,
Environmental Protection Agency

TO THE EDITOR:

Havender's article does not accurately portray EPA's decision to issue an "emergency" suspension of EDB sold for use in grain fumigation. He suggests that this action was not warranted because potential EDB residues in grain-based consumer goods pose very little short-term risk so that there is no "emergency." In fact, the agency's public statements have emphasized the health risks posed by long-term exposure to EDB, and our actions are designed to eliminate these risks in an orderly manner. EPA agrees that grain products on store shelves are not a significant short-term health hazard and that the risks from EDB do not make these foods unsafe to eat.

The agency's emergency suspensions of EDB grain and soil fumigation products were based on federal pesticide law, which provides for emergency suspension to prevent an "imminent hazard," defined as "a situation which exists when the continued use of a pesticide *during the time required for cancellation proceedings* would be likely to result in unreasonably adverse effects" (emphasis added). The agency estimated that the appeals of our decision to cancel EDB grain fumigants would result in hearings that could take two or more years. We believe that two or more years of continued unrestricted use of EDB in grain products posed unreasonable and unnecessary risks to public health. Similarly, the emergency suspension of soil fumigants was intended to prevent further contamination of ground water, which has occurred in parts of five states.

EPA does not agree with the author's view that the risk of cancer posed by exposure to EDB is insignificant. Given the current limited state of knowledge about the causes of cancer, animal studies are the most realistic indicator available of carcinogenic risk. There is persuasive evidence that EDB is a potent animal carcinogen. EPA recognizes the uncertainties involved in extrapolating from animals to humans and discussed these limitations in the documents supporting each EDB decision. However, we feel it is a mistake to assume that animal risks do not pertain to human beings or that there is a specific threshold dose below which the risk of cancer disappears. This is particularly true in the case of EDB, where all studies, involving several species, both sexes, three routes of administration, and high- and low-dose groups were all demonstrably positive for tumors.

Several other points should be noted. The human exposure studies Havender mentions were reviewed by the agency's Carcinogen Assessment Group and found to be so seriously flawed that they could not be used in regulatory decision making. The EDB atmospheric standard of 130 parts per billion for workers established by the state of California is indeed higher than the dietary exposure that EPA estimated. However, occupational exposure is calculated for a forty-year work life, eight hours per day, five days a week, for a relatively small group of people. EPA's actions were based on the potential risks of lifetime (seventy-year) dietary exposure for the entire U.S. population.

The author attempts to play down the risk posed by EDB because there are other cancer risks that are higher. The logic of this position is elusive, to say the least. In the case of cigarettes, the public can affect its level of exposure in ways other than regulation. Although there are many naturally occurring carcinogens, EDB differs in that it is subject to regulatory action that can eventually eliminate exposure. That there are other hazards is no reason not to take action on this one.

Finally, the author is in error in stating that the agency has not examined the toxicity of the alternatives to EDB. In fact, they were discussed at three separate locations in the September 27, 1983, position document, the same document that Havender says does not discuss the toxicity of the alternative pesticides. He is also in error in saying that

the carcinogenic potential of aluminum phosphide has not been studied. It has been studied, and the results are negative. It is true that methyl bromide and carbon tetrachloride are under review as potential carcinogens, and EPA is requiring additional data on these and the other alternative fumigants in order to assess potential risks. Again, these uncertainties do not warrant failing to act to reduce the more clearly established risks of EDB.

John A. Moore,
Assistant Administrator for
Pesticides and Toxic Substances,
Environmental Protection Agency

WILLIAM HAVENDER responds:

I share Dr. Sorell Schwartz's doubts about the concentration of tumors in the forestomachs of the test rats in the EDB study. Other questions could be raised as well about the study. For instance, the high mortality of the subjects suggests that the maximum tolerated dose was exceeded. But current concepts of cancer regulation recognize no such qualifications, and I wish Schwartz well if he wants to persuade regulators otherwise.

John A. Moore argues that an immediate ban on EDB was justified because the prospect of its continued use during two or more years of hearings was intolerable. This claim cannot be reconciled with the agency's own numbers. Last fall EPA estimated that uncontrolled use of EDB would lead to three extra cases of cancer per thousand exposed persons over a lifetime. It said that this level of risk, while intolerable for the long term, did not warrant an emergency ban. On February 3 of this year, the agency changed its mind and announced that it would ban EDB immediately because of new data on supermarket samples. One might assume that the new data would show the hazard to be greater than EPA had thought last fall. But in fact, EPA had lowered—yes, *lowered!*—its estimate of public hazard by well over tenfold. Only the Red Queen would understand how a huge decline in estimated risk could create an emergency.

In the document of February 8, explaining its decision, EPA said its interim standard was not sufficient because it left adults with an estimated lifetime risk, from two to three years exposure under the interim standard, of somewhere between one cancer case in a million and one in ten million. Most students of regulation consider risks in this range to be negligible. Pepper is thought to pose one hundred to one thousand times as much carcinogenic risk, based on EPA's new numbers. I disagree with Dr. Schwartz that it is "specious" to point out the amounts of EDB people actually ingest; it is central to putting the degree of EDB's risk in perspective. Potency is a legitimate issue, but I spent much of my paper explicitly discussing it.

EPA's reasons for dismissing the human exposure studies are obscure. In particular, the agency described one of the studies as "technically acceptable" and concurred that it showed no "statistically significant cancer increase in exposed workers." The agency's primary objection seemed to be that only 156 workers were studied, but that number was large enough to test EPA's estimate of the potency of EDB. As I noted, EPA did not discuss or even refer to a 1979 study by Ramsay *et al.* that had already investigated this issue and showed that EPA's estimates were at least ten times too high.

Concerning EPA's rejection of the California worker standard, most toxicologists feel that lowering a worker standard by a factor of ten is adequate to allow for sensitive groups in the general population, including the very young, the elderly, the ill, and so on. In this case, the general-public standard was set below the worker standard by a factor of a thousand and now, since EPA revised its estimated exposure levels, by a factor of more than ten thousand.

We next turn to Moore's discussion of how EPA compared the risks of EDB to those of its alternatives, aluminum phosphide, methyl bromide, and carbon disulfide. As he says, EPA's earlier report discussed the toxicity of EDB's primary alternatives. What it failed to mention, as I pointed out, was that it did not know much about the potential *carcinogenic* properties of those alternatives—a crucial omission, since it is precisely EDB's carcinogenic hazard to consumers that prompted the agency to act.

Moore claims that aluminum phosphide has been studied and is not a carcinogen. There is only one test that he might have in mind—one in which animals were given not aluminum phosphide, but rather food that had been pretreated with it and contained trace residues at a level of about one part per million. It is not surprising that such minute doses yielded no tumors; EDB itself would pass such a test. As I pointed out in my article, the relevant consideration is whether EDB's alternatives have been subjected to the "same sort of long-term, high-dose animal cancer tests" as EDB.

Let me reassure Schwartz that in applying EPA's own methodology to methyl bromide I did not wish to endorse that methodology, just to show that by EPA's own criteria methyl bromide is a carcinogen with a potency comparable to EDB. Schwartz is correct that the Dutch study on methyl bromide showed no tumors at distant sites. But the EDB test ran for forty-nine weeks, nearly four times as long as the Dutch test. Since distant tumors result from a process not requiring local irritation, they may take longer than three months to develop. Thus there is no necessary contradiction between the two experiments.

Moore's admission that EPA is still trying to figure out the hazards of EDB's alternatives concedes my main point: that EPA did not know enough about the carcinogenic risks of the alternatives when it imposed the ban. In short, the agency is playing dice with the nation's health.

I am not a consultant to the American Council on Science and Health, but a member of its Board of Scientific Advisors, as are a hundred other scientists across the country, all of whom serve without pay and none of whom are employed by industry. Hugh Kaufman's insinuation that the council accepts industry "clients" and develops scientific positions in conformity with their wishes is simply absurd. If Kaufman has cogent scientific objections to any of the council's positions on consumer issues, he should state forthrightly what they are, not rely on innuendo.

Kaufman correctly states that he was not recommending the use of marigolds as a grain fumigant. As I wrote, he was recommending them to control nematodes in citrus groves instead, a use for which they are equally ill-suited. (The topic arose, however, in a debate in which I pressed Kaufman to come up with safe grain and spot fumigants, and marigolds were the first thing he mentioned.) To be fair, Kaufman did later endorse carbon dioxide as a replacement for EDB. But carbon dioxide has so far not achieved any significant usage by industry, for three good reasons: it is useless for spot fumigation, huge quantities are needed, and it requires airtight storage facilities in order to main-

tain the necessary 60 percent concentration for four days. Since most existing grain storage bins (not to mention milling machines) were not built to be airtight, one must question Kaufman's assurances that carbon dioxide is cost-effective.

Persian Gulf Oil

TO THE EDITOR:

We would like to make a correction in our article "The *Next* Oil Shock—Giving the Market a Chance" (*Regulation,* March/April 1984). In the first full sentence on page 17, the word "world" was inadvertently substituted for "Persian Gulf." The sentence should read: "A 50-percent reduction in *Persian Gulf* oil supplies . . . could cause the world price of oil to double." We regret any confusion this may have caused our readers.

George Horwich
David Leo Weimer

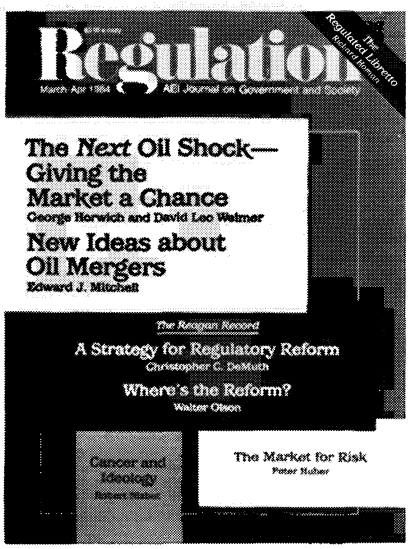
Rail and Truck Reform: Assessing the Record

TO THE EDITOR:

Thomas Gale Moore claims kudos for having predicted the benefits of recent truck and rail deregulation ("Rail and Truck Reform—The Record So Far," *Regulation,* November/December 1983). No one, to my knowledge, is advocating a return to the regulation against which Moore railed many years ago. However, the results of deregulation are not quite as clearcut and universally positive as he suggests.

Moore's analysis relies on the voluntary replies he received when he conducted a survey of shippers. This survey notwithstanding, it serves no useful purpose to pretend that none of the members of the shipping public have been losers. Among the shippers who believe themselves ill-served by the deregulatory events of recent years are the National Small Shipments Traffic Conference and the Drug and Toilet Preparation Traffic Conference. In a joint statement (Ex Parte No. MC-172) they assert: "The three years since the passage of the Motor Carrier Act of 1980 (MCA) have witnessed changes in the regulation of the motor carrier industry that have been, for the most part, devastating to shippers of freight weighing less than 1,000 pounds."

As for the effect on the suppliers of transportation, two points need



to be made. First, the deregulatory movement promised to help, more than anyone else, the allegedly abused independent owner-operators. It seems to have missed this target, however. As Marshall Siegel, executive director of the Independent Truck Owner-Operator's Association, stated in his prepared statement to the House Subcommittee on Surface Transportation on October 25, 1983: "From approximately 300,000 owner-operators in 1979, the number has decreased to approximately 100,000. This drop in the number of owner-operators can only be described as an unmitigated disaster."

The second point is that at least one important group, the general freight common carriers, has taken a much worse beating than Moore indicates. Dr. Irwin Silberman told the same subcommittee that, according to Value Line, this industry group's return on equity dropped from 14.3 percent in 1978 to 9.6 percent in 1982.

I will grant that some groups have benefited from deregulation, but we should not delude ourselves into thinking the millennium has arrived. There are problems that need to be resolved, not ignored, at every perilous step along this uncertain route.

Dabney T. Waring, Jr.,
Motor Common Carrier Associations

THOMAS GALE MOORE responds:

Waring says that "the results of deregulation are not quite as clearcut and universally positive as [I] suggest." My article was intended to indicate the overall impact of rail and motor regulatory reform, not to suggest that all participants, or even all shippers, benefited.

The impact of deregulation on owner-operators is confounded by other things that were going on at the same time. Fuel prices rose sharply from early 1979 through 1981; taxes on trucks were greatly increased in early 1983; a major recession, perhaps the worst in the post-war period, occurred during this period. It is unclear why deregulation should have harmed owner-operators, who were already unregulated. The drop in freight rates should have simply encouraged more freight traffic, increasing the demand for factors of production such as owner-operators. Moreover, deregulation was structured so as to encourage owner-operators to become licensed truckers; to what extent this happened is not yet known. Such incentives, added to the effects of higher fuel prices and taxes and the recession, are more likely to explain any decline in the number of owner-operators.

It is true that the return on equity of general freight common carriers had declined by about one-third by 1982. That figure is less than the comparable decline for the transportation industry as a whole, and represents the situation at the bottom of the recession, a point at which earnings were depressed throughout the economy.

While it may be true that some shippers are paying significantly more now to move their goods than they paid before deregulation, I have no data on these exceptional cases, nor does Waring give any. He cites the statement of the National Small Shipments Traffic Conference and the Drug and Toilet Preparation Traffic Conference as evidence that the changes have been "devastating to shippers of freight weighing less than 1,000 pounds." It is possible that these shippers may have been hurt, but it is also possible that the traffic conferences have included in this "devastating" rise in rates the sharp inflation that occurred during that period. The real question, of course, is what happened to those rates after adjusting for inflation. My information indicates that shippers *of* less-than-truckload lots have gained on average, although not as much as users of truckload service. None of this is to suggest that the millennium has arrived, only that shippers and eventually consumers should benefit from transportation decontrol. ■