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**Informing America: Risk, Disclosure, and the First Amendment**

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WE are in the midst of an extraordinary period of democratization. All over the world, authoritarian regimes are being replaced with systems that aim for democratic self-governance. American aspirations, for a long time so controversial both here and abroad, appear to have emerged triumphant after an era of intense competition. But perhaps the international movement for democratization can help cast light on our own problems and dilemmas as well. Perhaps it can make us rethink some of our own basic practices. So, at least, I will be arguing.

In the last fifty years, national government in America has taken on entirely new dimensions. Massive bureaucracies are entrusted with basic social tasks: promoting economic efficiency, redistributing resources to the needy (and not so needy), increasing employment, reflecting public values, and reducing risks. The reduction of social risks has perhaps been the most intense preoccupation of regulatory government in the last quarter century. An extraordinarily wide range of agencies—including the Food and Drug Administration, the Federal Aviation Administration, the Environmental Protection Agency, the Federal Trade Commission, the Occupational Safety and Health Administration, the Consumer Product Safety Administration—are obliged to protect Americans against the dangers they face in daily life. Here democratic aspirations loom large. Here those aspirations have often been disappointed.

A full account of the reasons would require a long story. But a pervasive problem is the use of rigid, highly bureaucratized \"com-
mand and control regulation, which dictates, at the national level, risk control strategies for hundreds, thousands, or millions of companies in an exceptionally diverse nation. Such regulation is widely inefficient. It wastes billions of dollars by ignoring the enormous differences among plants and industries and among geographical areas. It is not sensible to impose the same technology on industries in diverse areas—regardless of whether they are polluted or clean, populated or empty, or expensive or cheap to clean up.

Equally fundamental, such strategies are deficient from the standpoint of a well-functioning democratic process. They ensure that outcomes will be dictated from the center. They make no effort to benefit from or to increase citizen participation in selecting social outcomes. Often they ensure that citizens and representatives will be focusing their attention not on what levels of risk reduction are appropriate, but instead on isolated extreme cases, or on the largely incidental and nearly impenetrable question of what technologies are now available. They focus on the question of regulatory "means," a focus that increases the power of well-organized private groups by allowing them to press the law in the service of their own parochial ends. In this light, it is no wonder that some observers think our current system is a kind of Madisonian nightmare in which James Madison's vision of deliberative democracy has been transformed into a system of government as a series of interest group deals.3

I think that we should try to start over. In many areas, perhaps the first and most basic problem is that Americans lack the necessary information. With respect to social risks, perhaps the first goal ought to be to ensure genuinely informed choices, rather than to dictate outcomes from Washington. In short, our first line of defense should be educative, rather than regulatory. Thus far, we have tended to pursue the opposite strategy—regulate first, educate only in exceptional cases. Might we reverse our priorities?

Such a reversal would steer a middle course between the 1980s enthusiasm for laissez-faire and the 1970s embrace of regulatory government. Markets do fail; markets for risk are especially unreliable. But we know enough about command-and-control government to understand that regulation is no panacea. It often interferes with individual liberty. It exacts a large toll in terms of economic efficiency, and it is a disaster from the standpoint of democracy.

This Essay comes in four parts. Part I outlines the basic case for informational remedies. Part II describes current initiatives and em-

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pirical findings. Part III qualifies my basic argument, showing ways in which informational remedies may fail. Part IV explains how the arguments suggested here might require a large-scale revision in our understandings about the system of free expression. Through this route, I hope to suggest that the discussion of risk regulation might bear very generally on the problem of information and on the government’s role in providing it.

I. THE CASE FOR INFORMATIONAL REMEDIES

Many Americans are unaware of the risks they face in day-to-day life. Workers often do not know about toxic substances in the workplaces or about the risks that these substances cause. Consumers of ordinary foods are unable to evaluate the dangers posed by fats, calcium, sugar, and salt. People in small communities do not know that toxic waste dumping has occurred. If they know the facts, they do not know the risks. From all this, we can generate a strong argument for informational remedies—on grounds of liberty, economic efficiency, and democracy.

A. Liberty

If people are unaware of the consequences of their choices, they are, to that extent, less free. Workers who choose a certain place of employment do not do so freely if they do not know about the level of risk of getting cancer from exposure to chemicals. Someone who buys a lawn mower has not done so freely if he or she is unaware of the risks of an accident. People who vote on policies or candidates have a lot less liberty if they lack relevant information about the consequences. There is room for disagreement about how much information is too little and about the efficacy of governmental disclosure policies. But it is hard to dispute the proposition that the disclosure of information can increase human liberty under any view of that admittedly controversial term.

B. Economic Efficiency

When information is lacking, there may well be a conventional case of market failure under economic criteria. To be sure, information—like other goods—is a scarce commodity. Perhaps the market has pro-

duced the optimal level of information. The optimal level is not complete information. If the optimal level is produced, there is no market failure, even if there might be a problem under noneconomic criteria. But there are several reasons why the market for information may indeed fail.

First, information is sometimes a public good. Once it is available at all, or to anyone, it may be available to everyone or to many people. People can thus capture the benefits of information without having to pay for its production. Once created, a report discussing the risks posed by carcinogens in the workforce may well benefit employees a great deal—but no individual employee has the right incentives to pay his proportional share for the report. Each employee has the incentive to “free ride” on the efforts of others. The result is that too little information will be forthcoming.

The point applies to materials about shared risks in general. Indeed, the point applies to materials about all matters of shared importance. It suggests that there is a strong case, on economic grounds, for a good deal of governmental interference in the information market.

Second, manufacturers may have poor incentives to provide information about hazardous products. Competition over the extent of danger may decrease total purchases of the product, rather than help any particular manufacturer to obtain greater sales. The phenomenon has sometimes played a role in discouraging competition over safety among manufacturers of tobacco products.

Information asymmetries may produce a “lemons” problem in which dangerous products drive safe ones out of the market. Imagine, for example, that producers know which products are safe but that consumers cannot tell. Safe products may not be able to compete if they sell for a higher price than dangerous ones if safe products are more expensive to produce, and if consumers are unable to tell the difference. In that case, the fact that sellers have information, while buyers do not, will ensure that “lemons”—here dangerous products—will dominate the market. All this suggests that there is frequently a market failure in the provision of information. At least as a presumptive matter, government remedies are an appropriate response. These remedies should ordinarily take the form of governmentally provided information, education campaigns, or disclosure requirements imposed on private firms. Strictly on economic grounds, there is much

5. There are, however, many cases where companies compete over safety and, in that sense, the market often works as an effective check on dangerous products.

to be said in favor of these remedies. They may fortify the operation of the marketplace. They may also be a precondition for free choice, the background assumption of efficient markets.

C. Democracy

Suppose that we wanted to increase the democratic character of contemporary government by promoting citizen participation in and control over governmental processes. A good initial step would be for government to provide enough information for people to make knowledgeable judgments.

Government itself might supply information or require disclosure by private citizens and companies. Consider, for example, the matter of expenditures per lives saved.7 There is now considerable data on the amount of money spent to save lives in various government programs. What emerges is a crazy quilt, and very few people know about it. Some programs pay for themselves in terms of health and related savings; others are extremely hard to defend. At the very least, the American public should be informed of these disparities so that it can evaluate them. Provision of information about the content and expense of regulatory programs should be high on the governmental agenda. Without such information, people cannot evaluate governmental policies. They will respond to sensationalistic anecdotes or misleading stories, rather than analyze the facts.

Consider the question of risk regulation in general. On that question, people are poorly informed.8 For example, they appear not to know that the risks of nuclear power are substantially smaller than the risks posed by other energy sources. They appear not to have a clear sense of the relationships among different risks that are confronted in everyday life. Smoking, for example, produces more than 345,000 deaths per year;9 all occupations produce about 11,000 annual deaths,10 although this number is disputed; and nearly 50,000 deaths come from automobile accidents.11

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7. See Sunstein, Rights Revolution, supra note 2, app. B.
11. Id.
Information of this sort ought to be widely available. The fact that it is not creates a significant failure in government regulation. At least equally important, it presents a large obstacle to citizenship. The problem appears in the private sector, in local government, and at the state and national levels. Workers uninformed of risks are unable to participate usefully in the process of deciding among different possible levels of workplace safety. Local communities, seeking to decide whether to allow toxic waste sites or plants that produce sulfur dioxide, need to be in a position to make informed choices.

A large virtue of a federal system is that it permits different states, having different values, to make different choices about social arrangements. In the context at hand, many decisions about the relations among industrial development, employment, pollution, and risk must be made at the state level. An absence of information is a severe obstacle to this process. The same is true at the national level, where sensational anecdotes displace reasoned analysis of the alternatives.

The most general way to put the point is to note that on the framers' view, America was supposed to be a deliberative democracy in which representatives, accountable to the people, would make decisions through a process of deliberation uncontrolled by private factions. Without better information, neither deliberation nor democracy is possible. Legal reforms designed to remedy the situation are a precondition for democratic politics.

D. The Comparative Advantages of Informational Remedies

Thus far, we have seen that provision of information may well be an improvement over a system of laissez-faire. We can simultaneously promote liberty, efficiency, and democracy with informational remedies, even though these goals are sometimes thought to conflict. Such remedies would also make for large gains as compared with existing regulatory measures, at least in many contexts. As noted, those structures consist of massive command-and-control structures, dictating individual outcomes for hundreds, thousands, and even millions of individuals and groups. How would informational strategies compare with current approaches?

From the standpoint of liberty, those approaches have large drawbacks. Most important, they do not allow individuals to make informed choices among possible options. There are two problems here.

The first is that inadequate information is a serious obstacle to liberty. To the extent that current approaches do not provide information, they disserve this goal.

The second problem is that governmentally prescribed outcomes unnecessarily diminish the role of individual decisions and choices in forming individual lives. At least across a broad range of possibilities, people should be allowed to select their preferred mixes of risk, employment, salary, medical care, and so forth. If their choice is irrational, or if it has large consequences for others, the government is entitled to intervene. But the presumption should be in favor of private choice. Because current regulatory law forecloses private choice in favor of nationally mandated outcomes, it diserves liberty, certainly in comparison to a system in which information is provided.

It is no answer to say that private choices are often constrained by lack of sufficient opportunities or by unjust background conditions. Mandated regulatory systems often seem best because without them, people in difficult conditions may be forced to take risky (but relatively remunerative) jobs, or to purchase less safe but inexpensive products. This is often true; people in difficult conditions will trade off greater risk for other goods they favor, and sometimes the risks will be serious. We should do everything we can to increase opportunities, to prevent or ease difficult conditions, and to diminish injustice. But a regulatory requirement that forecloses the best of a set of bad options is a singularly poor strategy for accomplishing any of these goals. If people are forced to accept higher risks for more money, that is their choice. At least as a general rule, we do them no favors if we require them to have less money and lower risks, if they want (as we are assuming) more money and higher risks. Thus far, then, the provision of information seems far preferable to governmentally mandated outcomes, at least on grounds of liberty.

What of economic efficiency? The sad truth is that existing programs are often extremely inefficient. They cost far more than is necessary to accomplish their salutary goals. They waste billions of dollars. They penalize investment, both in general and (especially perverse) in newer, safer technologies. Precisely because of their uniformity, they force a wide range of actors into the same mold. In this way, too, they diminish economic efficiency, which calls for the investment of social resources in places where they will do the most good. Existing programs are extremely expensive to enforce both be-

cause of the burden they impose on government and because of the high cost of private resources that must be spent on compliance.

On all of these scores, informational approaches have large advantages. They are much more flexible. Because they leave considerable room for freedom of choice, they avoid the inefficiencies of centralized dictation of outcomes. They are generally far less expensive to implement for private industry and to enforce for government. They impose much less of a disincentive to productive investment. Indeed, precisely because they call attention to social risks, they create a good incentive for technological advances in the area of safety. This is a huge advantage over existing systems, where the incentive often runs in the opposite direction.

Along the dimension of democracy, informational strategies have equivalent strengths. Command-and-control regulation has especially serious democratic drawbacks. Usually centralized in Washington, it is far too remote to encourage or benefit from widespread citizen participation. A national decision about the appropriate technological controls on a toxic air pollutant will have only an attenuated connection to democratic processes.

In addition, the current system strongly encourages interest group maneuvering. If Congress is attempting to specify the particular means by which to decrease the pollution brought about by gasoline, it will be especially vulnerable to well-organized private groups. Such groups will attempt, and have often attempted, to promote their own welfare through obtaining pollution control technologies that benefit them. The creation of such incentives is poorly suited to democratically controlled risk reduction. It is highly likely that Congress will end up pleasing the relevant groups with a mechanism that helps the most powerful and well-organized lobbyists.

Finally, and perhaps most important, a command-and-control strategy will have democratic defects precisely to the extent the citizenry is poorly informed. We cannot expect people to participate well, or to participate at all, if they lack information about the relevant problems.

In these circumstances, the provision of information seems to have large democratic advantages over the regulatory status quo. It should promote decentralization, not only by allowing markets to function, but also by eliminating nationally mandated solutions and increasing the power of states and local communities. It should diminish the power of well-organized private groups; interest group maneuvering is certainly possible, but probably less likely, when the government is simply providing or requiring provision of information. And it should
help democratic self-governance precisely to the extent that it ensures that people will be more informed.

II. EMPIRICAL EVIDENCE: WHAT WE'VE DONE, WHAT WE KNOW

Thus far, we have seen that informational strategies have important advantages over both laissez-faire and the current system of regulating social risks. But the discussion has been relatively abstract and a bit speculative. In this section, I turn to some details. Part A discusses current initiatives. Part B outlines the current record.

A. What We've Done

The national government has started a series of steps in the direction of information disclosure. Mandatory messages about risks from cigarette smoking, first set out in 1965 and modified in 1969 and 1984, are, of course, the most familiar example. The FDA has long maintained a policy of requiring risk labels for pharmaceutical products. The EPA has done the same for pesticides and asbestos. Congress requires warnings on products with saccharin. There are numerous other illustrations. Indeed, the effort to provide information counts as one of the most striking, if still incipient, developments in modern regulatory law. Three recent initiatives are especially notable.

In 1983 the Occupational Safety and Health Administration issued a Hazard Communication Standard (HCS) that applied to the manufacturing sector. In 1986 the HCS was made generally applicable. Under the HCS, chemical producers and importers must evaluate the hazards of the chemicals they produce or import; develop technical hazard information for materials safety data sheets and for hazardous substances labels; and, most importantly, transmit this information to users of the relevant substances. All employers must adopt a hazard communication program—including individual training—and inform workers of the relevant risks.

In 1986 Congress enacted an ambitious new statute, the Emergency Planning and Community Right to Know Act (EPCRA). Under this statute, firms and individuals must report to state and local government the quantities of potentially hazardous chemicals that have been stored or released into the environment. Users of such chemicals must

report to their local fire departments about the location, types, and quantities of stored chemicals. They must also give information about potential adverse health effects. A detailed report suggests that EPCRA has had important beneficial effects, spurring innovative, cost-effective programs from the EPA and from state and local government.19

The Food and Drug Administration has also adopted informational strategies. In its most ambitious set of proposals,20 the FDA seeks (a) to compel nutritional labeling on nearly all processed foods, including information relating to cholesterol, saturated fat, calories from fat, and fiber; (b) to require compliance with government specified serving sizes; (c) to compel companies to conform to government definitions of standardized terms, including "reduced," "fresh," "free," and "low"; and (d) to allow health claims only if these (1) are supported by scientific evidence and (2) communicate clear and complete information about such matters as fat and heart disease, fat and cancer, sodium and high blood pressure, and calcium and osteoporosis.

B. What We Know

We now have some empirical information about disclosure of risks. In general, the information suggests that disclosure can be a helpful and cost-effective strategy.21 Workers appear to respond to new information about risks by quitting or demanding higher salaries. Consumers often react well to the disclosure about danger levels. There is every reason to think that governmentally-mandated disclosure, if suitably designed, is an effective mechanism for promoting economic efficiency and other regulatory goals.

Let me add some specifics. The Superfund statute, EPCRA, requires a "toxic release inventory" requiring reports on toxic emissions.22 A 1991 government report shows that the statute has had substantial good effects.23 The inventory played a large informational role in the 1990 Clean Air Act Amendments.24 It has also contributed

23. See G.A.O., supra note 19.
24. Id. at 3.
to legislative efforts in many states, including Oregon and Massachusetts. It has greatly assisted the EPA in its pollution prevention strategy, a leading new weapon in risk regulation, and it has also contributed to the development of cross-environmental media approaches.\textsuperscript{25} Environmental groups and the media have made good use of the inventory, listing the highest polluting companies.\textsuperscript{26} Best of all, the inventory has led major companies to reduce pollution even without legislation.\textsuperscript{27} It appears that more than half of all reporting facilities have made changes as a result of the inventory requirement.\textsuperscript{28}

Evidence of this sort is highly suggestive, but it does not show whether consumers and citizens react rationally to new information. We know disclosure has had some political consequences. It is important also to know how such information is received by ordinary people. Here too, however, we are beginning to accumulate valuable data.

A study of consumer reactions to hazard warnings contains interesting lessons.\textsuperscript{29} In this study, two products were tested: a liquid bleach and a liquid drain opener. Both of these posed short-term risks. People who drink bleach (usually children) experience vomiting and stomach aches, a risk that can be avoided by keeping the products away from children. Bleach mixed with ammonia can produce chloramine gas poisoning, which involves headaches and possible hospitalization. The risk can be avoided by not mixing bleach with ammonia. Drain opener, if accidentally ingested, can lead to severe mouth burns and possibly loss of the esophagus. Spilling the product can produce painful burns and swollen blisters. Rubber gloves can prevent these effects.

In the study, there was a comparison between "no warning" labels and different labels with different warnings. All but one of the latter labels informed consumers of the relevant risks, but some were larger and highlighted the relevant precautions.\textsuperscript{30} One label, called "Test," was designed by labeling experts. The study showed that the regular warning labels generally had significant effects on consumer behavior, but that the "Test" labels produced by far the most substantial consequences. Statistically significant results were shown in almost all groups of people seeing the "Test" label. For example, consumers' willingness to store bleach in childproof locations was increased by

\begin{itemize}
  \item 25. \textit{Id.} at 21.
  \item 27. \textit{Id.} at 3.
  \item 28. \textit{Id.} at 24.
  \item 29. \textit{See} Viscusi et al., \textit{supra} note 21, at 351.
  \item 30. \textit{Id.}
\end{itemize}
thirty-three percent over the "no warning" labels. Once informed of the risks, moreover, consumers showed a desire to pay more to avoid the need for precautions. In general, the relevant information was processed reliably. Thus the authors of the study concluded that the "results presented here provide a more optimistic view of the potential efficacy of informational approaches . . . . Households facing particularly large risks were more likely to undertake protective actions, and differences in the information provided produced the expected effects."

Another study attempted to test workers' responses to labels of potentially hazardous chemicals. There was evidence—suggestive by itself—that workers in dangerous occupations received risk premiums for the dangers they faced. Workers who perceived their jobs as quite dangerous received an annual risk premium of $700 to $800, while workers who thought their jobs were only somewhat risky received a premium of about $100 less. I say that this evidence is suggestive by itself because it shows that workers will demand a higher salary or other compensating benefits when they know that they face workplace dangers.

The study presented each worker with a hazard warning label for a chemical that was not a current part of his job. When presented with the labels, workers generally adjusted their perception of the risk assessment in their jobs. Thus the adjustment shows a rational learning process. Moreover, and crucially, the workers indicated they would require a higher salary, calibrated to the degree of risk that was disclosed. Many workers also indicated they would refuse to continue to work in the now-riskier job. The greater the information, the better the reaction.

There is also a valuable study of the effects of warning labels on diet soft drinks containing saccharin. The data show that after the warning labels were required, there were significant adverse effects on sales. The initial effects were produced primarily by well-educated and high-income households. Soon thereafter there were similar effects on households with young children. Interestingly, there was no such effect on the soft drink purchase habits of the elderly.

Consumer behavior was also significantly modified by a Stanford study designed to promote heart disease education. Three California
communities were selected; two of them were saturated with information about lifestyle changes that would reduce heart disease. A "control town" was not affected. Knowledge increases were significant in the two saturated communities; there were no real changes in the control town. Intriguingly, there were large gains in knowledge in the less-advantaged Spanish-speaking community. Behavioral changes were also shown with respect to reported changes in diets, exercise, and smoking, and also with weight and plasma cholesterol levels. Plasma cholesterol levels changed significantly during the course of the campaign.

Less encouraging is the evidence from educational campaigns designed to increase seat belt use. It seems clear that if everyone used seat belts, motor vehicle deaths could be halved, and billions of dollars could be saved. But efforts to promote seat belt use have produced little results, at least in the United States. (Campaigns in Great Britain and Sweden produced increased usage rates of twenty percent to thirty-five percent.) In its most recent, more sophisticated efforts, the government's campaign showed a negligible 2.6% increase, ranging from 11.3% to 13.9%.

California's Proposition 65, requiring cancer warnings, appears to have been only a mixed success. One study shows that it has actually decreased information by making people think certain products are much more dangerous than they are in fact. Similarly, one study shows that widely used chemical labels had minimal effects because the relevant information was not provided in an effective manner.

On balance, the existing evidence gives reason for cautious optimism at the very least. Certainly much more research is necessary; here the obligatory call for further empirical work is especially important. But what we know is sufficient to suggest that it is fully appropriate to continue to work with information strategies and that such strategies can accomplish their intended purposes in many settings. I discuss possible lessons for reform in Part III.

III. THE LIMITS OF INFORMATION

The picture thus far has been quite optimistic, and I do believe that optimism is on the whole quite warranted. But the case for informational remedies is not unqualified. There are three major problems

35. See id. at 171-78.
36. Id. at 176.
38. See Viscusi et al., supra note 21, at 365.
with such strategies. First, the provision of information can be expensive. Second, the provision of information is sometimes ineffectual or even counterproductive. Third, informational strategies deal inadequately with some external effects of risk.

A. Expense

Consider, for example, the fact that the government estimates the cost of the new FDA rules as no less than $1.7 billion over twenty years. The President of the National Food Processors Association claims that the first-year costs alone will exceed $2 billion. In either case, the cost is high. OSHA's hazard communication policy is estimated to save 200 lives per year—a lot—but at an annual cost of $360 million. The expenditure per life saved is therefore $1.8 million. This is far better than a large number of regulations, and probably an amount well worth spending, but it is more than many agencies spend for life-saving regulations. It is therefore not the case that the OSHA rule stands out as a means of saving lives especially cheaply. There are many life-saving programs that achieve the same goal—saved lives—at lower cost.

When informational strategies are costly, there are two possible responses. The first is to do nothing. If the savings—in terms of health, life, informed choice—are relatively low, costly strategies, even informational ones, make little sense. There will, therefore, be circumstances in which a government remedy for an absence of information is unwarranted. Sometimes laissez-faire is indeed preferable.

When the costs are high, the second possibility is to impose a regulatory strategy rather than to require disclosure. By a regulatory strategy, I mean a mandatory outcome, such as a flat ban on the materials in question, or governmental specification of a particular outcome, as in a mandated maximum level of carcinogens in the workplace. It is surprising but true that sometimes the regulatory strategy will be cheaper because the price of disclosing information—changing packaging and so forth—is so high. This is likely to be the right response when most or all people would respond to the information in the same way. In that case, it is unnecessary to provide information. It is better simply to dictate an outcome that, by hypothesis, is generally preferred. A flat ban is generally appropriate for an especially dangerous

40. The figures come from John F. Morrall, III, A Review of the Record, 10 Regulation 45 (1986).
substance, one that reasonable people would not choose to encounter and that has safer substitutes.

B. Little, No, or Bad Effects

1. How Information Can Go Wrong: An Outline

Even when informational strategies are not prohibitively expensive, they may be ineffectual and thus have low benefits. There are many possible problems here.

(a) Information Processing

A central difficulty is that people have limited ability to process information. They have a notoriously difficult time in thinking about low-probability events. Sometimes they discount such events to zero; sometimes they treat them as much more dangerous than they actually are. If people are told, for example, that a certain substance causes cancer, they may think it is far more dangerous than it is in fact. But some carcinogenic substances pose little risk.

For example, California's Proposition 65, an initiative designed to promote citizen awareness of risk levels, requires warnings for exposure to carcinogens. At first glance, the requirement seems unexceptionable, indeed an important advance. It seems to have all of the advantages discussed in the first sections of this Essay. But Proposition 65 has in some cases been counterproductive or even worse. Consumers appear to think that twelve of every 100 users of a product with the required warning will die from cancer. This estimate exceeds reality by a factor of 1000 or more. The presence of the warning makes people more confused rather than more aware.

We can generalize from the example. With respect to information, less may be more. If information is not provided in a clear and usable form, it may actually make people less knowledgeable than they were before.

(b) Heuristics That Produce Errors

The problem is aggravated by the fact that in evaluating social risks, people tend to use heuristic devices that produce systemic errors. A particular problem here is the "availability heuristic," through which people tend to think an event is probable if they can

41. See generally Judgment and Decision Making: An Interdisciplinary Reader, supra note 8; Viscusi, supra note 10.
42. See Viscusi, supra note 37.
readily bring to mind memories of its occurrence. Thus, for example, an airplane disaster will sometimes be thought relatively probable, whereas a death from diabetes usually will not be. There is a good deal of evidence that people overestimate risks from highly visible or sensational causes but underestimate risks from less dramatic, but more serious, ones.\textsuperscript{43} The availability heuristic may distort informational remedies since people may fit the information to assumptions that are false or skewed.

(c) Motivational Distortions

There is evidence as well of another problem with informational strategies: People often believe themselves to be immune from risks that they acknowledge are significant and real with respect to others.\textsuperscript{44} In one study, for example, ninety-seven percent of those surveyed ranked themselves as average or above average in their ability to avoid both bicycle and power mower accidents.\textsuperscript{45} Disclosure of information may be an unhelpful tool when people do not internalize the new data, thinking that it is really relevant only to other people.

There is also evidence that people feel frustrated and frightened by probabilistic information and greatly prefer a certain answer. The desire to reduce cognitive dissonance—to prevent the world from being confusing and frightening—may prevent people from recognizing that risks are real, even when information is provided.\textsuperscript{46} The same desire may undermine efforts to provide risk information when the truth is that people must inevitably operate under conditions of uncertainty. For similar reasons, people may fail to recognize that conditions are dangerous even in the face of solid information to this effect. Finally, initially held beliefs are not easy to modify, even when new information that undermines those beliefs has been presented.\textsuperscript{47}

(d) Overload

There is also a pervasive risk of information overload, causing consumers to treat a large amount of information as equivalent to no information at all.\textsuperscript{48} If employers are forced to list all risks and to

\begin{itemize}
\item \textsuperscript{43} See Slovic et al., supra note 8.
\item \textsuperscript{44} Id. at 116.
\item \textsuperscript{45} Id.
\item \textsuperscript{46} See George A. Akerlof & William T. Dickens, The Economic Consequences of Cognitive Dissonance, 72 Am. Econ. Rev. 307 (1982).
\item \textsuperscript{47} See Slovic et al., supra note 8, at 118; see also Robert C. Ellickson, Order Without Law: How Neighbors Settle Disputes (1991).
\item \textsuperscript{48} See Jacob Jacoby et al., Corrective Advertising and Affirmative Disclosure Statements: Their Potential for Confusing and Misleading the Consumer, 46 J. MKTO. 61, 70 (1982).
\end{itemize}
explain them in detail, people may absorb little or nothing. If advertisers are required to have detailed disclosure labels, consumers may obtain relatively little information.

(e) Disclosure Requirements that Deter Disclosure

Yet another problem is that companies may respond to disclosure requirements by refusing to provide information at all (if this is an available option). If industry responds to a requirement of evidentiary support for scientific claims with mere "puffing," consumers may have less information than they did to begin with. If advertisers must conduct extensive tests before they are permitted to make claims, they will be given a strong incentive to avoid making claims at all. The result will be the removal from the market of information that is useful overall.

(f) Disclosure and the Disadvantaged

Disclosure strategies may also have disproportionately little effect on people who are undereducated, elderly, or poor. This is to be expected, for information remedies require an ability to read and process. This ability is most pronounced among the well-educated and the wealthy.

(g) Public Good Issues

Finally, information may be an inadequate strategy when greater safety is a public good. Imagine, for example, that the replacement of carcinogen X with safe product Y would benefit all workers simultaneously because all of them would simultaneously be exposed to Y rather than X. Imagine too that each worker is bargaining separately with the employer. In that case, no individual employee may have a sufficient incentive to decrease his demand for wages and other benefits to obtain increased safety. Because the benefits of the new substance are provided to everyone, no individual employee will "pay" enough to obtain them, preferring instead to take a free ride on others. The result will be too little safety on conventional economic criteria. Here a regulatory response is appropriate.

50. See Schucker et al., supra note 33, at 55.
51. See Rose-Ackerman, supra note 4, at 356. For its plausibility, this argument depends on transactions cost barriers to free mobility of labor. If labor were completely mobile, the problem should disappear.
C. Externalities

I can be brief on this point. Sometimes risks are regulated because, when they come to fruition, many people are harmed. When there are adverse "external" effects from risk-generating activity, the solution is not merely the provision of information. If people are told that companies are producing pollution, that is all to the good. But it is often not enough. Regulation should require the company to reduce pollution levels to reduce external harms, either by taking additional care or by reducing the level of polluting activity.

When the risk-generating activity creates harms to people not likely to be in a contractual relation with those who engage in that activity, it is desirable to supplement information strategies with economic incentives designed to produce the optimal activity level. If a company is emitting carbon dioxide into the atmosphere, it is not enough for everyone to know about this fact. Instead the government should impose a tax or emissions fee designed to require the company to "internalize" the cost of its activity. Economic incentives are in this sense a necessary supplement to informational strategies.52

D. Responding to Limitations

All this suggests that there are real limitations to informational strategies. The limitations should, however, be taken merely as qualifications of the broader point, or as providing helpful guidance to those seeking to design effective information requirements. They do not argue fundamentally against reform efforts. While informational strategies are no panacea, they would accomplish considerable good, at least if the possible obstacles are kept firmly in mind.

The first and most important point is that some of these very limitations can be overcome through more and better information. An awareness of the distorting effects of current heuristics can help overcome those effects. General publicity about those effects might therefore supply a corrective. The "availability" heuristic in particular would be overcome through making public and private sector changes in what risks come readily to mind.

Existing studies also suggest that some disclosure remedies will work better than others. Well-tailored programs would minimize the relevant risks by putting the information in its most understandable form. Instead of labeling a substance a "carcinogen," a uniform system of risk regulation could give better awareness of risk levels.53 Ex-

52. See Sunstein, supra note *.
53. See Viscusi et al., supra note 21, at 365.
cessive detail should be avoided; the relevant information should be crisp and simple. Any disclosure requirements should attend to difficulties in processing information.

In this light, the current initiatives are simply a beginning. Broader and more ambitious programs, coordinating the general communication of social risks, are very much in order. It has been suggested that government might eventually develop a "national warnings system" containing a systematized terminology for warnings. Such a system could apply to all contexts and risks and give a uniform sense of risk levels. The existence of a uniform language would make it possible to assess risks across a wide range of social spheres. This step would introduce a healthy degree of coordination and priority-setting in regulation.

Most important of all, such a system would perform a vital educational function, one that could complement the functioning of markets and provide a necessary precondition for democratic choice. We should ultimately aspire to go far beyond risk regulation, to introduce information bearing on democratic affairs in general. The First Amendment is a good place to start.

IV. RECONCEIVING THE FIRST AMENDMENT: A NOTE

We have become accustomed to the view that the First Amendment is a barrier against content-based restrictions on the autonomy of speakers. Our core conception of a free speech violation is a case in which the government silences a speaker because it objects to what the speaker is saying. This conception has accomplished enormous good; it has served as the basic model for a series of dramatic victories for free expression.

Under current conditions, however, this conception may well be inadequate. A system of free expression will be in great jeopardy when there is insufficient information about public affairs. An absence of information may be a product not of direct government controls, but

54. See Viscusi & Magat, supra note 21, at 155, for an illustration of systemized warnings; see also Viscusi, supra note 14, at 149-51.

of free markets in information. If so, the purposes of the First Amendment might be promoted, not undermined, by content-based regulatory initiatives.

Let me be more concrete. Imagine that the consequence of the current system of free speech is a regime in which most Americans do not read or see much in the way of substantive argument about what government is doing or ought to be doing. Imagine too that there is little diversity of view. In such a system, the system of free expression might be dominated by situation comedies, or sensationalistic stories about celebrities, or material that combines sex with violence. Even news programming might feature misleading anecdotes or "horse race" stories rather than substance. Imagine too that access to the media is largely a product of how much other people are willing to pay to hear the relevant voice—and that this system is importantly affected by the desires of advertisers who indirectly, sometimes directly, exercise some control over programming content.

Is it so clear that the First Amendment would be violated by regulatory initiatives designed to increase attention to public affairs and diversity of view? If the arguments set out thus far are persuasive, a democratic correction may well be desirable. If we understood the system of free expression to be concerned with the dissemination of information, especially about public affairs, then such a corrective may well be compatible with, even required by, our First Amendment principles.

At this point it might be suggested that in an era of cable television, the relevant problems disappear. People can always change the channel. Some stations even provide public affairs broadcasting around the clock. Both quality and diversity can be found in light of the dazzling array of options made available by modern technology. Viewers can now choose from a wide range of options. In this light, a concern about the market status quo might seem to amount to a puzzling, even bizarre rejection of freedom of choice. Ought not a foreclosure of expressive options be thought to infringe on freedom of speech?

There are several answers. The first point would reemphasize my earlier suggestion that information has many characteristics of a public good, like national defense or clean air. It is well-known that if

56. The term "free markets" may be misleading if it diverts attention from the fact that markets are created by law and impose legal constraints on who may do what. In the context at hand, for example, people are deprived of access to the media, not by voluntary private acts, but by the civil and criminal law, which prohibit one person from (for example) getting on CBS or ABC to state a particular view.

57. See Daniel A. Farber, Free Speech Without Romance: Public Choice and the First

we rely entirely on markets, we will have insufficient national defense and excessively dirty air. The reason is that both defense and clean air cannot be feasibly provided to one person without simultaneously being provided to many or all. In these circumstances, each person has inadequate incentives to seek, or to pay for, the right level of national defense or clean air. Acting individually, each person will "free ride" on the efforts of others. No producer will have the appropriate incentive for production. The result will be unacceptably low levels of the relevant goods.

Much the same is true of information, especially with respect to public affairs. The benefits of a broad public debate, yielding large quantities of information—through coverage of public issues, disclosure of new facts and perspectives, and diversity of view—accrue simultaneously to many or all people. Once information is provided to one person, or to some of them, it is also provided to many others too, or it can be provided at minimal cost. The production of information for one or some person thus yields large external benefits for other people as well. But—and this is the key point—the market provides no mechanism to ensure that these benefits will be adequately taken into account by those who produce the information, in this case the newspaper and broadcasting industries.

At the same time, the benefits of informing one person—making him or her an effective citizen—are likely to accrue to many other people as well through that person's contribution to multiple conversations and to political processes in general. But the external benefits for each person will not be taken into account in individual consumption choices. Because of the "public good" features of information, no single person has sufficient incentive to "pay" for the benefits he receives. The result will be that the market will produce too little information. Reliance on media markets will therefore have some of the same difficulties as reliance on markets for national defense or environmental protection. For this reason, a regulatory solution, solving the collective action problem, is justified.

Amendment, 105 Harv. L. Rev. 554 (1991). Information is not a pure public good because it is often feasible to provide it to those who pay for it. Copyright and patent laws can guarantee appropriate incentives for its production. But information does have much in common with pure public goods.


59. It might be thought that the distinctive characteristics of the broadcasting market provide at least a partial solution. Because advertisers attempt to ensure large audiences, viewers are commodities as well as or instead of consumers. In these circumstances, it is not as if individuals
So much for the public good issue. The second point is that the absence of scarcity of outlets does not explain why there is a constitutional objection to democratic efforts to increase quality and diversity by ensuring better programming on individual stations. Even with a large number of stations, there is far less quality and diversity than there might be. Perhaps people can generate at least a partial solution by changing the channel. But why should the Constitution be thought to foreclose a collective decision to experiment with new methods for achieving the goals of a system of free expression?

Third, it is important to be extremely cautious about the use, for constitutional and political purposes, of the notion of "consumer sovereignty." Consumer sovereignty is the conventional economic term for the virtues of a free market, in which commodities are allocated through consumer choices and valued through the criterion of private willingness to pay. Those who invoke the notion of free choice in markets are really insisting on consumer sovereignty. But the constitutional conception of "sovereignty"—rooted in the writings of James Madison—is the relevant one. That conception has an altogether different character.

On the Madisonian view, sovereignty entails respect not for private consumption choices but for the considered judgments of a democratic polity. In a democracy, laws frequently reflect those judgments or what might be described as the aspirations of the public as a whole. Those aspirations can and often do call for markets themselves. But they might also diverge from consumption choices—a familiar phenomenon in such areas as environmental law, protection of endangered species, social security, and antidiscrimination law. For present purposes, the most notable point is that information is crucial for the development and expression of democratic aspirations. These are purchasing individual pieces of information. Instead, advertisers are aggregating individual preferences in seeking popular programming and, in that sense, helping to overcome the collective action problem.

The problem with this response is that the advertisers' desire to attract large audiences does not adequately serve the goal of overcoming the public good problem with respect to information about public affairs. A program with a large audience may not be providing information at all; consider most of network television. Advertisers may even be hostile to the provision of the relevant information. Their economic interests often argue against sponsorship of public service or controversial programming, especially if the audience is relatively small, but sometimes even if it is large. The external benefits of widely-diffused information about politics are thus not captured in a broadcasting market. The peculiarities of the broadcasting market overcome a kind of collective action problem by providing a system for aggregating preferences, but they do not overcome the crucial problem.

60. See Sunstein, supra note 55.
aspirations ought not to be disparaged. Democratic liberty should not be identified with "consumer sovereignty." And in the context at hand, the people, acting through their elected representatives, might well decide that democratic liberty, producing greater information, is more valuable than consumer sovereignty.

Finally, private broadcasting selections are a product of preferences that are a result of the broadcasting status quo and are not independent of it. In a world that provides the existing fare, it would be unsurprising if people generally preferred to see what they are accustomed to seeing. They have not been provided with the opportunities of a better system. When this is so, the broadcasting status quo cannot, without circularity, be justified by reference to the preferences. Preferences that have adapted to an objectionable system cannot justify that system. If better options are put more regularly in view, it might well be expected that at least some people would be educated as a result and be more favorably disposed toward programming dealing with public issues in a serious way.

It is tempting but inadequate to object that this is a form of "paternalism" unjustifiably overriding private choice. If private choice is a product of existing options, then the inclusion of better options, through new law, does not displace a freely produced desire. At least this is so if the new law has a democratic pedigree. In such a case, the people, in their capacity as citizens, are attempting to implement aspirations that diverge from their consumption choices.

What strategies might emerge from considerations of this sort? Recall that the overriding goal is to increase public information about public affairs—a goal that calls for substantive attention to public issues and an opportunity to speak for divergent views. There is thus a strong case for public provision of high-quality programming for children or for obligations, imposed by government on broadcasters, to provide such programming. The provision of free media time to candidates would be especially helpful. Such a route would simultaneously provide attention to public affairs and diversity of view and overcome the distorting effects of "soundbites" and financial pressures.

More generally, government might award "points" to license applicants who promise to deal with serious questions or provide public affairs broadcasting even if unsupported by market demand. Or government might require purely commercial stations to provide financial subsidies to public television or to commercial stations that agree to

provide less profitable but higher quality programming. Government itself should surely subsidize such programming or use its ownership rights (over, for example, airports and subways) so as to encourage attention to public issues. It is worthwhile to consider more dramatic approaches as well—such as reductions in advertising on children's television, content review of such television by nonpartisan experts, or guidelines to encourage attention to public issues and diversity of view.

Views of this sort would reconceive the responsibilities of the mass media. They would call for both public and private action, and precisely in the name of the First Amendment. Under this approach, the free speech principle would bear on much more than governmental interferences with the autonomy of speakers with current ownership rights. It would also make it necessary for us to assess the connection between the existing free speech "market" and the informational and citizenship goals of a system of free expression. It would draw on existing knowledge of the limits of current "markets" in information to support new free speech initiatives. Above all, it would refuse to identity laissez-faire in speech with the dictates of the First Amendment.

V. CONCLUSION

Our current regulatory system is too rigid and too centralized; it provides too little basis for improving either private decisions in the marketplace or public decisions in the ballot box. Instead of mandating particular solutions or leaving people to the vicissitudes of the market, government should, as its first line of defense, require disclosure of information or provide information on its own. A step of this sort could revolutionize the activities of many government agencies, including the EPA, the FDA, the CPSC, and OSHA. Eventually it could help produce a "national warnings system" that provides clear and concise information about the risks faced in day-to-day life.

I have spent most of my time on informational strategies with respect to social risks, but the analysis may extend much further. It suggests reasons to question some of the received wisdom with respect to free speech. The defects in information markets may well call for governmental improvements designed to promote attention to public issues and to generate a diversity of views.

The broader point is that the movements for democratization throughout the world—in South Africa and Russia, Romania and China, Israel and Kuwait, Bulgaria and Ukraine—are far from irrelevant to current reform efforts in the United States. The massive regulatory state, an outgrowth of the twentieth century, has accomplished considerable good, but it has also severely compromised the American
commitment to democratic self-governance. There could be no better first step, by way of reform, than to embark on the project of substituting, for our inflexible and interest-prone current controls, a system designed to ensure that in their capacity as consumers, workers, and voters, Americans are well-informed.