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Citation: 3 Sup. Ct. Econ. Rev. 239 1993

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3 Sup. Ct. Econ. Rev. 239 1993
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Cigarette Warnings: The Perils of the *Cipollone* Decision

W. Kip Viscusi*

In Cipollone v Liggett Group, Inc., a splintered Court concluded that cigarette smokers who are injured through their consumption of tobacco may bring some state law tort claims against the manufacturers of the cigarettes. Other claims, however, are preempted by federal legislation requiring cigarette packages and advertising to bear warning labels, the specific wording of which is dictated by statute. After a detailed examination of the economics of hazard warning systems, Professor Viscusi argues that the most important economic issues in the Cipollone case were correctly resolved in Justice Stevens' plurality opinion, which contained little overt economic reasoning. The other two opinions in the case, which contained more economic analysis than the Stevens opinion, reached conclusions that were economically less sound with respect to the most important warnings issues. Professor Viscusi concludes that the result in Cipollone is largely good news for consumers, and that it should serve as a warning against judging the economic effects of judicial decisions by the degree to which they seem to rely on economic reasoning.

I. INTRODUCTION

Cigarettes have long been among the most prominent of risky products. The hazards of smoking have been an object of public debate for decades, if not for centuries. The first warning language specifically mandated by Congress for consumer products was for cigarettes, and the experience with cigarette warnings has provided a natural experi-

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ment that has served as a model in a variety of other contexts, such as alcoholic beverages. In the context of tort liability, cigarettes have assumed a conspicuous role not only because of the enormous stakes involved in cigarette litigation, but also because the risks are so well known.¹ In its Restatement (Second) of Torts, the American Law Institute used the risks of cigarettes as a prime example of familiar hazards:

The article sold must be dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics. Good whiskey is not unreasonably dangerous merely because it will make some people drunk, and is especially dangerous to alcoholics; but bad whiskey, containing a dangerous amount of fusel oil, is unreasonably dangerous. Good tobacco is not unreasonably dangerous merely because the effects of smoking may be harmful; but tobacco containing something like marijuana may be unreasonably dangerous.²

Notwithstanding the often-voiced belief that the risks of smoking are a subject of common knowledge within the American community, our legal system has not yet clearly determined how those risks are to be allocated. An important step, however, was recently taken by the Supreme Court in *Cipollone v Liggett Group, Inc.*³ Because this case will have widespread ramifications not only for cigarettes but for warnings policies more generally, the economics of the decision are worth examining and evaluating in some detail.

By the time it reached the Supreme Court, the *Cipollone* case had generated a very complex procedural history. For our purposes here, only a few aspects of that history are important. After a New Jersey

¹ In addition to the discussion of cigarettes in the *Restatement (Second) of Torts* (ALI, 1965), and in *Enterprise Responsibility for Personal Injury-Reporter's Study* (ALI, 1991) ("*ALI Reporter's Study*"), a variety of articles have been concerned with the legal status of cigarettes. See, for example, Paul G. Crist and John M. Majoras, *The "New" Wave in Smoking and Health Litigation-Is Anything Really So New?*, 54 Tenn L Rev 551 (1987); Alan Schwartz, *Views of Addiction and the Duty to Warn*, 75 Va L Rev 509 (1989) ("*Schwartz, Views of Addiction*"). For a broader economic assessment of the cigarette market, see Robert Tollison and Richard E. Wagner, *Smoking and the State: Social Costs, Rent Seeking, and Public Policy* (D.C. Heath, 1988).

² *Restatement (Second) of Torts* § 402A comment i at 352 (cited in note 1).

³ 112 S Ct 2608 (1992).

woman developed lung cancer, she and her husband brought suit under state law against the manufacturers of the cigarettes that she had smoked for several decades. This law suit, which was pursued by the woman's survivors after she died, sought to hold the manufacturers liable in damages for the effects of the cancer that was allegedly caused by the cigarettes. The plaintiffs advanced several legal theories, all of which were based on state law, and most of which were variations on the claim that the defendants had concealed or misrepresented information about the dangers of cigarette smoking. The manufacturers contended, as one of their defenses, that their conduct after 1965 was insulated from liability by the Federal Cigarette Labeling and Advertising Act, enacted in 1965, and its successor, the Public Health Cigarette Smoking Act of 1969. The defendants argued that these federal statutes, which required specific warning labels on cigarette packages and advertisements, defined the extent of their legal duties to provide information about the risks of smoking and preempted any state-law claims that presupposed a duty to take steps other than those required by the federal statutes. The Supreme Court accepted the case in order to consider the preemptive effect of the federal statutes on the following state-law claims: that the manufacturers breached express warranties contained in their cigarette advertising; that they tortiously failed to warn consumers about the hazards of smoking; that they fraudulently misrepresented the hazards of smoking to consumers; and that they conspired to deprive consumers of relevant scientific information about the effects of smoking.

The Supreme Court was unable to produce a majority opinion resolving all the issues that were raised, and the future of the law of preemption was left wrapped in some obscurity. This outcome, which may be of considerable concern to the legal profession, is not the focus of my interest here. Instead, I will examine the three opinions offered by the Justices with an eye to evaluating their soundness as a matter of economics. The results of this examination are quite startling. The opinion for three Justices written by Justice Blackmun and the opinion for two Justices written by Justice Scalia both rely explicitly on economic reasoning. The two opinions reach diametrically opposed conclusions, *neither* of which seems to be economically sound on the economically most important issue in the case. Justice Stevens' opinion for four Justices almost completely eschews economic reasoning, yet

comes closest to an economically sound result. This is particularly striking inasmuch as the Stevens opinion is sharply criticized both by Scalia and by Blackmun for its *legally* confusing results, a charge that Stevens does not seriously attempt to rebut.

This curious outcome leads me to suspect that the Stevens plurality may have been guided by economic principles to a greater extent than it was willing to acknowledge, and that it chose to sacrifice some legal clarity in the interest of those principles. Because the Stevens group was both the largest faction among the Justices and the "intermediate" position legally, Stevens' approach may be the one most likely to be followed in the future. If so, that is probably good news from the standpoint of economic efficiency, however frustrating it may be to those lawyers who must try to make sense out of the law of preemption. If my suspicions are correct, the *Cipollone* case should also serve to warn us against assuming that the efficiency of judicial decisions can reliably be inferred from the nature of the economic reasoning that appears (or fails to appear) on the *surface* of a judicial opinion.

II. THE ECONOMICS OF WARNINGS AND INFORMED CHOICE

A. The Analytics of Risky Consumer Decisions

An instructive starting point for assessing the role of the two cigarette warnings statutes in relationship to the producer's obligations is to address generally the nature of consumer decisions in situations in which there are risks and hazard warnings. The appropriate economic question is whether the smoker derives a higher expected utility from smoking behavior based on an assessment of the risks before the injury has occurred. Certainly, if the smoker is injured *ex post* there will typically he regret over the smoking decision. However, the appropriate reference point in economic contexts involving lotteries such as this is to ascertain whether accurate prior risk information, as opposed to knowledge that you yourself will suffer an injury, would affect the decision to purchase the risky product.⁴

⁴ The thousands of investors who purchased corporate stock this week and who will observe price declines will regret their decisions *ex post*, but this does not mean that at the time these investments were made that they were necessarily incorrect. Similarly, the investments that are profitable were not necessarily good investments, but may simply be investments that benefitted from fortuitous circumstances.

For concreteness, assume that the consumer has an income level Y , which will yield a welfare level, which I will call utility $W(Y)$, if the consumer does not purchase cigarettes. The consumer can purchase cigarettes at a price P , and doing so will yield a utility $U(Y-P)$ if he remains healthy and $V(Y-P)$ if he does not. For simplicity, we will compress the potential health ramifications of cigarettes into a single health state (ill health) and into a single period. The true risks of ill health posed by cigarettes are π , and the probability that the smoker will remain healthy is $(1-\pi)$. As a result, the expected utility conferred by smoking is $(1-\pi)U(Y-P) + \pi V(Y-P)$. It will never be desirable to smoke unless the utility conferred by smoking when healthy exceeds the utility of not smoking at all.

It is useful to establish a reference point for the risk-utility test.⁵ A product passes an efficiency test if the expected utility based on the true risks π exceed the utility conferred by not purchasing cigarettes at all. This condition is given by

$$(1-\pi) U(Y-P) + \pi V(Y-P) > W(Y). \quad (1)$$

The risk levels and the payoffs here pertain only to the smoker and not to others in society who are affected by smoking. One could envision broader kinds of efficiency tests involving second-hand smoke, fire-related injuries to others, and genetic damage from smoking. However, these kinds of broader tests involve complex judgments as to the overall social benefits and costs of smoking. For example, smokers cost society money in terms of higher health insurance benefits, but save society money in terms of lower pension costs and social security costs.⁶ Cigarette production also has complex effects on international trade and employment. These kinds of broader societal issues are best addressed through government regulation and national smoking poli-

⁵ Implicit in any analysis is that the risk-utility test should serve as the context for assessing the desirability of warnings. For elaboration of my views on the role of this test, see W. Kip Viscusi, *Reforming Products Liability* (Harvard, 1991) ("Viscusi, *Reforming Products Liability*"); *ALI Reporter's Study* (cited in note 1).

⁶ See Willard G. Manning, et al, *The Costs of Poor Health Habits* (Harvard, 1991).

cies more generally than through tort litigation.⁷ As a result, from the standpoint of this paper I will focus only on the risks to the consumer and whether the purchaser of the product is making a sound decision. This is also the focus of the *Cipollone* case.

B. Accuracy of Risk Perceptions

The actual decision made by the smoker is not based on the true probabilities π , but instead is governed by the risks as perceived by the potential smoker. Thus, what is pertinent is not the value of π but rather the perceived risk q where

$$q = Q(\text{warnings, other company risk communication, other company actions, public information, private knowledge}). \quad (2)$$

As equation 2 indicates, individuals' subjective risk perceptions reflect a variety of influences, many of which may be correlated with the actual risk of the product π . The sources of information that can contribute to subjective probabilistic judgments include the hazard warnings; other risk information such as that in advertising; other company actions that might affect risk perceptions such as non-risk information in advertising; public information provided about cigarettes; and private knowledge that the smoker might obtain either from his own experiences or those of others. The general task of warnings is typically to provide new information in a convincing manner. Firms should not be responsible for performing a general educational function. For example, manufacturers of cars need not inform consumers how to drive or indicate that driving is dangerous. Rather, the only obligation of the manufacturer is to convey information with respect to risks that consumers are unlikely to be aware of based on personal experience or general public knowledge. Idiosyncratic information about a product would be one type of risk information that would be useful.

This formulation abstracts from the dynamics associated with smoking behavior. Individuals' risk perceptions may change over time. The attractiveness of smoking to them may also diminish, leading to a desire to quit. However, as many observers have noted, quitting ciga-

⁷ For further advocacy of this view, see Viscusi, *Reforming Products Liability* (cited in note 5), in which I detail quite explicitly different levels of risk-utility tests that can be taken with respect to the product's effect on the consumer and on society at large.

rettes is often costly, an effect that some have labeled an issue of "addiction."⁸

In assessing the welfare loss associated with costs of altering smoking behavior, the accuracy of probabilistic judgments plays a central role. If at the time individuals began smoking they are aware of the risk, the consequences of smoking for their well-being, and their future attitude toward smoking, then even if they would like to quit smoking subsequently, the initial smoking decision may have been efficient. For example, suppose Hillary begins smoking at age 21 understanding the risks and anticipating that when she reaches 30 she would like to quit smoking, but will find it difficult to do so. The efficiency properties of this economic outcome are much more attractive if Hillary anticipated this course of events at the time she began smoking than if she did not anticipate the risks or her subsequent desire to give up smoking.

A primary matter of concern will be whether the level of risk perceptions reflected in an individual's subjective risk assessment q is sufficient, when compared to the true risk π . Firms that supply consumer products will not necessarily have met their appropriate obligations by providing information about the general category of risks. Indicating that lung cancer or heart disease is a potential consequence of smoking does not convey the significance of the risk. The company's responsibility goes beyond providing information that will lead consumers to have an assessed probability q that is nonzero. This distinction is important because the warnings themselves provide no explicit probabilistic information concerning the level of the risk. This is true not only of cigarettes but virtually all other mass-marketed products as well.⁹

⁸ For diverging viewpoints on the addiction issue, see Cass R. Sunstein, *After the Rights Revolution* (Harvard, 1990); Schwartz, *Views of Addiction* (cited in note 1); and Thomas C. Schelling, *Choice and Consequence* (Harvard, 1984).

⁹ One exception is that in some rare cases of pharmaceutical products, the hazard warning includes explicit information concerning the frequency of adverse reactions and other adverse repercussions of prescription drugs. However, in this case the audience for the warning is the learned intermediary, the physician, rather than the patient. In the absence of providing background training on the processing of probabilistic information, it may be overly optimistic to assume that detailed quantitative risk information can be conveyed in a manner that will be processed reliably.

Though the framework has been constructed in terms of a single health outcome, ill health, it could be generalized to capture a multitude of health outcomes, each of which has a separate risk perception and an associated true probability. Clearly it may not be the case that individuals correctly perceive all of the adverse consequences of smoking, including lung cancer, throat cancer, stroke, heart disease, emphysema, and a wide range of other effects. What is sufficient is that on balance the assessment of the risks is sufficient to discourage smoking to the same extent as would accurate risk perceptions. Let there be $n-1$ categories of risks, each of which has an associated probability π_i and a utility function for ill health of $V_i(Y-P)$. There could be a separate utility function for each health outcome. The question of whether smoking behavior is efficient in a tax-free world consequently reduces to whether:

$$\left(1 - \sum_{i=2}^n \pi_i\right) U(Y-P) + \sum_{i=2}^n \pi_i V_i(Y-P) < W(Y). \quad (3)$$

For ease of exposition, the subsequent discussion will be in terms of the stylized model that focuses on the two-outcome situation of good health and ill health.

C. Market-Based Tests

Even if individuals make a mistake and err in their smoking decision, the welfare losses may be small. Consumers may suffer very little welfare loss if they do not underestimate the probability of harm substantially. For individuals who underestimate the risks of smoking by a considerable amount, the potential for welfare loss is much greater. Since cigarettes are marketed to millions of consumers, some of whom are aware of the risks and some of whom are not, how can one judge whether the product meets the risk-utility test? Let us begin with a situation in which there are no impediments to consumer decisions. Taxes are zero, and subjective risk assessments equal the true probabilities. Let S be the amount the individual needs to be made indifferent between smoking and not smoking, or

$$(1-\pi) U(Y+S-P) + \pi V(Y+S-P) = W(Y). \quad (4)$$

For individuals for whom smoking is a rational act, the value of S will be zero or negative. If, however, it is not efficient for the individual to

smoke, the value of S will be positive, which indicates that the individual would have to be compensated to bear the true risks of smoking. Thus, S measures the absolute amount of the welfare loss or gain associated with smoking decisions.

Several observations are worth making. First, the size of the loss matters. If individuals are making small errors with a low value of S , then societal concern with this outcome will be less than if the magnitude of these loss values is large.

Second, and most important, companies cannot sell their products to representative, identifiable consumers. More specifically, companies cannot distinguish those consumers who purchase their products because they underperceive the risks and those who do so because they place a high value on the smoking experience. The fundamental liability issue is whether on balance removing the product from the market, redesigning it, or mandating particular warnings will raise overall consumer welfare. In particular, when the S values given by equation 4 are aggregated across all consumers, not simply the segment who are making an error in purchasing the product, will banning the product, altering the product, or mandating warnings for it raise consumer welfare? In a two-consumer situation in which one consumer rationally smokes (with a negative value of S) and another consumer is making an error by smoking (with a positive value of S), cigarettes are nevertheless a desirable economic product if the value of S that is negative for the efficient smoker has a larger absolute magnitude than the positive value of S for the misinformed smoker.

In general it will not be feasible to convey fully accurate risk information to all parties and to make q equal π for all consumers. Hazard warnings do not convey some true probability π of the product risk. Instead, the typical warnings function to provide partial risk information, to alert consumers to the presence of a hazard, and generally to raise the level of risk perceptions associated with the product. Even with an effective warning some consumers may underestimate the risk, some may have accurate risk perceptions, and some may overestimate the risk. To judge whether more stringent warnings are worthwhile, one must ascertain whether the efficiency gains from increasing the value of the risk perception q , as measured by the change in the values of S

for all consumers, is sufficient to warrant the expenditure to provide the information.

An important application of this principle is to the provision of warnings to particular segments of the product user group. High risk users who are particularly sensitive to certain chemicals and groups who have difficulty in processing warnings information, such as non-English speaking product users, may require separate warnings programs or additional warnings efforts targeted to meet their special needs. Are such efforts worthwhile?

The appropriate test should be market-based. There will be some net gain in welfare to the group receiving the targeted warnings, but there may be a loss to other groups. Provision of additional risk information for sensitive population subgroups may, for example, generate problems of label clutter and information overload for the groups who will not profit from these additional warnings. The appropriate economic test is whether the net welfare gain measured by aggregating the incremental effect of the warnings change or the change in S values in equation 4 exceeds the additional costs of information provision. Risk-utility tests for adequacy of warnings consequently must be undertaken using a market-based orientation.

D. Cigarette Excise Taxes

There is an additional complication as well because consumer demand for cigarettes is influenced not only by individuals' risk perceptions but also by taxes specifically linked to the product.¹⁰ Cigarette taxes, which will be designated by T , constitute 30.8 percent of the retail price of cigarettes, and the Clinton administration is considering seeking a quantum leap in their level.¹¹ Taxes consequently play a con-

¹⁰ Since consumers will have a perceived probability q associated with each of these adverse outcomes, the condition for the product to be attractive to the consumer if there are cigarette excise taxes is given by

$$(1 - \sum_{i=2}^n q_i)U(Y-P-T) + \sum_{i=2}^n q_i V_i(Y-P-T) > W(Y).$$

¹¹ These retail tax percentages are for 1985 in order to establish comparability with the assessed economic implications of the role of taxes to be discussed below. For discussion of this tax information, see W. Kip Viscusi, *Smoking: Making the Risky Decision* 101-09 (Oxford, 1992) ("Viscusi, *Smoking*"), especially the discussion at 109.

siderable role in influencing the attractiveness of this product. Consumers will decide to smoke if their expected utility from smoking net of taxes, cigarette prices, and health losses is greater than their utility when not smoking, or

$$(1-q)U(Y-P-T) + qV(Y-P-T) > W(Y). \quad (5)$$

This requirement differs from the efficiency test given in equation 1 above. First, the pertinent probabilities from the standpoint of the consumer are the probabilities perceived to be the risks associated with cigarettes, and these may not coincide with the true probabilities involved. It is this potential difference in the probabilities that establishes both the potential role for hazard warnings as well as the rationale for tort liability in product safety contexts. Otherwise, market outcomes would be efficient.

The second departure from equation 1 is that the utility functions in each smoking state include a tax component. The role of these taxes—often called “sin taxes”—is in many respects similar to that of effluent charges in pollution contexts. By imposing taxes on a polluter, the government can achieve the same kinds of environmental quality improvement as can be achieved through rigid specification standards. In the cigarette context, taxes that are proportional to the number of cigarettes smoked can be viewed as a mechanism for providing incentives to decrease smoking that will discourage smoking just as would higher risk perceptions. There have also been suggestions to refine the cigarette tax to include recognition of the tar and nicotine content of cigarettes.¹²

The extent to which excise taxes should be recognized in this analysis depends both on one’s reference point and the nature of the market failure. Suppose that individual smoking decisions are efficient from the standpoint of the smoker, but that second-hand smoke generates diseases not incorporated in the smoker’s decision. The result is that smokers will consume too many cigarettes, and too many people will smoke. A cigarette excise tax can reduce smoking levels to a socially optimal amount.¹³

¹² See Jeffrey E. Harris, *Taxing Tar and Nicotine*, 70 *Am Econ Rev* 300 (1980).

¹³ Ideally, one would, however, like to vary the tax depending on the location of the smoking activity, the number of exposed individuals, and the smoker’s concern with their own welfare.

If, however, the market failure stems from inadequate risk perceptions, some people who should not smoke given the risks will do so. A cigarette excise tax can prevent these people from smoking so that only those who would have met equation 1 will smoke. However, the people who choose to smoke in the presence of the tax may experience a drop in their expected welfare based on the true probabilities since they must pay the tax.¹⁴ If the liability reference point is that the smoker's expected welfare must be raised by the product, *net* of the taxes paid and given the true probabilities, the ability of excise taxes to promote sound outcomes is more limited.

Moreover, one can never justify inclusion of general sales taxes in such an approach. The main difference is that a sales tax affects the attractiveness of purchasing the risky product and the attractiveness of alternative consumer expenditures reflected in $W(Y)$. The influence of a broadly-based sales tax typically will not distort the comparison between expenditures on cigarettes and expenditures on other goods.¹⁵

The excise taxes on cigarettes discourage smoking just as would a substantial increase in risk perception.¹⁶ Using as a metric the lung cancer risk perception equivalent of excise taxes, one finds the following. For consumer groups who are relatively insensitive to the price, excise taxes discourage smoking by roughly the same extent as would a perceived risk of lung cancer from smoking of .17. For the more price-sensitive groups, such as teenagers, excise taxes function in the same manner as would endowing them with a lung cancer risk perception of .51. Thus, even if individuals on their own set the perceived risks of smoking equal to 0, excise taxes would discourage smoking by roughly the same extent as would believing the chance of getting lung cancer from smoking range from 1 in 5 to 1 in 2, depending on the particular consumer group. Excise taxes consequently have a powerful

¹⁴ Thus, one may have

$$(1-\pi)U(Y-P-T) + \pi V(Y-P-T) < W(Y)$$

and

$$(1-q)U(Y-P-T) + qV(Y-P-T) > W(Y).$$

¹⁵ There may be some minor differences to the extent that the price elasticity of cigarettes differs from the price elasticity of other goods, but these are likely to be inconsequential in most situations. Moreover, if there are differences of this type, it is unclear whether they should be taken into account.

¹⁶ See Viscusi, *Smoking* 101-09 (cited in note 11).

effect on the smoking decision and must necessarily condition any judgments with respect to the social efficiency of additional mechanisms for discouraging smoking.

Excise taxes were high not only in the mid-1980s—the time period of the calculations above—but also during the 1960s, which is the period in which the two labeling acts considered in the *Cipollone* decision were promulgated. In 1965 and 1969, cigarette taxes constituted 51.4 and 47.7 percent of the retail price of cigarettes respectively.¹⁷

III. HAZARD WARNINGS AND RISK BELIEFS

A. Warnings Objectives

If taxes are excluded from the analysis, the overall objective of hazard warnings and other interventions is to raise the value of q to equal π . Companies will, of course, not be penalized by the courts if they provide excessively alarmist warnings leading to $q > \pi$, so that there is an asymmetry in how the divergences from accurate perceptions are addressed. The result is that the courts create incentives for over-warning.

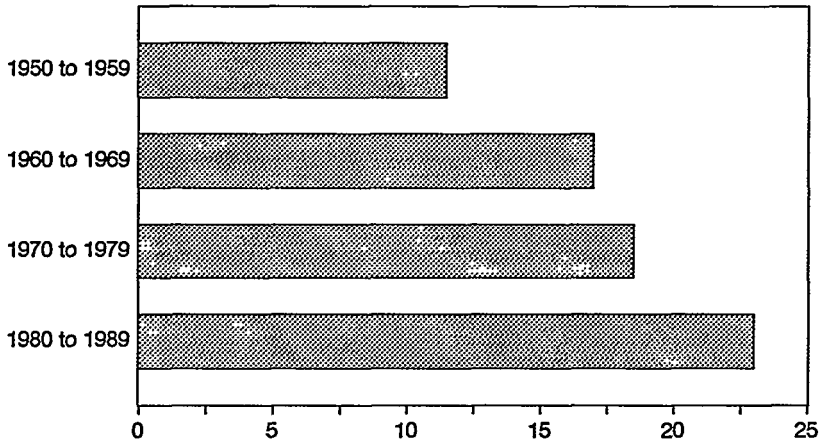
Such proliferation of unnecessary warnings is not a harmless outcome. Excessive warnings clutter the warnings landscape and make it more difficult for consumers to identify which products are hazardous and which are not. Given individuals' cognitive limitations, such problems of information overload are not a minor concern, but are central to the overall efficacy of hazard warnings in our society.

As equation 2 indicates, there are a variety of different mechanisms that can be used to affect risk perceptions. Company-provided warnings are but one information source. The government can provide information to consumers directly, as it has been required to do by Congress since 1964 by issuing annual reports of the Surgeon General. These public information efforts may affect consumer perceptions directly or may generate other media attention. The risks of smoking have been a prominent concern in the media, as is reflected in a count of articles dealing with smoking in *Reader's Digest*—the most widely read magazine over the past 40 years. This count, illustrated in Figure 1,

¹⁷ See *Tax Burden on Tobacco, Historical Compilation, Volume 26, 1991* at 84, 88 (Tobacco Institute, 1992).

indicates a steady rise in smoking articles over the past four decades.¹⁸ However, even before the advent of warnings and the more recent public attention given to smoking, the risks of smoking were a significant media concern likely to be reflected in consumer judgments.

Figure 1
Reader's Digest Article Count



Source: Viscusi, *Smoking* at 36 (cited in note 11)

B. Trends in Risk Beliefs

These concerns are also reflected in the public opinion polls over the past half century. Table 1 provides the Gallup Poll opinion survey results for individual awareness of the cancer risks of smoking, where I will focus primarily on lung cancer, since it is a risk for which we have the most continuous long-term information using opinion poll data.¹⁹ These questions are not ideal since they focus on awareness of smoking risks as opposed to levels of risk perceptions. Nevertheless, the trends in these risk perceptions are of interest. During the period before the advent of hazard warnings and mandated warnings, just under half of the population was aware of lung cancer risks from smoking. Subsequent to the on-package warnings and the increased public dissemination of information pertaining to smoking in the 1960s, the awareness

¹⁸ For documentation, see Viscusi, *Smoking* at 35, 36 (cited in note 11).

¹⁹ The time trends in other risk perceptions are not necessarily identical. For discussions of these differences, see Viscusi, *Smoking* chapter 3 (cited in note 11).

Table 1
 Gallup Poll Opinion Surveys, 1949–1981:
 Questions on Cigarette Smoking and Cancer
 (% responding positively)

Question	Year	All respondents	Cigarette smokers	Non-cig. smokers	Former cig. smokers
Cigarette smoking one of causes of lung cancer?	1954	41	30	48	54
One of causes of cancer of lung?	7/1957	50	38	59	--
	12/1957	47	35	--	--
	1958	44	33	--	--
	1958 ^a	45	33	--	--
	1969	70	--	--	--
Is/is not one cause of lung cancer?	1971 ^b	71	--	--	--
	1972	70	--	--	--
	1977	81	72	87	--
	1981	83	69	91	--
Smoking as cause of throat cancer?	1977	79	73	82	--
	1981	81	69	87	--

^aSpecial Survey

^bSurvey taken in nine different nations, but this figure is for U.S. responses only.

of these risks increased to about 70 percent of the population, and has since risen to 80 percent. Risk perceptions certainly were not zero before the advent of the hazard warnings and public information campaigns in the 1960s, but these efforts did affect the awareness of smoking risks.²⁰

In this situation as in other contexts involving risk communication, increasing risk perceptions will not necessarily lead to more accurate risk beliefs. Choices under uncertainty are replete with various perceptual biases. It is well-known that individuals tend to overestimate the risks associated with low probability events. How this phenomenon affects the risk perceptions with respect to smoking is unclear since the lifetime smoking risks are quite substantial, whereas the smoking risks per cigarette are low. Research has also indicated that individuals tend to overreact to risks that are called to their atten-

²⁰ Analysis of the effect of cigarette health information appears in Lynne Schneider, Benjamin Klein, and Kevin Murphy, *Governmental Regulation of Cigarette Health Information*, 24 J L & Econ 575 (1981); Staff Report on Consumer Responses to Cigarette Health Information (FTC, 1979); and, more comprehensively, Viscusi, *Smoking* chapters 2–3 (cited in note 11).

tion.²¹ The advent of hazard warnings makes the risks of smoking identifiable, and the annual reports by the Surgeon General serve to further highlight these risks. Given the tendency to overestimate risks that are given frequent media coverage, such as earthquakes, tornadoes, and floods, one might expect this substantial public information effort to also lead to potential risk overestimation for smoking.²² There is, however, a tendency to underestimate disease risks such as stroke and heart disease, which are not dramatic or highly publicized. This factor would lead individuals to underestimate some of the risks of smoking. Overall, because of the conflicting directions of the various patterns of perceptual bias, it is not possible a priori to predict the direction of the bias in smoking risk perceptions, if any. To resolve the issue regarding the direction of the bias, I have examined extensive survey evidence.

My survey results for the post-warning era indicate that the potential for risk overestimation is more than conjecture.²³ Table 2 summarizes the results for two surveys, the first of which was a national survey undertaken in 1985 and the second was a regional survey that I undertook in 1991. Evidence from a large national sample of individuals indicates that overall individuals believe the assessed risk of lung cancer from smoking is .43, and the risk assessed by current smokers is .37.

Table 2
Summary of Smoking Risk Perceptions

Risk Category	Mean (Standard error of mean)	
	Full Sample	Smokers
Lung cancer risk perception (1985)	.43 (.01)	.37 (.01)
Lung cancer fatality risk perception (1991)	.38 (.02)	.31 (.04)
Total mortality risk to smokers (1991)	.54 (.07)	.47 (.05)

²¹ See W. Kip Viscusi and Wesley A. Magat, *Learning About Risk: Consumer and Worker Responses to Hazard Information* (Harvard, 1987).

²² The prominence of smoking risks is discussed in Baruch Fischhoff et al, *Acceptable Risk* (Cambridge, 1981). Barbara Combs and Paul Slovik, *Newspaper Coverage of Causes of Death*, 56 *Journalism Q* 837 (1979), assess the role of publicity in affecting risk perceptions.

²³ For documentation, see Viscusi, *Smoking* at 49, 50 (cited in note 11).

Whether these risk perceptions are too high or too low depends on the overall level of the risks actually posed by smoking. Estimates based on the scientific evidence available at the time of the two surveys discussed above appears in Table 3. Since the lung cancer mortality risk to smokers was estimated by scientists to be .05 – .10 using data up to the survey year 1985, these results suggest that individuals dramatically overestimate this component of the hazards of smoking.

There is also a tendency to overestimate other components of the risks of smoking, although to a lesser extent. Based on a 1991 sample, I found that the overall perceived lung cancer fatality risk was .38, and the total perceived smoking mortality risk from all causes was .54. These amounts contrasted with scientists' 1991 estimates of the risks of lung cancer mortality of .06 – .31 and total smoking mortality of .18 – .36. Both the lung cancer fatality risks and the smoking mortality risks are overestimated, although the total mortality risk is overestimated to a lesser extent. Even smokers tend to overestimate the risk, as they perceive the lung cancer fatality risk to be .31 and the total smoking mortality risk as .47.

Individuals also overassess the extent of life that is lost. Scientific evidence based on 1991 data suggest that the estimated life expectancy loss from smoking is 3.6 to 7.2 years.²⁴ On average, people estimate a life expectancy loss of 11.5 years, and current smokers estimate that their life expectancy loss from smoking is 9.0 years.

Table 3
Actual smoking risk ranges in 1985 and 1991

<i>Survey Year</i>	<i>Lung cancer mortality risk to smoker</i>	<i>Total mortality risk to smoker</i>	<i>Total mortality risk to society</i>
1985	.05 – .10	.16 – .32	.21 – .42
1991	.06 – .13	.18 – .36	.23 – .46

C. Effect of Risk Perceptions on Behavior

Even if smokers are aware of the risks associated with smoking, these risk perceptions may not affect smoking decisions. Individuals might, for example, not fully perceive the consequences of the adverse health effects of smoking for their welfare or may undervalue or over-

²⁴ See Viscusi, *Smoking* at 79–81 (cited in note 11).

value these consequences. To resolve these issues, I have explored the influence of risk perceptions on smoking decisions and have found strong statistical relationships.

An index of the responsiveness of smoking to risk perceptions is needed to explore how smoking rates would change if we altered risk perceptions. Scientific evidence at the time of the 1985 national survey indicates that the true lung cancer risk range is from .05 – .10 for a typical smoker. If the public's perception of the lung cancer risk associated with smoking was lowered from its current average value of .43 to .10, then the average rate of smoking in the United States would rise by over 6 percent.²⁵ Similarly, if the risk perceptions were lowered to a level of percent.

Another index of the extent to which the response to risk perceptions by smokers is of the same magnitude as would prevail with perfect markets is obtained by examining the implicit values that smokers attach to various health outcomes. Based on the response of smokers to the dissemination of cigarette health information using a sample of smokers from 1980, one study found that these individuals had an implicit value of life of from \$300,000 – \$600,000.²⁶ These value-of-life estimates are roughly comparable to or a bit lower than those found for workers on high risk jobs during a similar time period.²⁷ This pattern is consistent with the lower implicit values placed on health status by smokers in job risk contexts. For example, I report that the implicit value that smokers attach to nonfatal job injuries involving at least one lost workday is \$26,100, as compared with the implicit value of \$47,900 that the average individual places on such outcomes.²⁸ Not surprisingly, nonsmoking seat belt users are at the high end of the spectrum, as they attach a value of \$83,200 to job injuries. Thus, there is consistency in terms of attitudes toward risk across different activities.

²⁵ See Viscusi, *Smoking* at 100 (cited in note 11).

²⁶ Pauline M. Ippolito and Richard A. Ippolito, *Measuring the Value of Life Saving from Consumer Reactions to New Information*, 25 J Pub Econ 53 (1984).

²⁷ See W. Kip Viscusi, *Fatal Tradeoffs: Public and Private Responsibilities for Risk* chapter 4 (Oxford, 1992).

²⁸ W. Kip Viscusi, *Smoking* at 112 (cited in note 11).

D. Judging the Adequacy of Risk Communication

The overall implication of these smoking risk perception patterns is that one should be careful in interpreting and judging the efficacy of any risk communication effort. The task is not simply to raise risk beliefs but to make them more accurate. Risk information that, for the most part, simply highlights a category of risk will tend to boost risk perceptions and may lead to overestimates of the risk.

The risk information that warnings provide is not in terms of probabilities, such as indicating that there is a 1 in 4 chance of death. Rather, warnings communicate more general information regarding the presence and severity of the risks. It will always be possible to make the message more strident, as has been proposed by some California legislators who have suggested labels such as: "WARNING: The tobacco industry is not your friend."²⁹ The American Medical Association also has ventured forth into the unfamiliar territory of the science of risk communication, and has urged the warning: "Smoking is ADDICTIVE and may result in DEATH."³⁰ Other manipulations of the design of the current warning, such as putting it in day-glo lettering, might also increase its prominence. However, a more strident hazard warnings policy is not necessarily better. The task is to inform choice, not to deter choice. The current situation may already be one of over-deterrence. Individuals greatly overestimate the risks of lung cancer associated with smoking, overestimate the total mortality risks, and overestimate the life expectancy loss.

The key question is what level of warnings is needed to achieve the efficient consumer decisions that satisfy the tests outlined in Section II? To properly address the implications of the 1965 and 1969 congressional enactments, one should return to the risk communication formulation specified in equation 2. Companies have two primary mechanisms for communicating the risk, hazard warnings and other risk communication efforts. It makes little sense to say that one component of the company decisions, hazard warnings, suffices as an adequate risk communication device without in effect making some

²⁹ Seth Mydans, *California Opens All-Out War on Tobacco and Its Marketing*, New York Times A1 (April 11, 1990).

³⁰ *Scientists Agree Smoking Harmful: Industry Funding Is Questioned*, Durham Morning Herald A12 (June 26, 1991).

judgment respecting the adequacy of the entire risk communication system. It is possible that it is never efficient for the company to utilize any mechanism other than hazard warnings to convey risk. Of all the alternatives available to it, hazard warnings may be the least cost means for conveying information. Indeed, the substantial focus of court cases, federal legislation, and government regulations on the use of on-product warnings reflects the prominence of the warning mechanism.³¹ If the mandated hazard warning will not lead to efficient decisions, then in effect Congress has adopted an inefficient policy unless this mode of communication has been optimally exploited. The efficient outcome may require that the company augment the hazard warning in some way. However, the most efficient mechanism for communicating the risk has already been constrained by government. The specific design, format, and wording of the warning must conform with government-mandated standards. The company must consequently resort to a less efficient mechanism for conveying the risk to consumers.

Suppose the policy objective is to get risk perceptions up to some level q^* . The firm may have two different mechanisms to affect risk perceptions, advertising and on-product warnings. If the firm were unconstrained and given the task of providing information that would achieve a risk perception of q^* , then what would the stringency of the warnings component be? If the firm would opt for a stronger warning than the government-mandated warning, then an efficient outcome will not result if the courts require the firm to meet higher levels of advertising obligations than would have been the case if the firm had simply been given the task of generating the q^* risk perception in the least cost manner possible.

Government constraints on a component of hazard communication listed in equation 2 will not always lead to an inefficiency. In the extreme case, the government requirements may force firms to fully exploit the potential of one particular mechanism for risk communication so that it would never be desirable to do more than is required with this mode. However, hazard warnings play a central role within the

³¹ There are exceptions, such as required training for workers who use potent pesticides. Information with respect to the risks of driving similarly requires that one do more than read an on-product warning. As a result, states have a variety of driving tests to promote driving safety.

context of risk communication. Indeed, such legal cases are typically designated warnings cases, not risk communication efforts, in recognition of their prominence. To take the extreme case, if hazard warnings were the only risk communication mechanism, it would certainly not be sensible to impose additional warnings requirements beyond the mandated warning because the specification of the warning language and format in the government-mandated warning not only limits the company's options with respect to additional warnings but also complicates efforts to alter the warning. Expanding the warning may either undercut the mandated warning or lead to label clutter that impedes processing of the key warning information by the intended recipient group.

A complication of a quite different nature arises if firms relax some risk communication efforts, such as product risk information in advertising, after mandatory warnings have been imposed. The alcoholic beverage industry, for example, has indicated that voluntary advertising about the risks of drunk driving will decrease if the government mandates that various hazard warnings be included in alcoholic beverage advertising. Such actions do not directly undercut the effect of the mandated warning, but they may lead to a less effective system of risk communication.

In situations in which there is government regulation of warnings and more than one mode of risk communication should be utilized to ensure effective risk communication, these other mechanisms should be regulated. Cigarette warnings, for example, not only appear on the product but are included in print advertising as well. The government similarly couples labeling efforts for pesticides with a requirement that users of dangerous chemicals pass a training program and become certified pesticide applicators. Drug warnings are sufficient for less dangerous drugs, but more dangerous drugs are designated prescription drugs, and their use must be authorized by a physician. Once the government has intervened in such contexts and constrained certain aspects of hazard communication systems, ideally the set of regulations should ensure that the risk information provided about the product is adequate.

To avoid situations where the government regulation will lead to inefficient hazard communication mechanisms, the provision of the

hazard warning mandated by the regulation should be regarded as sufficient. It is this perspective that will govern my discussion below regarding the legal implications of the 1965 and 1969 statutes at issue in *Cipollone*. To the extent that these laws have a preemptive effect, they should preempt all hazard communication obligations of the firm.

This formulation also highlights the fact that the extent of the preemptive effect should be restricted to the firm's hazard communication obligations. The fact that the government has mandated warnings in no way impedes the company's ability to design a safer product. Nor does it reduce a company's responsibility to learn about the product risks. Our knowledge at the time a warning is given may not be so precise that we should foreclose the possibility of learning more about the risks. To the extent that companies would have an obligation to undertake product risk research and respond to, for example, reports of adverse reactions, this responsibility should be a continuing one. Particularly in the case of health hazards, as opposed to acute safety risks for which the scientific issues can be resolved more immediately, there is an ongoing process of information acquisition. Indeed, the fact that Surgeon General's reports appear annually as opposed to once each decade reflects the evolving knowledge of smoking.

IV. THE 1965 CIGARETTE WARNINGS

A. History of Cigarette Warnings

The health aspects of smoking have long been the subject not only of public debate but also of the advertising campaigns of the companies. Even in the 1920s, health claims with respect to smoking were a prominent part of the advertising content.³² Indeed, the risks of smoking have been discussed, perhaps as long as cigarettes have been in existence. In the seventeenth century, Popes Innocent X and Urban VIII excommunicated smokers.³³ Moreover, a century ago cigarettes became an object of vigorous public debate after James B. Duke intro-

³² See W. Kip Viscusi, *Smoking* at 40-43 (cited in note 11). Ringold and Calfee review the nature of cigarette advertising throughout the century. D.J. Ringold and J.E. Calfee, *The Informational Content of Cigarette Advertising: 1926-1986*, 8 J Pub Pol & Management 1 (1989).

³³ See Cassandra Tate, *In the 1800s, Antismoking Was a Burning Issue*, 20 Smithsonian 107, 108 (1989) ("Tate, *Antismoking*").

duced mechanization into the cigarette industry, thus making it a mass-marketed consumer product:

Beginning with Washington in 1893, no fewer than 14 states outlawed the sale, manufacture, possession, advertising and/or use of cigarettes, aka coffin nails, little white slavers, dope sticks, paper pills, brain capsules, coffin pills, and devil's kindling wood. At least 21 other states and territories considered cigarette prohibition.

Congress was asked to protect the public health by requiring that cigarette packages be stamped with a skull and crossbones, and labelled "POISON." Many employers refused to hire cigarette smokers. Nonsmokers said their health was being jeopardized by "secondhand smoke."³⁴

Although these concerns were not new, public action in terms of risk communication did not become reality until the landmark report by the U.S. Department of Health, Education, and Welfare in 1964 documenting the risks of smoking.³⁵

To put the different warnings eras in perspective, Table 4 below summarizes the different hazard warning periods. The focus of this section is on the first of these warnings introduced in 1965 under the Federal Cigarette Labeling and Advertising Act. In addition to imposing this warnings requirement, the 1965 statute also included the following preemption provisions:

(a) No statement relating to smoking and health, other than the statement required by section 4 of this Act, shall be required on any cigarette package.

(b) No statement relating to smoking and health shall be required in the advertising of any cigarettes the packages of which are labeled in conformity with the provisions of this Act.

The Federal Cigarette Labeling and Advertising Act of 1965 consequently had two key provisions. First, it mandated a quite specific warning for cigarettes. Although this warning did not indicate the numerical risk associated with smoking, evidence suggests that this warning conveyed a cancer risk roughly comparable to that believed to

³⁴ Tate, *Antismoking* at 107 (cited in note 33).

³⁵ United States Department of Health, Education, and Welfare, *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the Public Health Service* (Von Nostrand, 1964).

be associated with smoking.³⁶ The second key component of the Act is that it included a preemption provision that limits the other warnings requirements that can be imposed on the firm. The first fundamental issue addressed by the Supreme Court in *Cipollone* is the extent to which this preemption provision simply limited other government regulations or whether it also affects other obligations the firm might have under common law rules.

Table 4
Cigarette Warning Content Summaries

<i>Warning period</i>	<i>Warning content^a</i>
1965-1970	"Caution: Cigarette Smoking May Be Hazardous to Your Health."
1970-1984	"Warning: The Surgeon General Has Determined That Cigarette Smoking is Dangerous To Your Health."
1984-present	<ol style="list-style-type: none"> 1. "SURGEON GENERAL'S WARNING: Smoking Causes Lung Cancer, Heart Disease, Emphysema, and May Complicate Pregnancy." 2. "SURGEON GENERAL'S WARNING: Quitting Smoking Now Greatly Reduces Serious Risks to Your Health." 3. "SURGEON GENERAL'S WARNING: Smoking by Pregnant Women May Result in Fetal Injury, Premature Birth, and Low Birth Weight." 4. "SURGEON GENERAL'S WARNING: Cigarette Smoke Contains Carbon Monoxide."

^aThe wording of the warnings set out here has been specified by legislation. See 15 USC § 1333(a) (and historical note to that section) (1988).

³⁶ In particular, in a comparison of different warning labels, I have found that 69 percent of all respondents view the 1965 warning as conveying a risk comparable to that of a label that implies a lifetime cancer risk of .12.

B. The Majority's Analysis of the 1965 Act

There was a consensus among the members of the Supreme Court that this provision certainly prohibited other state and federal rule-making bodies from imposing specific cautionary statements on cigarette labels and advertisements. The language of the Federal Labeling Cigarette Labeling and Advertising Act is quite specific, and the legislative history noted that substantial conflicts might arise if the states issued conflicting or possibly different warnings requirements.

The economic rationale for preempting other kinds of regulations is straightforward. For mass marketed consumer products, standardized federal warnings labels provide a more efficient mode of compliance. Indeed, it was partly the lower costs associated with federal labeling as opposed to diverse state regulations that led firms to be more willing to accept a political compromise based on federal intervention. The role of preemption is to eliminate the inefficiencies that can arise from conflicting regulatory obligations, and the Court properly concluded that these preemption provisions did in fact prohibit restrictions "imposed under state law."

The broader issue over which there is more disagreement is the extent to which the preemption provisions also limited plaintiffs' ability to make common law claims against a firm. For analytical clarity, two general classes of claims will be considered, those that hinge on showing that the company had failed in its obligation to communicate the risks adequately, and those based on other rationales.

The latter class of claims can be addressed most readily. First, the preemption provisions do not specifically preempt all obligations of the firm, but only pertain to statements made with respect to smoking and health. Moreover, from an economic standpoint, there is no rationale for preempting any claims other than those associated with risk communication, assuming that the provision of warnings does not affect the productivity of other actions the company might take to provide safer products. Other risk-related obligations of companies are in no way affected by the hazard warnings requirement since these efforts involve quite distinct economic decisions. There may be efficiency losses if the firm abandons its legitimate responsibilities in these areas.

The effect of the preemption provisions on the firm's risk communication responsibilities merit more detailed exploration. If this

preemption provision did not apply to hazard communication generally but only to the mandating of specific warnings, then the firm could be required under common law, for example, to provide for a much stronger risk communication system than is now in place. Mandated warnings do not necessarily prevent the firm from doing this, but they do constrain what is perhaps the most effective mechanism for the firm to communicate the risk. As noted above, from an efficiency standpoint the warnings requirement and the associated preemption provision is only sensible within the context of hazard communication if it pertains to the entire hazard communication system rather than only a part of it.

In construing the 1965 statute, the Blackmun faction joined that portion of the Stevens opinion that rejected preemption of either class of claims. Thus, the crucial distinction and the role of hazard communication systems is not recognized at all in the section of the Stevens opinion joined by a majority of the *Cipollone* Court. Remarkably, this line of reasoning is recognized, though clearly not fully understood, in the discussion of the 1969 statute in the Blackmun opinion:

A manufacturer found liable on, for example, a failure-to-warn claim may respond in a number of ways. It may decide to accept damages awards as a cost of doing business and not alter its behavior in any way. . . . Or, by contrast, it may choose to avoid future awards by dispensing warnings through a variety of alternative mechanisms, such as package inserts, public service advertisements, or general educational programs.³⁷

While this view is correct in that it recognizes the multiplicity of risk communication devices available to the firm, it is incomplete in that it does not recognize the fact that one salient risk communication mechanism, on-product warnings, has been constrained by federal law. To mandate a specific risk communication tool available to the firm and then to impose additional requirements on other risk communication mechanisms may lead to potential inefficiencies. Moreover, it is true that companies can simply choose to incur damages awards and not alter their behavior. However, a main function of these awards is to provide incentives for companies to alter their behavior. It makes no sense to impose a damages award if we do not hope to alter the actions

³⁷ 112 S Ct at 2628.

of the companies that produce and market risky products. Rational firms respond to the incentives they face on a variety of dimensions, and these incentives will govern their behavior.³⁸

C. Scalia's Dissent with Respect to the 1965 Act

The dissenting opinion by Justice Scalia (joined by only one other Justice) displays a more complete understanding of the role of hazard communication systems, and makes the correct economic inference:

Advertising and promotion are the normal means by which a manufacturer communicates required product warnings to prospective customers, and by far the most economical means. It is implausible that Congress meant to save cigarette companies from being compelled to convey such data to consumers through that means, only to allow them to be compelled to do so through means more onerous still.³⁹

In his opinion, Justice Scalia correctly identifies the potential efficiency loss that can arise from the imposition of additional hazard communication requirements on firms in contexts in which there are mandated federal warnings. In its narrow interpretation of the 1965 preemption provisions, the Court's majority failed to display an appreciation of the underlying economic choice that firms are making. The preemption provisions only make economic sense if they pertain to the entire hazard communication system, not specific modes within it. Justice Scalia's view that the 1965 Act preempted all the failure-to-warn claims (although not those claims based on statements volunteered by the cigarette companies) consequently is more consistent with an efficient hazard communication policy.

The desirability of making the warnings requirement preemptive is illustrated by comparing the situation in which providing the mandated warning fulfills the firm's obligations and that in which there continues to be potential liability with respect to hazard warnings. If

³⁸ If, for example, the losses associated with smoking are equivalent to some monetary equivalent L , and these losses are paid by the firm because of its failure to warn, then the expected losses associated with each consumer will be given by πL . If firms can provide information costlessly to individuals, then providing them warning information will always be advantageous if consumers have some perception of the risk, and will be a break-even proposition if consumers' risk perceptions are zero.

³⁹ 112 S Ct at 2637.

providing the government-mandated warning fulfills the firm's informational obligation, plaintiffs will not be able to sue the firm for inadequate warnings, but they will be able to sue on the basis of design defects, failure to meet obligations with respect to product-related risk research, and other matters. However, the firm can be confident that at least with respect to provision of hazard warnings it has met its obligations. Moreover, to the extent that these warnings inform consumers of the risks associated with the product, then the resulting consumer decisions will be sound and one can be confident that market outcomes will reflect efficient risk-taking behavior.

In contrast, under the *Cipollone* majority's rule, the firm's warnings can still be found to be inadequate. Plaintiffs' warnings experts routinely testify that if the print size had been bolder, the warning had been more prominent, or additional warning language had been included, then the risky activity would have been avoided.

To avoid the possibility of such suits, there will be an incentive for the firm to augment the warning language even if the mandated warning provides the proper amount of information. In the case of mass produced products, such as cigarettes, where an inadequate warnings decision has broad ramifications across an entire product line, the incentives for overwarning will be substantial. To the extent that the additional risk of liability leads to excessive warning, the effect will not only be to distort the risk information conveyed about the particular product but also perhaps to possibly dilute the warnings for other products as well. In effect, this product will be stamped as being more hazardous than it actually is, thus leading consumers to have a distorted perspective of its risk relative to other products.

Moreover, as consumers learn from experience and from other sources the true risk, and see that the provided warnings have overstated this risk, they will tend to discount warnings. This would be an undesirable consequence of overwarning the consumers.

The use of additional warning language to augment the mandated warning also may create problems with respect to risk communication for that particular warning. As risk information on the label increases, there are problems of label clutter as individuals' cognitive limitations impede their abilities to process a substantial amount of information. There is also the danger that the additional information will undercut

the impact of the succinct hazard warning mandated by the government. Moreover, any additional information that is provided by the firm will not be within the context of a standardized warnings vocabulary. One of the advantages of federally mandated warnings is that the warning content is standardized across the product group. The warnings context is one situation where standardization is often preferable since it increases individuals' ability to make reliable judgments regarding the product's risk level.

The final difficulty of facing additional liability with respect to warnings is that firms in effect have no safe harbor. Unable to fulfill its legal obligations by adopting the government-mandated warning, the firm will remain uncertain as to the future liability with respect to the product. This uncertainty leads to a variety of distortions, not only with respect to product warnings but also with respect to discouraging innovation of new products and the production of risky products more generally.

D. Summary

Although the two dissenting Justices provided an analysis of the 1965 statute that is economically superior to that adopted by the other seven Justices, the actual effect of this portion of the decision will be relatively minor. The 1965 statute was subjected to superseding amendments in 1969, and the amended version has been in effect since that time. Because there was no preemptive federal legislation at all before the 1965 statute was enacted, the unduly narrow interpretation of the preemptive effect of the law that affects conduct that occurred for about four years in the relatively distant past will have only trivial incentive effects. It is the interpretation of the 1969 statute that is really significant, and to that subject I now turn.

V. TWO ERRORS IN APPLYING THE 1969 CIGARETTE WARNINGS STATUTE

In the Public Health Cigarette Smoking Act of 1969, Congress amended the hazard warning language to indicate that "smoking is hazardous" instead of the somewhat more conditional "smoking may be hazardous" claim, as is indicated in Table 4 above. Although this

statement is more direct, it is attributed to the Surgeon General rather than being an unconditional statement by the government.⁴⁰

The fundamental issue with respect to the 1969 labeling statute was not the change in the wording of the warning but rather the modification in the preemption provision. The original § 5(b) was replaced by the following:

(b) No requirement or prohibition based on smoking and health shall be imposed under State law with respect to the advertising or promotion of any cigarettes the packages of which are labeled in conformity with the provisions of the Act.

Whether this statement broadened the preemptive effect of the cigarette warning legislation beyond that of the 1965 Act was the most significant and divisive issue addressed by the Court. On this issue the Court split into three distinct camps. Justice Blackmun, writing for himself and two others, concluded that the preemptive effect of the reworded 1969 provision was no greater than that of the 1965 statute. His legal reasoning was based primarily on a very strong presumption against preemption, manifested in a demand that Congress articulate any preemptive intent with the utmost clarity and absence of ambiguity. At the other extreme from this "clear statement" rule, Justice Scalia (joined by one other Justice) urged that the language of the preemption provision simply be given its ordinary and apparent meaning. In Scalia's view, this interpretation required the preemption of all the claims in this case because they all invoke duties "based on smoking or health."

Whatever the merits of these contending positions may be as a matter of legal doctrine and application of precedent, each is economically flawed. This is most clear in the case of Blackmun's position, which distorts the incentives that the federal labeling requirement should create by allowing state laws to require additional and potentially higher-cost risk communication tools. As noted earlier, Justice Blackmun purports to offer an answer to this economic objection, but

⁴⁰ Survey test results regarding a similar warning for products other than cigarettes suggests that the change in the warning in 1969 did not necessarily strengthen the impact that the warning had on consumer risk perceptions. See the particular results reported in Viscusi, *Smoking* at 33 (cited in note 11).

his defense fails because it requires one either to ignore the importance of the incentive effects that are manifestly a principal purpose of the federal statute, or to ignore the fundamental desirability of lower-cost risk communication techniques.

Justice Scalia's opinion avoids this error, but goes too far in the other direction by failing to distinguish the treatment of company decisions relating to hazard communication and those decisions that may be quite independent of the hazard warning costs. The fact that firms are required to have in place specific product warnings should, for example, in no way impede their ability to perform product-related risk research or invest in safer product designs. It will be true, of course, that the mandated warnings will apprise consumers of the risks. However, this risk communication effort will be based on the current state of knowledge. In situations where our knowledge of the risk is evolving and can potentially be altered by continuing to engage in research and, in some instances, bringing to bear more recent technologies on this research effort, then it will clearly be desirable to maintain appropriate incentives for firms to refine our knowledge of the risk. This knowledge in turn may lead to different warning requirements in the future.

Company research is particularly important to the extent that there are particular nontobacco ingredients added to the company's cigarettes that have uncertain risk implications. For ingredients shared by cigarettes of many companies, such as tobacco, a more efficient research approach would be to tax cigarette companies to support a centralized federal research effort. Moreover, the government could also undertake a leadership role in terms of assessing risk levels for cigarettes and providing guidelines for firms to communicate these risks to consumers. However, even though federal intervention may be more efficient, this does not necessarily eliminate the responsibility of firms to take such actions in the absence of federal involvement.

Another way to view the role of effective warnings is the following. An adequate warning will apprise consumers of the risk and, as a result, one can be confident that the resulting decisions with respect to purchase of the product will be efficient. Consumers will derive a higher level of expected welfare from purchasing the product than from not purchasing, based on the true risks associated with the product. In

these situations, the firm should not be subject to liability with respect to the overall marketability of the product.

However, this efficiency result does not imply that the firm should be free of liability with respect to changes in product design. If consumers were also fully informed of the risks associated with alternative product designs, then market processes would provide incentives for the provisions of products with an efficient level of safety, and consumers would select the level of safety that is most in line with their preferences. However, if the new product designs are not on the market and there is no accompanying risk information effort to provide information to consumers to generate a demand for these safer products, then one cannot necessarily conclude that market processes will generate efficient risk outcomes simply because the hazardous products now on the market bear an appropriate warning.

Indeed the government has long been an impediment to the generation of risk information that would provide the impetus for design change.⁴¹ In the 1960s, the government discouraged the “great tar derby” in which cigarette companies attempted to compete with each other in terms of lowered tar and nicotine levels. More recently, the government has discouraged both the smokeless cigarette marketed by R.J. Reynolds and the de-nicotined cigarette marketed by Phillip Morris, as the policy emphasis has been to oppose smoking irrespective of the degree of safety associated with particular kinds of cigarettes. To enable consumers to select from an efficient mix of product designs as opposed to making a correct dichotomous decision between smoking cigarettes now on the market and not smoking, the government should foster additional risk information with respect to alternative product designs to promote market competition with respect to safety. Current policies suppress this information, and the net effect is that consumers now rarely distinguish between the risks posed by differing kinds of cigarettes.⁴²

⁴¹ See Viscusi, *Smoking* chapter 7 (cited in note 11).

⁴² For further discussion of this issue and the government’s policies in this area, see *id.*

VI. THE STEVENS INTERPRETATION OF THE 1969 STATUTE

In his plurality opinion for four Justices, John Paul Stevens interpreted the 1969 statute to preempt some claims but not others. An examination of his conclusions shows that he arrived at the economically correct result in each instance, although his explanations for those results did not display much in the way of economic reasoning.

In contrast to Stevens' analysis of the 1965 statute, but in accord with Scalia's interpretation of both statutes, Stevens concluded that the 1969 statute preempts failure to warn claims that presuppose a duty on the part of manufacturers to include in their advertising or promotional materials warnings other than those required by the federal statute. Unlike Justice Scalia, however, Stevens correctly concludes that this rule of preemption should *not* extend to claims based on alleged deficiencies in the manufacturers' testing or research practices. For the reasons I gave in the previous section of this article, such preemption would be economically inappropriate. Although he drew the correct conclusion, Stevens did not explain the underlying economic rationale.

The plurality also concluded that claims for breach of an express warranty were not preempted by the 1969 Act. Since this issue does not hinge upon the adequacy of the firm's hazard communication efforts but rather on whether the firm made some kind of promise to the buyer regarding the product that was purchased, there is no economic rationale for preempting this claim. As Justice Stevens correctly observes:

If, for example, a manufacturer expressly promised to pay a smoker's medical bills if she contracted emphysema, the duty to honor that promise could not fairly be said to be 'imposed under state law,' but rather is best understood as undertaken by the manufacturer itself.⁴³

With respect to fraudulent misrepresentation, the petitioners had two theories. The first suggested that advertising served to neutralize the effect of the hazard warning labels by depicting the product favor-

⁴³ In this regard I take a somewhat different view from Justice Scalia, who maintains that the warnings also preempt warranties since "every express warranty obligation is a 'requirement . . . imposed under State law,' and that, therefore, the Act preempts petitioners' expressed warranty claim." 112 S Ct at 2622.

ably. Justice Stevens correctly concluded that claims based on this theory are preempted. If the firm were to undertake some other explicit risk communication effort that explicitly disavowed the hazard warning, then this type of advertising certainly might be considered fraudulent misrepresentation. However, the hazard warning regulation was imposed in a context where it is understood that the firm would be able to undertake its normal business operations with respect to marketing. Depicting consumers of its products as being attractive and happy in their consumption decision is certainly not atypical marketing practice. If the intent of advertising is to sell a product, one wonders why firms would ever depict their consumers as being physically unattractive and dissatisfied with the product. Since this claim in no way suggests that the firm's actions changed to undercut the efficacy of the warning, there is no economic basis for it. The hazard warnings requirement is designed within the context of the current business environment, not under the assumption that all other actions undertaken by the firm and by the government are going to be changed in a manner that will boost risk perceptions even further.

The second fraudulent misrepresentation theory suggested that the defendants falsely represented and concealed material facts concerning the risks of smoking. The Stevens plurality correctly concluded that specific fraudulent statements are not preempted by the 1969 Act. Although Stevens did not address this issue openly, the main matter of concern from an economic standpoint is the implication of these statements for consumer behavior. If consumers dismiss these statements altogether or if they do not alter their risk perceptions in a manner that is sufficient to lead them to make inefficient choices with respect to this risky product, then there is no efficiency loss associated with even fraudulent misrepresentation and no rationale for finding the defendants liable. Thus, the principal economic test for fraudulent misrepresentation should be the consequences of the falsity and the ultimate implications for market efficiency rather than the existence of a falsity. In the extreme case in which false statements are made and no actions are altered because of them, there are no economic losses involved and no rationale for damages. Because state law presumably requires proof of causation, however, this possibility would not justify preemption.

The final theory that was offered pertained to conspiracy to misrepresent or conceal material facts. For the same reasons given in the plurality's discussion of intentional fraud, this claim was not preempted by the provisions of the 1969 Act. Although I agree with the conclusion in this instance and in the situation of intentional fraud, once again the main issue is not simply whether there was conspiracy but whether this conspiracy was of economic consequence. The ultimate question is not whether fraudulent statements were made or facts were concealed, but rather whether these falsehoods substantially altered the perceived product risk and the decisions based on these beliefs.

It should also be stressed, however, that there is a strong case for the economic provision of true information, particularly on the part of large manufacturers. Information by nature is a public good for which the costs of transmitting the information to multiple parties instead of one are low if not zero. Moreover, there are often substantial economies of scale for information acquisition and generation so that large producers of a product have an economic advantage in generating this information over decentralized consumers. One would certainly want to maintain economic incentives for the provision of accurate information. However, the ultimate value of the information should be judged on the basis of the extent to which the information will alter probabilistic beliefs and individual decisions. One of the most fundamental results in the economics of information is that information that does not alter decisions has zero value to the decision maker. This same insight should be adopted by the courts in this instance by shifting attention to the rationality of the product choices that result.

Justice Stevens' success in arriving at economically justifiable conclusions, without having offered much in the way of economic explanation, is particularly striking in light of the severe criticisms to which his approach was subjected by Blackmun and Scalia alike. The essence of their attack was that Stevens was inconsistent in his treatment of the failure to warn and fraudulent misrepresentation claims. Both Blackmun and Scalia argued that both types of claims are identical in the sense that they must be based either on "smoking or health" (as Scalia concluded) or on a more general duty to inform consumers of known risks (as Blackmun concluded). Explicitly rejecting the "theo-

retical elegance” that he acknowledged was offered by the Blackmun and Scalia proposals, Stevens defended the inconsistency in his own position as a faithful reflection of what he called “congressional purpose.”⁴⁴

As Blackmun and Scalia convincingly demonstrated, however, the intent attributed to Congress by Stevens was by no means clearly expressed. This leads me to suspect that the real key to understanding Justice Stevens’ opinion is an unstated attribution of economic rationality to the 1969 Congress. And because Stevens did *not* find the same economically defensible intent in the less important 1965 statute, perhaps what we are seeing here is the operation, certainly unstated and perhaps unconscious, of rational economic policy choices by the Stevens’ plurality. It would certainly make some sense, after all, for a group of Justices who were tacitly incorporating economic policy judgments into their interpretation of statutory law to limit such activism to the most economically important context.

This is, of course, only speculation on my part, but if true it would explain what are otherwise some puzzling aspects of the *Cipollone* decision. In any event, and even apart from these speculations, the approach of the Stevens plurality seems more likely than either of the other two approaches to become the favored approach in the future. Lower courts are more likely to treat the opinion of a four-Justice plurality as the governing law than they are to follow either of the approaches that attracted fewer votes in the Supreme Court. That, I think, is good news from an economist’s perspective.

VII. CONCLUSION

The *Cipollone* decision is likely to be regarded as a disappointment by many lawyers, who will naturally be concerned at the absence of a majority opinion stating and applying the law of preemption. Looked at from an economic perspective, however, in which the main concern is whether efficient market operations are encouraged by the legal rules adopted in the case, there is more reason to be pleased than disappointed.

Cases arising from conduct that occurred before the effective date of the 1965 statute are not affected by the *Cipollone* decision, but this is

⁴⁴ 112 S Ct at 2624 n 27.

of minor and decreasing practical significance because the significance of smoking that took place more than a quarter century ago is increasingly unlikely to be the cause of illnesses or injuries that manifest themselves today. For the same reason, the *Cipollone* Court's interpretation of the 1965 statute, though unfortunate, should have only very limited continuing effect. Even more important, the incentives determining the future behavior of cigarette manufacturers will be affected almost exclusively by the Court's interpretation of the 1969 Act because it is that statute's preemption provision that remains in effect today.

With respect to the issues most important in immediate practical terms—namely those arising from the 1969 statute—the *Cipollone* case was resolved in a way that will best promote economic efficiency. An economist may be disappointed in the paucity of proper economic analysis in the Court's various opinions, but consumer welfare will not be affected by this shortcoming.

