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# Smokers' Compensation: Toward a Blueprint for Federal Regulation of Cigarette Manufacturers

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# SMOKERS' COMPENSATION: TOWARD A BLUEPRINT FOR FEDERAL REGULATION OF CIGARETTE MANUFACTURERS

Jon D. Hanson,\* Kyle D. Logue\*\* & Michael S. Zamore\*\*\*

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## I. INTRODUCTION

Although nothing is certain in Washington, sweeping federal legislation in the cigarette area is more likely now than has ever been the case.<sup>1</sup> Congress is currently considering several proposals for comprehensive federal regulation of the cigarette market,<sup>2</sup> a market that has until now gone largely untouched by government intervention.<sup>3</sup> Among those proposals, the one that has received the most attention, and the one that in fact motivated policy makers to look anew at the problems posed by cigarettes, is the proposed national tobacco resolution (the "Proposed Resolution").<sup>4</sup> The Proposed Resolution, which has been advanced by a coalition of state attorneys general and tobacco companies, would grant cigarette manufacturers immunity from all class action and attorney general lawsuits and punitive damages for past harms in exchange for changes in FDA regulatory authority, limitations on advertising by tobacco companies, and \$368.5 billion in payouts over 25 years.<sup>5</sup>

In a recent article in the *Yale Law Journal*, two of us (Hanson and Logue) made three general arguments regarding the cigarette market.<sup>6</sup> First, we argued that the market for cigarettes is characterized by severe market failures and hence is in need of extensive government regulation.<sup>7</sup> Given that the current debate in Washington assumes the need for some type of government action in the cigarette area, we will not restate those market failures here. Instead, we will say only this: In light of evidence that smokers typically begin smoking at a very early age,<sup>8</sup> tend to underestimate the long-term health risks to themselves (and to others) of smoking,<sup>9</sup> often underestimate the addictiveness of cigarettes,<sup>10</sup> and do not bear many of the

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1. See Jeffrey Taylor & Brian Duffy, *Bipartisan Bill Over Tobacco Is in the Works*, WALL ST. J., Feb. 27, 1998, at A3.
  2. *Id.*
  3. Jon D. Hanson & Kyle D. Logue, *The Costs of Cigarettes: The Economic Case for Ex Post Incentive-Based Regulation*, 108 YALE L.J. 1162 (1998).
  4. Proposed Resolution: For Settlement Discussion Purposes Only 6/20/97 (on file with authors).
  5. For a more complete description of the Proposed Resolution and its likely effects, see Hanson & Logue, *supra* note 3, at 1316-48.
  6. Hanson & Logue, *supra* note 3.
  7. *Id.* at 1181-1262.
  8. See Proposed Resolution, *supra* note 4, at 1.
  9. See Hanson & Logue, *supra* note 3, at 1186-93.
  10. See *id.* at 1193-1221.

costs associated with their own smoking,<sup>11</sup> we agree that the market for cigarettes should not be left unregulated.

Second, we argued that, from a deterrence perspective, the most promising type of regulation in the cigarette context is some form of ex post incentive-based regulation—regulation that imposes the costs of smoking on cigarette manufacturers as those costs arise, giving manufacturers incentives to make cost-justifiably safer cigarettes and forcing cigarette pricing to reflect the social costs of smoking.<sup>12</sup>

Finally, we described how the Proposed Resolution takes just the wrong approach, completely rejecting ex post incentive-based regulation and instead expanding the use of other regulatory approaches (mainly command-and-control provisions) that have proven to be—and are widely regarded by regulatory experts as being—inferior to incentive-based regulatory approaches.<sup>13</sup>

In this article, we elaborate on one type of ex post incentive-based regulation that was briefly outlined in the Yale article.<sup>14</sup> It is a regime that we call *Smokers' Compensation*.<sup>15</sup> The principal goals of the regime would be: (a) to exploit, rather than be exploited by, the informational advantage that cigarette manufacturers have regarding the risks posed by their products; (b) to force cigarette manufacturers, and hence cigarette consumers through the price mechanism, to take into account more of the social costs of cigarettes than they currently do; (c) to create incentives for cigarette companies to make safer cigarettes, indeed to compete with respect to cigarette safety; (d) to establish a separate insurance pool for smoking-related harms that is financed by smokers through the price of cigarettes, thereby reducing nonsmokers' insurance premiums and taxes;<sup>16</sup> and (e) to do all of those things without producing administrative costs that outweigh the benefits of the regime.

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11. See *id.* at 1223–32.

12. See *id.* at 1263–1315.

13. See *id.* at 1316–48.

14. See *id.* at 1283–1315.

15. We use the term “Smokers’ Compensation” to emphasize the kinship between our proposed regime and perhaps the most prominent existing example of a causation-based, no-fault compensation regime—namely, workers’ compensation. We should emphasize, however, a key difference between Smokers’ Compensation and existing causation-based, no-fault regimes: The principal, though not necessarily the sole, goal of Smokers’ Compensation is deterrence, not compensation.

16. Establishing a separate insurance pool for smoking harms would remove those costs from existing public and private health-insurance pools, insofar as smokers currently have insurance against smoking-caused harms. Such segregation means lower premiums or taxes for nonsmokers and fills any gaps in existing insurance arrangements to the extent smokers are currently without coverage for smoking-related losses.

Before undertaking this examination, however, a word of caution is in order. This is not an exercise in legislative drafting. It is instead a starting point for someone who has been given the task of drafting legislation or creating regulations in this area and who is serious about correcting the failures in the cigarette market in a way that stands a chance of achieving the five goals mentioned above. Although we will discuss how a Smokers' Compensation regime might be designed, we will still speak in general terms and necessarily omit many details. This Article is also not intended to be a neat, theoretically impermeable treatment of the questions of tobacco regulation. The proposals herein are offered with an eye towards political viability. As such, many details necessarily must be deferred to policymakers who are in a position to evaluate the real world implications of the costs and benefits. At the very least, the Article aims to identify many of the issues that should be the focus of any effort to construct a workable ex post incentive-based regime.

Part II defines some key terms and briefly summarizes the basic case for ex post incentive-based regulation over its alternatives. That Part also briefly summarizes the problems with the Proposed Resolution. Part III offers an introduction to the Smokers' Compensation idea. It presents a decision-making framework in which to consider the subsequent proposals, namely the inevitable tradeoff between accuracy and cost. Part III also examines other existing and proposed alternative compensation systems that might serve to guide development of a Smokers' Compensation system. Part IV describes our blueprint for a Smokers' Compensation regime and surveys the questions that must be addressed in order to implement such a regime. In that Part, we look at the accuracy-cost alternatives implicit in various answers to the primary questions of system design: who is the decision-maker?; who should be eligible to bring claims?; what damages should claimants be entitled to?; how should claimants prove a smoking-related injury?; and how would compensation costs be allocated among cigarette manufacturers? Finally, in Part V we touch on a number of potential administrative and political difficulties in constructing a viable Smokers' Compensation system.

## II. THE CASE FOR EX POST INCENTIVE-BASED CIGARETTE REGULATION<sup>17</sup>

### A. Three Categories of Regulation

When comparing and contrasting various regulatory regimes, scholars often divide the world of regulation into three general types: *command-and-control* regulation; *performance-based* regulation; and *incentive-based* regulation.<sup>18</sup> The distinctions among these three categories are not perfect. Thus, some examples of command-and-control regulation begin to shade into performance-based regulation; and some examples of performance-based regulation begin to look like incentive-based regulation. In fact, it is probably most accurate to understand the three categories as three points along a continuum, with command-and-control regulation at one end, incentive-based regulation at the other end, and performance-based regulation somewhere in the middle. Nevertheless, it is useful to maintain the conceptual distinctions among the three types of regulation to enable us to identify the costs and benefits of moving in one direction or the other along the continuum.

Under *command-and-control* regulation, sometimes called “input regulation,” the regulator imposes specific requirements on the firm. The regulator in effect tells the regulated firm how specifically to run some aspect of its business. In regulating pollution, for example, the command-and-control regulator might prescribe specific steps that manufacturers must take, or specific technologies that they must use, to reduce the level of pollution that is emitted by their manufacturing processes.<sup>19</sup>

Under *performance-based* regulation, by contrast, the regulator presents manufacturers with a target of some sort, which the manufacturers are

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17. This Part draws on and summarizes the analysis in Hanson & Logue, *supra* note 3, at 1173–78, 1263–81.

18. See generally Hanson & Logue, *supra* note 3, at 1173–78, 1263–81 (defining and comparing these various forms of regulation and summarizing the literature regarding the scholarly consensus in favor of incentive-based regulation).

19. There are many examples of command-and-control regulation in the Proposed Resolution. For example, the warning requirements and the advertising restrictions that the Proposed Resolution would impose on manufacturers are best characterized as command-and-control regulations. Similarly, if the FDA exercised its limited authority under the Proposed Resolution to mandate particular “technologically feasible,” “less hazardous tobacco products,” it would do so in the form of command-and-control regulations. Proposed Resolution, *supra* note 4, at 14.

encouraged to meet. That target is sometimes called a "performance standard." The manufacturers are then left to decide how best to achieve the target. One performance standard, for example, might be a maximum quantity of pollution that a firm is allowed to emit over a given period of time, such as that allowed by tradable pollution permits. Failure to achieve the relevant target, however, would result in a fine or additional regulation.<sup>20</sup>

Although there is something to be said for performance-based regulation over command-and-control regulation,<sup>21</sup> both impose roughly the same informational demands on the regulator. Performance-based regulation, when compared to command-and-control regulation, reflects a greater degree of humility and skepticism with regard to how much the regulator can be expected to know about the cutting-edge technology in a given industry. It relies on the industry's (or the market's) information to a greater extent than command-and-control regulation. Nevertheless, both types of regulation make substantial informational demands on the regulator. To see why this is so, consider the following question: How is the performance-based regulator to choose the appropriate target level of performance or the appropriate fine for failing to meet that target? For example, how does Congress or the EPA determine the aggregate level of air or water pollution to permit? To answer such questions the regulator must have information about not only the level of harm caused by different levels of pollution but also the total social costs and benefits of both the activities that give rise to the pollution and the potential solutions.

*Incentive-based* regulation is superior to command-and-control and performance-based approaches because it requires less information of the regulator, and because it relies more on the market to generate the desired regulatory outcomes, than the other two approaches do. Under incentive-based regulation, the regulator simply forces the manufacturers to pay the total costs of their manufacturing activities. The manufacturers are then left to decide what to do about those costs, if anything. Thus, incentive-based regulation does not, in any way, tell manufacturers how to run their business (as command-and-control regulation does). Nor does it require the regulator

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20. The Proposed Resolution contains a couple of performance-based standards. The best known example is the so-called "look-back" provision, which would set target levels of underage smoking that the industry would pay a fine for failing to meet.

21. If there is a performance standard or target that is assumed to be desirable, performance-based regulation can be superior to command-and-control regulation as a means of achieving that standard, for the reason already described—manufacturers have better information. In addition, if we know what the target standard is, then enforcement of such a standard is relatively easy (because of the ease of monitoring compliance) compared to enforcement of command-and-control regulation, where the regulator must constantly defer to the informational advantage of the manufacturer.



to choose the ideal regulatory target (as performance-based regulation does). It simply makes the industry pay its costs, and lets the market sort things out. The general superiority of incentive-based regulation over command-and-control regulation in most settings is commonly accepted among efficiency-oriented scholars and is increasingly recognized by policy makers.<sup>22</sup> Indeed, most of the important debates in environmental regulation seem not to be over whether to use market forces, but how best to use market forces as a means of reducing pollution.

### B. *Ex Post vs. Ex Ante Incentive-Based Regulation*

Consider one additional definitional distinction: the distinction between “ex ante” and “ex post” incentive-based regulation. Under ex post incentive-based regulation, as we define the term, the regulator waits until after the harm occurs and then imposes the costs of that harm on the particular manufacturer responsible for it. Thus the manufacturer, in making its initial production decisions ex ante, will anticipate the possibility of such ex post liability and will take into account the expected value of those liability costs in deciding how much to invest in improving the safety of its cigarettes and in deciding how much to charge consumers for its brand of cigarettes. Under current law, we have a form of ex post incentive-based regulation: tort law or products liability law.

Ex ante incentive-based regulation, on the other hand, tries to impose those same expected accident costs on manufacturers before the harms actually occur. The typical example of this type of regulation would be an excise tax imposed on cigarettes. What is interesting is that the excise tax seems to be the preferred form of regulation among most economists. Indeed, among the economists writing about cigarettes, it seems to be the only regulatory tool that is given serious consideration. Why do economists have this preference for excise taxes? It is because a tax supposedly requires less information on the part of the regulator than command-and-control or performance-based regulation does.<sup>23</sup> Again, the idea is that the regulator can just measure harm and impose it on the manufacturer.

There are two general reasons why ex ante incentive-based regulation is inferior to the ex post version, especially in the cigarette context. First, choosing the appropriate rate of tax requires the regulator (as in the case of command-and-control and performance-based regulation) to have an

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22. See Hanson & Logue, *supra* note 3, at 1174–75.

23. See *id.* at 1268.

enormous amount of information up front (at the time the tax rate is set) about the costs and benefits of cigarettes, including the costs and benefits of alternative cigarette designs. In contrast, under an ex post regime, costs would be imposed on cigarette manufacturers only as the external harms caused by cigarettes actually became manifest. Thus, although the regulator would be responsible for sorting out after the fact what harms had been caused by cigarettes and should be charged to manufacturers, it would be the cigarette manufacturers who would decide up front how to make and market cigarettes to minimize those costs.

Second, an excise tax, unlike an ex post approach, does not create incentives for cigarette manufacturers to compete over safety. This is a very basic point, but it is central to the argument for an ex post regime and to our critique of the Proposed Resolution.<sup>24</sup> At best, an excise tax would impose on each manufacturer the average per pack external costs for the whole industry. Such a tax, however, provides no incentive for manufacturers to make investments in developing and manufacturing safer cigarette designs (such as nicotine-free cigarettes or low-carcinogen cigarettes) or in identifying relatively low-risk smokers (people who are least likely to suffer harmful effects from smoking). Any such innovations would cost a manufacturer money—research and development costs among others—but would provide essentially zero benefit to that manufacturer given that the taxes are fixed (or, if variable, are assessed on a market share basis).

If the taxes are fixed, then, of course, nothing that a manufacturer does can lower them. Even if the taxes vary to reflect the changes in the average costs imposed by cigarettes, however, manufacturers will not invest to lower those costs, because the benefit of such investments would be shared with the whole industry in the form of a reduced industry-wide excise tax. Again, each manufacturer would have a strong incentive to make no such safety-enhancing investments. This phenomenon is a special case of what policy scholars call the “common pool” or “free rider” problem. We sometimes refer to it as the “unraveling problem,” because, under such a scenario, the market for safety improvements may unravel, as each manufacturer realizes that making investments in safety enhancements is not in their financial best interest.

We should emphasize that our position is *not* that command-and-control, performance-based regulation, and excise taxes should never be used. In some non-cigarette situations (for example, in dealing with the problems of air pollution created by automobile emissions), command-and-

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24. See *infra* Part II.C.

control or performance-based regulation, or perhaps an excise tax, may be the only available options. This would be true if ex post incentive-based regulation (of the type we describe in greater detail in this Article) were considered impractical, perhaps because the harms associated with generalized air pollution are too widely dispersed to give rise to ex post damage claims brought by individual victims. It should be emphasized, however, that the cigarette market presents a setting in which ex post incentive-based regulation *is* available as a regulatory option. Therefore, those types of regulations are not viable *substitutes* for ex post incentive-based regulation of the cigarette market, for the reasons already discussed. Still, even in the cigarette context, command-and-control and performance-based regulation might be useful complements to an ex post incentive-based regime, for example, as additional means of reducing underage smoking.<sup>25</sup>

### C. Some Problems with the Proposed Resolution

Given the consensus in favor of incentive-based (and against command-and-control) regulation, one would hope that any proposal to regulate cigarettes would rely most heavily on incentive-based approaches, with little emphasis on command-and-control and performance-based regulation. In fact, the Proposed Resolution takes just the opposite approach. It is dominated by a renewed and strengthened emphasis on command-and-control regulation, including everything from new warning requirements<sup>26</sup> to new FDA control over the level of nicotine<sup>27</sup> and other ingredients<sup>28</sup> in tobacco products. In addition, the settlement contains the occasional performance-based approach—such as the “look back” provision designed to achieve specific targets of underage smoking by various points in time<sup>29</sup>—but those provisions, by virtually all accounts, involve penalties for failure to achieve the relevant targets that are too weak or otherwise ineffective.<sup>30</sup> Moreover, as we argued above, the way in which the penalties would be apportioned among tobacco companies (essentially on a market-share basis) would undermine each company’s incentives to reduce underage smoking.<sup>31</sup>

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25. See generally Hanson & Logue, *supra* note 3, at 1315 (making this point in greater detail).

26. See Proposed Resolution, *supra* note 4, at 9–11.

27. *Id.* at 15–17.

28. *Id.* at 19–20.

29. *Id.* at 24.

30. For a summary of the look-back provision and critiques of it, see Hanson & Logue, *supra* note 3, at 1331–36.

31. See generally Hanson & Logue, *supra* note 3, at 1315 (making a fuller version of this point).

Finally, the Proposed Resolution is especially remarkable for its rejection of ex post incentive-based regulatory approaches. In fact, by sharply curtailing products liability law as a means of regulating manufacturer behavior, the Proposed Resolution would eliminate the only existing incentive-based system with any potential for internalizing the external costs of smoking. The Proposed Resolution arguably includes an incentive-based component, insofar as the costs imposed on manufacturers are required to be passed through to consumers in the form of a price hike.<sup>32</sup> That mandated price hike would, like an excise tax, force manufacturers to bear at least some of the costs of their products. Viewing the Proposed Regulation in that light, some scholars have complained that the price hike is too small.<sup>33</sup> And some Senators and the Clinton administration have recently suggested the possibility of increasing the price hike to some amount closer to \$1.50 per pack.<sup>34</sup> In fact, there appears to be an emerging consensus among commentators and policy makers that the regulatory effect of the de facto excise tax needs to be enhanced and will have a greater regulatory effect than that of other aspects of the Proposed Resolution. But again, because of the common-pool problem, even an excise tax of \$1.50 per pack would not create incentives for manufacturers to make safer cigarettes.

### III. AN INTRODUCTION TO SMOKERS' COMPENSATION

As we have already mentioned, one type of ex post incentive-based regulation of cigarettes is currently in effect—that is, products liability law. And compared with the Proposed Resolution, we would prefer the status quo, which may be imperfect but at least has the potential for producing the sorts of deterrence incentives and pricing effects that we see as important. In this Part, however, we explore one alternative to products liability law, an administrative system of compensation and cost-internalization that we call *Smokers' Compensation*.

The following issues distinguish a Smokers' Compensation regime from other conceivable ex post incentive-based approaches, including a products

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32. See Proposed Resolution, *supra* note 4, at 35.

33. According to Jeffrey Harris, for instance, the proposed agreement would, if adopted, have the effect of a \$0.62 per pack excise tax on cigarettes. See Jeffrey E. Harris, Comments on Proposed Resolution (last modified June 26, 1997) <<http://web.mit.edu/jeffrey/harris/ACScomments.html>>, at 1-3 & tbl.2.

34. See Jeffrey Taylor, *More Senators Seem to Back Increasing Cigarette Prices Beyond Level in Accord*, WALL ST. J., Sept. 17, 1997, at A4.

liability regime: (a) who the decision-maker would be, (b) who the claimant would be, (c) what costs would be recoverable by a claimant, (d) what evidentiary showing a claimant would have to make to receive compensation, and (e) how a claimant's damages would be allocated among cigarette companies.<sup>35</sup> As we describe in greater detail below, one plausible version of a Smokers' Compensation regime would (a) be decided by some type of administrative tribunal, (b) be open only to smokers themselves or to those who bring claims on behalf of smokers (e.g., the smoker's estate or a subrogated insurer), (c) allow recovery only for those costs that tend to be covered under standard insurance and existing administrative compensation regimes according to pre-determined schedules, (d) require at least epidemiological evidence of a causal connection between the claimant's harm and her smoking, and (e) allocate damages among cigarette companies, as much as is feasible, according to each company's causal contribution to each claimant's harms.

#### A. The Tradeoffs Among Accuracy, Complexity, and Political Feasibility

Perfect cost internalization would be achieved only if all of the external costs of smoking were included in the system and only if those costs were perfectly allocated among cigarette manufacturers according to the extent to which each company's cigarettes contributed to the harm. In such a perfectly accurate deterrence regime, each cigarette company would bear the full costs of the harms that its cigarettes cause, but only those harms. But to achieve such a world would require an incredibly complex cost-internalization system whose administrative costs would almost certainly outweigh its deterrence benefits. Indeed, with any regime that seeks to create incentives to optimize deterrence, there is likely to be a tradeoff between accuracy and complexity.<sup>36</sup> Because achieving the former would

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35. The last two factors could also be understood as part of the same causal analysis.

36. As Professor Kaplow has observed, increased accuracy in adjudication will not inevitably produce deterrence gains. For example, Kaplow notes that, if the parties whose behavior is being regulated can only foresee—at the time they decide whether and how to engage in the regulated behavior—the average level of harm that their behavior may cause, then it would be a waste of resources to spend money to allocate damages *ex post* on a more fine-tuned basis. The deterrence benefits of such an investment would be nothing. See Louis Kaplow, *The Value of Accuracy in Adjudication: An Economic Analysis*, 23 J. LEGAL STUD. 307, 313–14 (1994); David Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 HARV. L. REV. 849 (1984). Kaplow goes on to argue, however, that a different conclusion may apply if the regulated parties have the ability to become informed regarding the actual risks posed by their behavior—as opposed to average risk posed by this general type of behavior. Kaplow, *supra* note

often require an increase in the latter, the goal is to optimize—to pursue accuracy until the next dollar in administrative costs incurred to achieve it yields only one dollar in welfare gains from improved deterrence.

Of course, in designing a smokers' compensation system for the real world, the goal of efficiency must compete with other goals and interests. Our objective in this Article is to propose a system that would be politically feasible and would, within the political constraints imposed, optimize the complexity and accuracy considerations mentioned above. To make such a proposal, we will assume that within the current political environment the following constraints are firmly in place.<sup>37</sup> First, the cigarette industry, although potentially on the verge of being subjected to significant governmental regulation,<sup>38</sup> has the political muscle<sup>39</sup> to avoid a plan that does

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36, at 316–18. In that case, so long as the more accurate information can be expected to be reflected in the ex post damage awards that the regulated parties will have to pay, and so long as the benefits of gathering the information (in terms of reduced ex post awards) will exceed the costs of information gathering, the regulated parties will have an incentive to acquire the relevant information and then to take it into account. *Id.* at 317. These conclusions are consistent with the reasoning underlying our justification of ex post incentive-based regulation of the cigarette industry. Our argument depends on the assumption that the tobacco industry, given the incentive to do so, can make ex ante determinations of what their relative share of the smoking-caused harms will be in society.

37. To be clear, it is not our view that many of the political constraints should be constraints. Indeed, as a review of our previously published, related work would suggest, we would prefer a world in which most of the constraints that we are about to describe did not exist. See generally Hanson & Logue, *supra* note 3; Jon D. Hanson & Kyle D. Logue, *The First-Party Insurance Externality: An Economic Justification for Enterprise Liability*, 76 CORNELL L. REV. 129 (1990); Steven P. Croley & Jon D. Hanson, *The Nonpecuniary Costs of Accidents: Pain-and-Suffering Damages in Tort Law*, 108 HARV. L. REV. 1787 (1995); Steven P. Croley & Jon D. Hanson, *Rescuing the Revolution: The Revived Case for Enterprise Liability*, 91 MICH. L. REV. 683 (1993); Steven P. Croley & Jon D. Hanson, *What Liability Crisis? An Alternative Explanation for Recent Events in Products Liability*, 8 YALE J. ON REG. 1 (1991).
38. Cf. David E. Rosenbaum, *Senators Agree on Forcing Up Cigarette Price*, N.Y. TIMES, Mar. 28, 1998, at A1 (“No other legislation Congress is likely to vote on this year would lead to such fundamental changes in the society. President Clinton has called it the most important public health measure in years.”).
39. The tobacco industry is, and has long been, a political powerhouse. The industry was described in 1979 by Senator Edward M. Kennedy as follows: “[D]ollar for dollar, they’re probably the most effective lobby on Capitol Hill.” Robert Pear, *A New Leaf; Now, the Archenemies Need Each Other*, N.Y. TIMES, June 22, 1997, at D1. Within the last several years, the tobacco industry’s lobbying efforts have grown particularly intense. In 1997, those efforts included expenditures of over \$30 million and the employment of such political heavyweights as Howard Baker, George Mitchell, and Ann Richards. See Maureen Dowd, *Integrity Clearance Sale*, N.Y. TIMES, Dec. 20, 1997, at A13. Also in 1997, Philip Morris was the top soft money contributor in the United States, donating \$1,253,253, mostly to the Republican Party. R.J. Reynolds contributed \$394,774 in soft money; Brown & Williamson \$170,000; the Tobacco Institute \$100,000; and U.S. Tobacco \$97,650. Center for Responsive Politics, *1997 Soft Money Donations* (posted Dec. 30, 1997) <<http://www.crp.org/pubs/parties/soft971.html>>; Center for Responsive Politics, *Soft Money Special*

not meet at least some of its interests, particularly its interest in making its liability costs more predictable.<sup>40</sup> We also assume that a complete prohibition of cigarette sales, at least among adults, is not a viable political option.<sup>41</sup> More generally, regulations that would result in the bankruptcy of several prominent cigarette manufacturers are unlikely to be adopted.<sup>42</sup> Nor are any proposals that would ultimately lead to a substantial black market in cigarettes.<sup>43</sup> We assume further that there is a widely held perception among

*Release* (posted Feb. 4, 1998) <<http://www.crp.org/crpdocs/feb98/softmoneyrelease.html>>. In addition, those entities' political action committees have made \$1,024,884 in direct contributions to candidates and parties in the 1997-98 campaign cycle. Center for Responsive Politics, *CRP Special Interest Categories: Tobacco* (visited Feb. 16, 1998) <<http://www.crp.org/cgi-win/org.exe?A02>>. This year, cigarette producers will likely make record contributions, although (or perhaps because) their political clout is clearly on the wane. See Jill Abramson, *Tobacco Industry Steps Up Flow of Campaign Money: Proposed Settlement Leads to Record Giving Even as Political Opposition Grows*, N.Y. TIMES Mar. 8, 1998, at A1. Though not what it once was, the industry's "political influence remains substantial." Rosenbaum, *supra* note 38, at A10.

40. The industry claims that its primary interest is in making its costs predictable. See *infra* text accompanying notes 173-74 (quoting the Proposed Resolution); Rosenbaum, *supra* note 38, at A10 ("[T]he industry has insisted on protection from lawsuits based on smoking-related illnesses. One of the industry's main goals is to have a degree of certainty about how much money it will have to pay in legal claims."); Congressional Testimony of N.G. Brookes, Chairman and Chief Executive Officer of Brown Williamson Tobacco Corporation, Jan. 29, 1998, 1998 WL 8991465. ("What does the industry get in return? Our primary benefit is a limited amount of financial stability from the resolution of some product liability claims against the industry." "[Those civil liability limitations] are valuable to the industry because they provide some stability to our business. We defended product liability cases for more than 40 years before entering into the current settlement. But we also recognize that the court system can sometimes be unpredictable. The civil liability provisions of the Proposed Resolution help us by allowing us to predict our future with some degree of certainty."); David E. Rosenbaum, *Tobacco Leaders Refuse to Budge on Pact*, N.Y. TIMES, Feb. 28, 1998, at A16 (describing how top tobacco executives testified that "they would never agree to modify their advertising and marketing practices unless the lawmakers gave the industry substantial protection against lawsuits"); *Hatch Says Tobacco Money Will not Be Used for Tax Cuts*, CONGRESS DAILY, 1998 WL 6604893 (quoting Senator Hatch: "I believe that consensus is developing around the idea of including liability provisions in a comprehensive anti-tobacco bill").
41. See, e.g., Congressional Testimony of Attorney General Gale Norton before the Senate Commerce Committee, Feb. 26, 1998, 1998 WL 8992534 ("I think it is naive to assume that 40-50 million current addicted smokers in the United States will simply quit using tobacco products. As the country experienced during Prohibition, it is more likely that a ban will result in illegal trafficking and smuggling of the product.").
42. See, e.g., Brookes Testimony, *supra* note 40; Norton Testimony, *supra* note 41 (providing a lengthy discussion of the problems with bankruptcy).
43. See, e.g., Rosenbaum, *supra* note 38, at A10 ("[S]ome [politicians] have cautioned that the price [of cigarettes] cannot be pushed so high that an illegal market develops."); David E. Rosenbaum, *Fight Against Big Tobacco Emboldens Democrats*, N.Y. TIMES, Feb. 16, 1998, at A12 (paraphrasing Newt Gingrich as saying that "it was important not to make cigarettes so expensive that a black market developed"); Norton Testimony, *supra* note 41 ("Contraband dealers are not going to be subject to federal, state or local regulation, will not be concerned with preventing youth state or local regulation, will not be concerned with preventing youth from having access to products, and are

lawmakers that the tort system (and the jury system) are often random and lottery-like and that juries are not capable of accurately deciding cases with complex, scientific evidence. Despite distrust of the tort system, we assume that any regulation protecting or immunizing the cigarette industry from the threat of tort law cannot appear to provide the cigarette industry with unprecedented protection.<sup>44</sup> Put differently, cigarette-industry regulations similar in kind and scope to those previously applied to other industries are likely the path of least political resistance. Additionally, we perceive in the tobacco debates a common position that notions of personal responsibility on the part of smokers must factor into regulation—that smokers who knew that smoking was potentially harmful should not receive a large windfall.<sup>45</sup> Finally, a proposal has a greater chance of being enacted; we suspect, if it would have the effect of substantially increasing government revenues or reducing government expenses. It is within the parameters established by those political constraints that we seek to balance deterrence accuracy and administrative costs.<sup>46</sup>

A great deal in administrative costs could be saved (and hence deterrence could be purchased relatively cheaply) if three things were true. First, all smoking-related injuries would be “signature diseases.” (They would, in other words, be caused exclusively, or nearly so, by smoking.) Second, smokers would be steadfastly loyal to their favorite brands of cigarettes, sticking to their preferred brand as long as they smoke. And third, all smoking-caused damages would be tangible and easily measured. In such a cheap-deterrence world, the Smokers' Compensation analysis would be greatly simplified. If a claimant had one of the signature diseases, the system could easily place liability on the manufacturer that caused the harm for an appropriate amount, and the costs of smoking would be appropriately internalized.

The good news is that the ideal world is not as far from the real world as most readers might assume. Certain diseases, most notably lung cancer and chronic lung disease, are significantly more common among smokers

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certainly not likely to be easily brought into court to compensate those injured.”).

44. Cf. Rosenbaum, *supra* note 38, at A 1 (“The tobacco companies are such pariahs in the public’s eye that few lawmakers can afford to vote for a bill that the industry endorses.”).
45. See Hanson & Logue, *supra* note 3, at 1350.
46. It is important to note that these political assumptions represent our best estimates of the practical constraints facing any tobacco proposal, including our Smokers' Compensation proposal. Differing assumptions may change the calculus and suggest different policy choices. Again, by describing these political constraints, we do not mean to endorse them. Indeed, we find many of them lamentable and accept them on pragmatic grounds only because of our impression that they are unlikely to change before lawmakers enact some sweeping form of cigarette regulation.



than they are among nonsmokers and smoking is very likely to be the central cause of those diseases among smokers.<sup>47</sup> We will sometimes refer to these as “quasi-signature diseases.” There is also evidence that smokers are extremely brand loyal.<sup>48</sup> Moreover, a substantial portion of smoking costs is economic and may be easily and accurately measured.<sup>49</sup> Thus, except for the sheer volume of claims that would be brought, we are hard pressed to imagine a commonly used consumer product for which a deterrence-oriented ex post compensation system could be more easily and effectively adopted.

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47. For example, 87% of all cases of lung cancer, a disease that kills 123,000 Americans annually, are attributable to smoking, though only 30% of the population smokes. To put the point differently, a smoker is 22.4 times more likely to die of lung cancer than is a nonsmoker. For chronic lung diseases, such as emphysema, the numbers are 72% and 9.6 times. Other diseases exhibit similar incidence levels in smokers: for example, mouth cancer (89% and 27.5 times), laryngeal cancer (74% and 10.5 times), and esophageal cancer (66% and 7.6 times). See Patrick Remington, *Assessing the Health Effects of the Proposed Tobacco Settlement* (Working Paper: Proceedings of the Conference on the So-Called Global Tobacco Settlement: Its Implications for Public Health and Public Policy) at 8, tbl.1.

48. Professor Pollay and his co-authors recently summarized the evidence on brand loyalty as follows:

The cigarette industry is . . . well known for its phenomenally high brand loyalty, the highest of all consumer product categories . . . . A relatively low rate of brand switching is evident, typically 10% or less . . . . There is nominal switching within brand families (e.g., from Brand X milds to Brand X lights), which is of little consequence to a firm's net profit. High brand loyalty resulting from nicotine “satisfaction” of those addicted makes it difficult and expensive to convert competitors' customers. Most of the brand switching that does occur is by older, health-concerned, or symptomatic smokers trading down, typically within a brand family, to products with lower tar and nicotine labeling, in the misguided belief that those products are safer. As a result, the net present value of gaining the trade of these older customers is low compared with the value inherent in attracting young starters, the vast bulk of whom will be highly brand loyal for many years . . . .

Richard W. Pollay, et al., *The Last Straw? Cigarette Advertising and Realized Market Shares Among Youths and Adults, 1979-93*, 60 J. OF MKT'G I (1996) (citations omitted); See also Joe B. Tye, et al., *Tobacco Advertising and Consumption: Evidence of a Causal Relationship*, 8 J. PUB. HEALTH POL'Y 492, 493 (1987) (“Cigarettes enjoy one of the most tenacious brand loyalties of any consumer product.”); Philip H. Dougherty, *A.M.A.'s Assault on Tobacco*, N.Y. TIMES, Dec. 12, 1985, at D29 (“Unlike most products you could name, cigarettes engender considerable brand loyalty.”); OFFICE ON SMOKING & HEALTH, U.S. DEP'T OF HEALTH & HUMAN SERVS., *REDUCING THE HEALTH CONSEQUENCES OF SMOKING: 25 YEARS OF PROGRESS* 507 (1989) [hereinafter SURGEON GENERAL'S PROGRESS REPORT] (reviewing studies that indicate that fewer than 10% of smokers change brands in any given year and that “[m]uch of the limited brand switching that occurs is necessarily between brands of the same company”).

49. One study estimated that the economic costs of smoking in direct health care costs and lost productivity were \$100 billion in 1993. AMERICAN CANCER SOCIETY, *CANCER FACTS & FIGURES-1997* 23 (1997). We will describe losses as “economic” or “pecuniary” if they are conventionally characterized that way. Our view, however, is that many so-called “economic” losses are actually nonpecuniary losses that can be readily measured. See Croley & Hanson, *The Nonpecuniary Cost of Accidents*, *supra* note 37, at 1857-61.

Nevertheless, the cheap-deterrence conditions are not always met, at least not entirely. For instance, although smoking is known to increase the risk of heart disease, there are a number of other potential causes of heart disease as well. Similarly, some smokers do occasionally switch brands. Insofar as the real world diverges from the cheap-deterrence world, it becomes necessary to weigh the value of increased accuracy in attaching injury costs to manufacturers against the administrative costs of achieving that accuracy. A similar tradeoff between accuracy and administrability exists with respect to calculating real-world damages.<sup>50</sup>

In the following section, we explore how the balance between accuracy and complexity in adjudication has been struck in a number of real-world regulatory contexts that are similar (and dissimilar) in important ways to the cigarette context and in which political constraints similar to those we highlighted above played a role. Then in Part IV, we describe a range of options for how the tradeoff between accuracy and complexity might plausibly be made in connection with a Smokers' Compensation regime.

## B. Real World Models for Smokers' Compensation

Causation-based administrative alternatives to tort law are by no means strangers to the legal landscape.<sup>51</sup> Workers' compensation systems usually provide the exclusive remedy for employees injured on the job in every

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50. One implication of this analysis of the tradeoff between accuracy and complexity is that, before any new regulatory regime is adopted, policymakers should dedicate some resources (time, effort, perhaps money on research) to examining further the extent to which there are signature smoking diseases and the extent to which smokers are brand loyal.

51. Professors Abraham and Liebman have drawn a distinction between three types of compensation systems: loss based, causation based, and fault based. Kenneth S. Abraham & Lance Liebman, *Private Insurance, Social Insurance, and Tort Reform: Toward a New Vision of Compensation for Illness and Injury*, 93 Colum. L. Rev. 75, 86 (1993). Under a loss-based system, a claimant must show that she has suffered a loss. The source of the loss and the circumstances in which the loss occurred are largely irrelevant. Examples of a loss-based system include any private or public first-party health, life, or disability insurance. Under a causation-based approach, by contrast, the claimant must show not only that she suffered a loss but also that it was the result of a particular type of cause. For example, under workers' compensation, the claimant must show not only her loss but also that it was work related. Finally, under the fault-based approach, the claimant must show a) that she suffered a loss, b) caused by a particular party, c) who was negligent or otherwise at fault. The tort system is the obvious example. Smokers' Compensation is, as we have said, a causation-based approach. Abraham and Liebman do not attribute any special deterrence advantage to causation-based compensation systems, but rather focus on fault-based approaches as a potential source of deterrence. *Id.* at 87-88. Even with respect to fault-based regimes, however, Abraham and Liebman are skeptical that the deterrence benefits are as great as is claimed, especially in cases involving long-latency periods. *Id.*

state.<sup>52</sup> Federal causation-based compensation systems include the Black Lung Benefit Program for miners suffering from lung disease and the National Vaccine Injury Compensation Program for victims of illnesses contracted from immunizations.<sup>53</sup> The Dalkon Shield Claimants Trust, established through settlement of a class-action lawsuit, provides an example of a privately-developed alternative to tort law. Those examples illustrate how other compensation systems have dealt with the five factors—who decides, who brings claims, which costs are covered, what evidentiary showing is required, and how to allocate damages—when juggling accuracy, administrability, and political constraints. Perhaps more important, those examples, taken together, deliver a fairly clear message that although state and federal legislatures have occasionally been willing to create some tort-law immunity for some industries, they have rarely done so without simultaneously substituting some form of ex post compensation system in its place. Thus, the tobacco industry, in lobbying for the Proposed Resolution, appears to be seeking special treatment not just among most product manufacturers, who have long been and would remain subject to tort penalties, but also among that tiny minority of industry groups that have been granted substantial tort law protection.

### 1. *Workers' Compensation*

Workers' compensation is a causation-based compensation system that functions largely outside of the courts and provides the exclusive remedy in most worker injury cases.<sup>54</sup> The details vary from state to state, but the basic form is usually similar.<sup>55</sup> A workers' compensation claim is initiated by the injured employee, who notifies his employer and then seeks medical care. Claimants are required to bring forth (1) evidence substantiating proof of

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52. U.S. CHAMBER OF COMMERCE, 1994 ANALYSIS OF WORKERS' COMPENSATION LAWS at vii (1994).

53. For a brief description of the Childhood Vaccination Compensation Program, see Robert L. Rabin, *Some Thoughts on the Efficacy of a Mass Toxics Administrative Compensation Scheme*, 52 MD. L. REV. 951, 955–60 (1993). The Black Lung program is discussed in PETER S. BARTH, *THE TRAGEDY OF BLACK LUNG: FEDERAL COMPENSATION FOR OCCUPATIONAL DISEASE* (1987).

54. See Note, *Exceptions to the Exclusive Remedy Requirements of Workers' Compensation Statutes*, 96 HARV. L. REV. 1641 (1993). Due to administrative delays, inadequate benefits, and frequent contests about compensation or degree of impairment, there have been doctrinal exceptions carved out of the general "exclusive remedy" doctrine. These include the "dual capacity" exception (allowing employees to sue employers for torts based on independent duties generated by nonemployer-employee relationships), and the exceptions for suits against parent/sibling corporations, for intentionally inflicted torts, and for contribution and indemnity from third-parties.

55. The procedures and structure described here are drawn primarily from New York.

employment,<sup>56</sup> (2) factual information regarding the workplace,<sup>57</sup> and (3) medical records detailing the injury.<sup>58</sup> The employer or the employer's insurer, not the employee, pays for necessary medical care.<sup>59</sup> An injured worker may collect actual medical expenses and lost earnings.<sup>60</sup> The lost earnings are awarded after only a short wait, and amount to a fraction, usually two-thirds, of earnings up to a statewide maximum.<sup>61</sup> Most workers' compensation systems also award scheduled awards for partial permanent disability, such as loss of a limb, but do not explicitly compensate intangible losses, such as pain and suffering.<sup>62</sup> In nearly all jurisdictions, workers' compensation decisions are made by an administrative law judge or panel, and usually may be appealed to the workers' compensation board.

Most states require employers to carry workers' compensation insurance, which covers workers' compensation awards. When the employer does not comply with the insurance requirement, many states follow New York in establishing some type of an Uninsured Employees Fund which immediately compensates the employee and retains the right to later sue the uninsured employer for indemnification.<sup>63</sup>

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56. See THOMAS F. MANCUSO, *HELP FOR THE WORKING WOUNDED* 203 (1976).

57. *Id.* (noting "the e of work done and the work exposures to specific dusts, fumes, mists, gases, noise, etc; the presence or absence of ventilation control measures; the presence or absence of protective clothing, including respirators that may be required; information as to whether air-sampling and measurements of toxic substances were done, where, when, and how often").

58. *Id.* ("These would include the medical examinations and tests, like chest x-ray, blood and urine analyses, done at the time of hiring and subsequent tests at the plant during the course of employment.").

59. Subrogation is an issue only where a third party is either partially or fully responsible for the employee's injuries. The employee may bring a suit against the third party for full damages regardless of the outside party's level of culpability. The third party, in return, can sue the employer for contribution, and the employer is then said to have a "lien" on the employee's winnings for any WC benefits previously paid. See William Bassin, *An Analysis of Employer Contribution to Third Parties Under Workers' Compensation Statutes*, 30 TORT & INS. L.J. 844 (1995).

60. See Martin Minkowitz, *Introduction to Workers' Compensation Law*, 460 PLI/Lit 11 (1993).

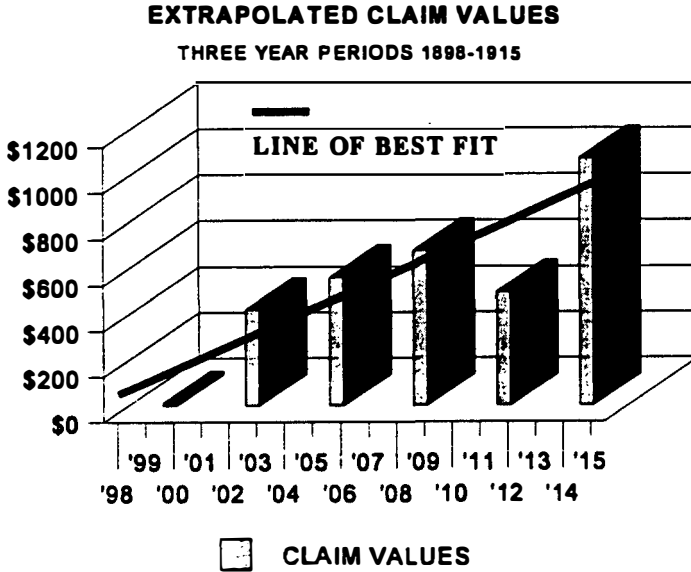
61. *Id.*

62. Most states do, however, provide for cases of mental distress—especially mental injuries resulting from "sudden" work-related instances—cumulative trauma, and rehabilitation expenses. See Gary T. Schwartz, *Waste, Fraud and Abuse in Workers' Compensation: The Recent California Experience*, 52 MD. L. REV. 983 (1993); see also Donald T. DeCarlo & Martin Minkowitz, *Workers' Compensation and Employers' Liability Law: Recent Developments*, 26 TORT & INS. L. J. 444 (1991).

63. See MINKOWITZ, *supra* note 60, at 10.

The historical forces behind the state-by-state adoption of workers' compensation laws were strikingly parallel to the forces behind the current efforts to adopt new forms of cigarette-industry regulation. Prior to enactment of workers' compensation laws, employers had long enjoyed virtually complete tort law immunity because of the assumption of risk defense and similar defenses available to manufacturers. For numerous reasons,<sup>64</sup> that state of affairs began to change in the early twentieth century.<sup>65</sup> For example, according to one study, the known injury values for 55 of the work-injury cases filed against the U.S. Steel company in Ohio between 1898 and 1915 indicate that the "market value" of workers' injuries increased sevenfold (see Figure 1).<sup>66</sup> "What these figures roughly demonstrate is that . . . both juries and judges were more and more inclined to shift that social cost of work-sustained injury over to the corporate balance sheet. This spiraling injury value phenomenon was well known to employers generally."<sup>67</sup>

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64. Several states passed statutes severely limiting the traditional employers' defenses to liability. For example, Ohio passed the Norris Act in 1910 which gutted the "fellow servant" rule by expanding the definition of superior servants. See PAUL B. BELLAMY, *A HISTORY OF WORKMEN'S COMPENSATION 1898-1915: FROM COURTROOM TO BOARDROOM* 38 (1997). And California passed a similar act, the Roseberry Act, in 1911 which abolished the common law defenses and imposed liability without regard to negligence for injuries sustained by the employee in the course of his employment. See Rita Maroney McPeake, *Managing the Private Law Library 1992: Trends, Ideas and Solutions: Workers' Compensation Law*, 335 PLI/Pat 408 (1992).
65. DON DEWEES, DAVID DUFF & MICHAEL TREBILCOCK, *EXPLORING THE DOMAIN OF ACCIDENT LAW: TAKING THE FACTS SERIOUSLY* 349 (1996) [hereinafter DEWEES, DUFF & TREBILCOCK] ("When workers' compensation insurance was first introduced, the tort law applicable to workplace accidents was in a process of rapid evolution. The nineteenth century doctrines of voluntary assumption of risk, the fellow-servant rule, and contributory negligence—all of which had acted as bars to tort recovery by injured workers—were being transformed or discarded, and workers were succeeding in an increased number of cases." (footnotes omitted)).
66. See Bellamy, *supra* note 64, at 169.
67. *Id.* at 170-71.

**Figure 1**

At the same time, lawmakers became serious about adopting greater worker protections outside of tort law.<sup>68</sup> Underlying both types of changes were numerous social, political, and economic shifts that combined to make judges, juries, and legislatures more sensitive to the plight of injured workers.<sup>69</sup> Broadly speaking, as Progressive notions of national

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68. See GRATTET T. RYKEN, *AT PLAY IN THE FIELD OF THE LAW: PROGRESSIVE REFORMERS AND THE TRANSFORMATION OF INDUSTRIAL ACCIDENT LAW* 56 (1994). Ryken claims that legislators, seeing the problem of industrial accidents as a public health concern amidst a messy legal doctrine of private contract, "created a space for the state, as representative of the public, to become a kind of third party to the employment contract. The state's job would be to ensure that the contract did not produce any harms to the public health and welfare." See also Paul Raymond Gurtler, *The Workers' Compensation Principle: A Historical Abstract of the Nature of Workers' Compensation*, 9 *HAMLIN J. PUB. L. & POL'Y* 285, 292 (1988) ("[H]eavy reliance on tort theory actually led to the eventual enactments of Employers' Liability Statutes across the country. However, tort theory, at best, only played the limited role of restoring 'the [injured] employee to a position no worse than that of a stranger injured by the negligence of the employer . . . .' Quite obviously, a new legal principle was needed.").
69. For a description of some of the historical factors surrounding the rise of workmens' compensation, see Bellamy, *supra* note 64, at 24, 109, 120 & 205.

responsibility took root, the discourse regarding industrial accidents was transformed from purely a matter of private contract between master and servant into a major public health concern.<sup>70</sup>

In light of those historical forces, workers' compensation laws have often been described as a compromise solution among the various interests at stake.<sup>71</sup> Employers escaped the growing threat of tort damages but, in exchange, had to accept partial responsibility for all work-related injuries and deaths. Particularly because of its institutional advantages in aggregating, managing and accumulating injury statistics, corporate America is said to have had a strong economic motive to trade rising compensation awards and uncertain liability for predictably capped damage amounts.<sup>72</sup> Arguably, some injured workers, who otherwise may have faced the obstacle of overcoming one or more employer tort-law defenses, also benefited from the more certain and more immediate, albeit less generous, awards of workers' compensation laws.<sup>73</sup> In short, the reduced administrative cost and the greater certainty regarding the outcome of each individual case represented a savings to both sides.

The experience of workers' compensation systems indicates that the primary goals motivating them have been reasonably well served. Administrative costs constitute 15%–20% of total costs of claims in U.S. workers' compensation systems (and only around 10% of the workers' compensation system in Ontario).<sup>74</sup> In contrast, the administrative costs of

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70. See Ryken, *supra* note 68, at 19.

71. Compare BELLAMY, *supra* note 64, at 184 (noting that "the reform received the unflinching support of the state's large manufacturing employers . . . . At least part of the impetus for pushing for the reform lay in the recent passage of the Norris Act, which severely delimited the employer defenses of contributory negligence and the fellow servant rule. . . ) with U.S. DEPARTMENT OF LABOR, SUMMARY OF STATE WORKMENS' COMPENSATION LAW, LABOR LAW SERIES NO. 10 (1997) ("Workmens' compensation laws are intended to assure prompt payment of benefits to employees injured in the course of their employment or to the dependents of those killed, regardless of fault, and with a minimum of legal formality.")

72. See, e.g., BELLAMY, *supra* note 64, at 206 ("The large industrial, transportation and insurance corporations conducted operations large enough to amass the actuarial data required to come to an understanding of the predictable course of employee injuries, examined over time."). Note that workers' compensation costs did not reflect a pure cost increase to employers who were then able to lower wages because of the credible promise of ex post compensation that they provided. DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 347–48, 396.

73. BELLAMY, *supra* note 64, at 37–40. The traditional defenses were: assumption of risk, contributory negligence, and the fellow-servant rule. Note, however, that, by the early 20th century, those defenses had been largely undermined by state statutes outlawing traditional defenses, see *supra* note 65–66 and accompanying text, and the applicable negligence standard may have expanded into a de facto strict liability rule, see BELLAMY, *supra* note 64, at 202. Thus, workmens' compensation may have merely "reformed the system by freezing it in stasis." *Id.*

74. See DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 393–94.

the tort system eat up closer to 50% of the total costs of claims.<sup>75</sup> Workers' compensation benefits in this country typically are paid within three weeks to four months of when a claim is initiated, whereas the delay in most tort claims (at least those made in federal courts) is between fifteen to twenty months.<sup>76</sup>

Although workplace-accident deterrence is not the primary goal of workers' compensation systems, it bears noting that those systems have had significant deterrence benefits.<sup>77</sup> Professors Dewees, Duff, and Trebilcock have summarized most of the empirical evidence comparing the efficacy of workers' compensation programs to alternative or supplementary regulatory options, including tort law, command-and-control style administrative regulation,<sup>78</sup> criminal sanctions, informational policies, and tax and insurance instruments. In their opinion, the evidence reflects well on workers' compensation programs.

As they conclude, the

operation of the workers' compensation system does reduce worker injury rates and that for high-risk industries and risk-rated firms this reduction is substantial, although the absolute magnitude of the effect is subject to enormous uncertainty. We accept the evidence that this effect is greater than that created by the tort system or that created by U.S. federal occupational safety and health regulation.<sup>79</sup>

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75. *Id.* at 394.

76. *Id.* These statistics must be viewed with caution, however. The costs of administering *occupational disease* claims and the time necessary for administering such claims are significantly higher than that of average workers compensation claims (though still significantly lower than that of the average tort claim). *Id.* It seems likely that at least some of the special costs and delays created by disease claims under workers' compensation systems would be present in many of the claims brought under a Smokers' Compensation system.

77. *See id.* at 386 ("Workers' compensation is designed primarily to compensate workers, with deterrence of harmful behavior as a secondary goal.").

78. *Id.* at 365 (explaining, as we would predict, that "[m]ost of the economics literature argues that OSHA has set inappropriate standards, and even those who tend to support a significant regulatory role for OSHA have difficulty with the existing type of standards").

79. *Id.* at 382; *see id.* at 378-82 (summarizing various studies); *see also id.* at 386 ("The most dramatic findings is that of Moore and Viscusi, who conclude that the occupational fatality rate in the United States would have been 40% higher were it not for the deterrent effect of workers' compensation, implying that workers' compensation has been far more effective in saving workers' lives than OSHA, for which the reduction in risk levels has been estimated to be as low as 2%-4%." (citation omitted)); *id.* at 389 (explaining how workers' compensation system has such useful deterrence effects).



Indeed, in their view, the “relatively impressive performance of the workers’ compensation system, and its considerable advantages and modest disadvantages relative to tort, may explain why criticism of workers’ compensation over many decades has consistently led to recommendations for reform and adjustment rather than for abolition.”<sup>80</sup>

## 2. *Childhood Vaccination Compensation Program (CVCP)*

The CVCP creates something of a hybrid system between a fault-based system and a causation-based compensation system. A party injured by one of the covered childhood vaccines files a petition with the U.S. Claims Court along with certain information necessary for a finding that compensation is due. The Court then appoints a special master to conduct hearings and make findings of fact and conclusions of law. The master is empowered to require evidence, including testimony, production of documents, and hearings. There is no discovery, cross-examination, pleadings, or trial. If neither party contests the master’s findings, the court must accept them. Otherwise, the court will review the evidence and make a determination and award damages. Claimants are not responsible for establishing causation by a standard of “scientific certainty.” Rather, the injured party is responsible for producing documents, reports, and any information regarding the nature, causation, or aggravation of a specific illness, which the special master will weigh according to a “preponderance of the evidence” standard. Compensation is contingent upon the injured party’s showing either that (1) she has experienced one of the four injuries or conditions listed on the vaccine injury table, or (2) in cases involving injuries not listed on the table or outside the stringent time frame, that her injury is more likely than not linked to the vaccine.<sup>81</sup>

The program compensates for economic losses of unreimbursed medical costs, lost wages, and reasonable attorney’s fees. It also allows up to \$250,000 in pain and suffering damages at the discretion of the judge, and a flat \$250,000 death benefit. Damage awards are paid by a fund administered by the Secretary of Health and Human Services and financed

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80. *Id.* at 396; *see also id.* at 361 (“There has been no suggestion that workers’ compensation should be abandoned and replaced by a pure tort system; indeed, this would be counter to trends in other fields where negligence-based tort recoveries are being replaced, at least in part, by no-fault or general accident insurance schemes. Nothing in our empirical review would lead us to propose such a change.”).

81. *See* Susan G. Clark, Comment, *The National Childhood Vaccine Injury Act: The National Vaccine Injury Compensation Program*, 94 ED. LAW REP. 671, 676–77 (1994).

by an excise tax on the sale of the covered vaccines. Manufacturers are therefore either not liable for damages awarded by the CVCP or, to the extent they are, their liability is allocated by market share.<sup>82</sup> The CVCP is meant to be expeditious (proceedings should not exceed one year), accessible, and informal.<sup>83</sup> The act imposed on lawyers an "ethical obligation" to inform their clients about the process and instructs the Secretary of Health and Human Services to publicize the system.

After the Claims Court rules on a claimant's case, the claimant has a choice either to accept that award or, within 90 days, to file a tort action. To discourage tort claims, however, the vaccine statute limits manufacturers' liability somewhat. First, manufacturers are immunized from liability in tort for the unavoidable side effects of the vaccine, if the product was properly prepared and accompanied by warnings, which are presumed to be adequate. Relatedly, the statute specifically provides that warnings can be made to physicians, and they need not necessarily be provided to end users—a result that effectively preempts some state rulings on this question. Finally, punitive damages are sharply restricted.<sup>84</sup>

The reasons for providing special tort protections to manufacturers of childhood vaccines were, at least abstractly, similar to the reasons now offered for providing cigarette manufacturers some tort law protections. That is, putatively unpredictable, expanding, and administratively costly tort liability did not provide injured consumers reliable compensation and threatened the very survival of an industry (or at least certain members of an industry) that policy makers believed should be protected.<sup>85</sup> Insofar as the

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82. Eliminating manufacturer liability in fact motivated creation of the CVCP. The program was enacted in response to a perceived vaccination crisis, in which manufacturers of beneficial products were pulling their products from U.S. markets to avoid crippling lawsuits. Given vaccines' positive externalities to the community and the requirement in all states and the District of Columbia that children be vaccinated, Congress considered it appropriate that the public at large bear the costs. See Mary Beth Neraas, Comment, *The National Childhood Vaccine Injury Act of 1986: A Solution to the Vaccine Liability Crisis?* 63 WASH. L. REV. 149, 150–51 (1988).

83. But see Lisa J. Steel, *National Childhood Vaccine Injury Compensation Program: Is This the Best We Can Do for Our Children?* 63 GEO. WASH. L. REV. 144, 146 (arguing that the "strict adherence by the Special Masters and the Department of Health and Human Services to the Vaccine Injury Table . . . makes it nearly impossible to establish an injury outside that Table. The Compensation Program under the Act is adversarial and the issues are technical . . .").

84. See Randall B. Keiser, *Déjà Vu All Over Again? The National Childhood Vaccine Injury Compensation Act of 1986*, 47 FOOD & DRUG L.J. 15 (1992).

85. See DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 240–45; Clark, *supra* note 81, at 674 (describing the dual concerns of inadequate, time-consuming litigation on the part of the plaintiffs, and possible market elimination of vaccine manufacturers in a world of increasing liability for unavoidable injuries); see also Neraas, *supra* note 82, at 159 (arguing that inconsistent court decisions regarding manufacturers' duties to warn have created a disincentive for pharmaceuticals

CVCP protects the industry from tort liability, however, the goal of the system appears to be purely a compensation goal, not a deterrence goal. That goal is, we think, understandable in part because some of the basic deterrence arguments in favor of liability do not clearly apply in the vaccine context<sup>86</sup> and in part because there remains under the CVCP a residual role for tort law to protect against the manufacture of unsafe vaccines.<sup>87</sup> Very recent developments suggest that the goal of keeping the vaccine industry afloat by reducing the threat of tort liability has been met.<sup>88</sup>

### 3. *Black Lung Program*

Congress established the Black Lung Program in 1969 to provide benefits to coal miners, and their surviving dependents, who are totally disabled by or who die from pneumoconiosis (black lung disease) arising from their employment in or around the nation's coal mines.<sup>89</sup> Initially the Social Security Administration administered the Black Lung Program, but since 1978 the Department of Labor has administered virtually all claims.<sup>90</sup>

The Deputy Commissioner of the Workers' Compensation Program reviews the claims.<sup>91</sup> There are three requirements to receive benefits which the claimant can establish by advancing rebuttable presumptions:<sup>92</sup> (1) the miner

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to continue manufacturing vaccines).

86. See DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 240-42; Croley & Hanson, *supra* note 37, at 87-88; see also Neraas, *supra* note 82, at 163 (stating that the tort system is not appropriate where society has enacted a compulsory public health measure "knowingly undertaking the risk that a small number of children will inevitably suffer severe reactions from the vaccination"); Steel, *supra* note 83, at 152 ("Vaccines cannot be made free from risk of injury but they are necessary for society to defeat disease.").
87. See DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 243 (describing the residual role of tort law in this context); Keiser, *supra* note 84, at 68 (explaining that only failure to warn of unavoidable adverse side effects and failure to provide direct warnings to the ultimate recipient of the vaccine are preempted by the CVCP, but that all other theories of potential liability remain available to plaintiffs, including those for defectively designed vaccine products and manufacturing defects).
88. See Elyse Tanouye, *The Vaccine Business Gets a Shot in the Arm*, WALLST. J., Feb. 25, 1998, at B1 (describing why "the vaccine business is heating up, with potentially huge implications for drug-industry profits and public health," including the "changes in product-liability laws").
89. Title IV of the Federal Coal Mine Health and Safety Act, Pub. L. No. 91-173, 83 Stat. 792 (1969) (codified as amended at 30 U.S.C. §§ 901-45 (1994)). See generally DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 394-95 (describing the Black Lung program as a type of workers' compensation program).
90. See FRANK, S. BLOCH, FEDERAL DISABILITY LAW AND PRACTICE 548 (1989).
91. See 20 C.F.R. § 725.351 (1997).
92. See Barth, *supra* note 53, at 115. A miner with pneumoconiosis who is able to establish employment of 15 years or more in an underground coal mine and where evidence indicates totally disabling respiratory or pulmonary impairment, there shall be a rebuttable presumption that the

must have a total disability arising out of coal mine employment, (2) the total disability must be due to pneumoconiosis, and (3) the pneumoconiosis must be the result of coal mine employment.<sup>93</sup> Total disability is defined as the inability to engage in gainful employment requiring the skills and abilities comparable to those that a miner uses in coal mine employment.<sup>94</sup> Once the claimant meets the burden of establishing a presumption, the burden shifts to the coal mine operator or the Department to rebut the claim.<sup>95</sup> This can be a difficult burden to meet, however, given the specific lines of argument that the Labor Department has identified as *not* being sufficient to defeat the presumption. For example, the presumption does not shift after a showing by the defendant that the claimant had other lung conditions, that the claimant had other respiratory problems before coming to work at the mines, or that the claimant was exposed to additional dust in another employment setting.<sup>96</sup>

If the burden is not met by the employer, the claimant may receive income benefits (37.5% of the federal Grade GS-2 salary level),<sup>97</sup> medical benefits,<sup>98</sup> and reasonable attorney fees.<sup>99</sup> Surviving spouses, divorced spouses, children, siblings, parents, and other dependents of the deceased miner may claim benefits after the miner's death.<sup>100</sup> The benefits administered by the Department of Labor are paid by the responsible coal mine operator;<sup>101</sup> if there is not a responsible coal mine operator, the federal Black Lung Disability Trust Fund pays the beneficiary.<sup>102</sup> The Fund is supported by an excise tax on producers of coal for each ton of coal sold.<sup>103</sup> The benefits administered by the Social Security Administration are paid out of the federal government's general revenues.

If either the claimant or the operator is dissatisfied with the Department's decision, an objection must be filed within 30 days.<sup>104</sup> After another

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miner is totally disabled by pneumoconiosis.

93. See *Mullins Coal Co. v. Director, OWOP*, U.S. Dept. of Labor, 484 U.S. 135, 141 (1987); see also 30 U.S.C. § 901(a) (1994).

94. See 30 U.S.C. § 902(f)(1)(A) (1994); 20 C.F.R. § 718.204(b) (1997); see generally 20 C.F.R. § 718 (1997).

95. See 20 C.F.R. § 727.203(b) (1997).

96. See *Barth*, *supra* note 53, at 112.

97. See 30 U.S.C. § 922 (1994); 20 C.F.R. § 725.520 (1997).

98. See 30 U.S.C. § 924(a) (1994).

99. See 26 U.S.C. § 9501(d) (1994); 20 C.F.R. § 725.530 (1997).

100. See 20 C.F.R. § 725.201 (1997).

101. See 30 U.S.C. § 932(b) (1994).

102. See 26 U.S.C. § 9501(d) (1994); 30 U.S.C. § 934 (1994).

103. See 26 U.S.C. § 4121 (1994).

104. See 20 C.F.R. § 725.419 (1997).

Department review, a party can appeal to an administrative law judge to review findings of fact and law.<sup>105</sup> Further appeals are taken to the Benefits Review Board, which was established by the Longshoremen's and Harbor Workers' Compensation Act,<sup>106</sup> and then to the Court of Appeals for the circuit where they most recently worked and most likely acquired pneumoconiosis.<sup>107</sup>

The history of the Black Lung movement differs somewhat from the other causation-based compensation programs in that it arose out of a growing public awareness of (1) the specific dangers surrounding the mining industry and its workers,<sup>108</sup> (2) the insufficiency of state workers' compensation programs with respect to injured miners,<sup>109</sup> and (3) gradual medical acceptance of the existence of such "dust diseases."<sup>110</sup> In addition, the political leverage gained through a series of "wildcat strikes" in 1969,<sup>111</sup> as well as the failure of the mine operators to present a unified opposition,<sup>112</sup> allowed the miners and their advocates to aggressively lobby for stringent safety standards and adequate compensation programs. Despite the initial legislative focus on safety, most of the battle lines between the operators and the miners were drawn with regard to the issue of "compensation," and subsequently, to the problematic issue of the funding source behind any such compensatory program. As Senator Byrd's testimony indicates, the primary concern in drafting was not in deterring operators or allocating responsibility especially at a time when "overhead costs [were] already very high and at a time when it [was] difficult for the product [coal] to remain competitive in

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105. See 20 C.F.R. § 725.421 (1997).

106. See 33 U.S.C. § 921(b) (1994); 20 C.F.R. §§ 725.481; 801-802.44 (1997).

107. See 20 C.F.R. §§ 725.482; 802.410; 802.411 (1997).

108. The Farmington disaster, resulting in the death of 119 miners in West Frankfort, Illinois, exposed the dangerous, highly risky nature of the coal mining industry and created a charged political environment ripe for reform. See BARBARA ELLEN SMITH, DIGGING OUR OWN GRAVES: COAL MINERS AND THE STRUGGLE OVER BLACK LUNG DISEASE 101-02 (1987).

109. Barth, *supra* note 53, at 9.

110. Smith, *supra* note 108, at 107 ("[T]he research of a few dissenting physicians began to confirm the longstanding experiential knowledge of those who had lived with and died from black lung disease.").

111. Barth, *supra* note 53, at 11.

112. Smith, *supra* note 108, at 130. There was a split between the older mine operators who feared any attempts at reform, and the newer, corporately owned operators who acknowledged the reality of attracting "new miners in a period of economic expansion and tight labor markets." *Id.* These operators were more open to reform but "resolved to shape any legislation to their own advantage." *Id.* at 131.

the marketplace.”<sup>113</sup> Rather, the key concern was “to work out some program whereby these old and disabled miners . . . who have not qualified under State [workers’ compensation] statutes for disability payments, can be given assistance through some Federal-State program.”<sup>114</sup> Consequently, the designers of the Black Lung program did not tie funding of the program to the safety conditions or records of individual employers, and the program has had virtually no beneficial deterrence effect.<sup>115</sup>

#### 4. *Dalkon Shield Claimants Trust (DSCT)*

A fourth example of a no-fault, causation-based regime is the result, not of legislation, but of private ordering through judicial supervision. The Dalkon Shield Claimants Trust was created by settlement of tort claims against the manufacturer of the Dalkon Shield intrauterine device.<sup>116</sup> The settlement created a “global peace,” permanently enjoining suits against the manufacturer (in bankruptcy at the time), its owners and company officials, its insurer, and doctors or health care providers who might otherwise have faced malpractice claims.<sup>117</sup> A \$2.3 billion trust was created and administered by five independent trustees appointed by the court.<sup>118</sup> The trustees developed a plan whereby potential claimants were offered one of three settlement options.<sup>119</sup>

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113. See Legislative History of the Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173, at 399; see also Smith, *supra* note 108, at 141 (explaining that the result of such compensation legislation was to take “the heat off the industry and put it on agencies and administrators in Washington D.C.”).

114. Legislative History of the Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173, at 349; see also DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 394 (“The black lung program was introduced . . . in response to the lack of state compensation for coal miners disabled by pneumoconiosis (lung disease arising from dust inhalation).”). Specifically, Senator Byrd strongly believed that such responsibility was the duty of Congress: “I have felt that if the Federal Government could provide assistance along this line, without additional cost to the industry, we would not incur the opposition of the industry . . . the Federal Government would be assuming some responsibility in this area, and I think it should assume such responsibility.” Legislative History of the Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91-173, at 349.

115. See W. Kip Viscusi, *Structuring an Effective Occupational Disease Policy: Victim Compensation and Risk Regulation*, 2 YALE J. ON REG. 53, 65 (1984).

116. See Georgene M. Vairo, *The Dalkon Shield Claimants Trust: Paradigm Lost (or Found)?* 61 FORDHAM L. REV. 617, 629 (1992).

117. *Id.*

118. *Id.* at 630.

119. A court order established a bar date, which established a deadline by which the claimants had to file their claim for compensation (later permitting disallowed claimants the opportunity to seek reinstatement). *Id.* at 627-28.

Under Option 1, designed to eliminate as many frivolous and low-value claims as possible,<sup>120</sup> any claimant who filed an affidavit stating that she had used and had been injured by (or may have been injured by) the Dalkon Shield received a payment of \$725.<sup>121</sup> Even those claimants whose documentation showed a conflict were paid that amount, since the Trust reasoned it was less expensive to pay this sum than to expend greater costs to investigate the claim.<sup>122</sup> Option 2 was intended to resolve the majority of claims and was designed to “provide moderate, standardized payments to individuals with relatively mild injuries.”<sup>123</sup> Under this option, the claimant was required to allege one or more specific, scheduled injuries (such as pelvic inflammatory disease) and to answer questions under oath regarding use of the device.<sup>124</sup> In addition, the claimant was required to offer medical records (or an affidavit from a health care provider) documenting her use of the device and her injury.<sup>125</sup> “Payments available under Option 2 range from \$400 for a loss of consortium claim by the spouse of a Dalkon Shield user to \$5,500 for a user who had certain conditions . . . that resulted in nonvoluntary sterilizing surgery.”<sup>126</sup>

Finally, claimants who did not resolve their claims under Options 1 or 2 could proceed under Option 3, under which specially trained employees of the trust would review the medical evidence according to a “highly structured, rules-based process.”<sup>127</sup> Claimants would then be offered the trust’s “best and final offer” based on projected settlement value, a valuation that is supposed to ignore whether the claimant was represented or had filed a lawsuit prior to the settlement.<sup>128</sup> If the claimant rejected the offer, the parties would meet to discuss it, with legal counsel permitted to be present,<sup>129</sup> although the trust would not increase the offer without new evidence.<sup>130</sup>

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120. *Id.*

121. *Id.* at 633. Kenneth R. Feinberg, *The Dalkon Shield Claimant's Trust*, 53 LAW & CONTEMP PROBS. 79, 106 (1990). The payment would be even smaller if the claimant alleged only a derivative injury—that is, that the injury (e.g., loss of consortium) was the result of another person’s use of the device. *Id.* Roughly 40% of all active claims have been resolved through Option 1. *Id.*

122. Feinberg, *supra* note 121, at 106.

123. *Id.* at 107.

124. *Id.* at 106.

125. *Id.*

126. *Id.* at 107.

127. Vairo, *supra* note 116, at 641.

128. *Id.*

129. Feinberg, *supra* note 121, at 108.

130. *See* Vairo, *supra* note 116, at 642–43.

Only after this conference could the claimant litigate or go to binding arbitration.<sup>131</sup>

As in the other causation-based models, claims are brought to the DSCT by injured parties. The DSCT differs from the other models, however, in that the party paying the awards is also assessing the claims. This system relies on independent trustees and court supervision to ensure the DSCT's fairness. It also offers more extensive damage awards, as costs are not limited to economic harms but also include pain and suffering. The system is designed, with its multi-level, non-adversarial structure, to discourage litigation. At the same time, the DSCT's assessment of claims takes place in the shadow of tort law, since any offer may be foregone in favor of binding arbitration or a lawsuit. The evidentiary standards employed, therefore, mirror those in tort law, as the DSCT is estimating the value of a claimant's case in tort.<sup>132</sup> Since the DSCT grew out of litigation against one defendant company, questions of allocation are not present in this context. The trust was funded by the defendant under consent decree.<sup>133</sup>

##### 5. Summary

The "real world" models of causation-based compensation programs described in the prior section indicate that institutional systems of compensation for injury are neither ideologically foreign nor politically infeasible. Workers' Compensation, though undergoing frequent reforms, has been and will continue to remain an important fixture in the realm of employer-employee relations. The historical forces underlying the Black Lung movement may have been idiosyncratic to the particular era and occupation, but the legislative success of a no-fault compensation system for injured miners in the face of medical agnosticism, diagnostic difficulties, and

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131. *Id.* at 644.

132. The Trust's policy, however, is to rely on its own valuation of the claim—even after the claimant independently obtains a jury verdict or arbitration award—to discourage claimants from litigating. The Trust pays only the amount of its own settlement offer, and "holds back" the balance until it is clear that sufficient funds exist to pay all valid, non-subordinated claims. *See id.* at 643. In those ways, according to Professor Sobol, the Trust is similar to workers' compensation, with fixed amounts for injuries, limited proof requirements, and discouragement of litigation. *See* RICHARD B. SOBOL, *BENDING THE LAW: THE STORY OF THE DALKON SHIELD BANKRUPTCY* 315–16 (1991).

133. It bears noting that a variety of causation-based, less-than-full-damages compensation plans have been adopted in other countries to cover a variety of injury contexts. For instance, drug injury compensation schemes are in place in Japan, Germany, and Sweden, all of which exclude coverage for pain-and-suffering losses. For a brief description of those programs, see DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 243–44. For a fuller discussion and assessment of those programs, see John G. Fleming, *Drug Injury Compensation Plans*, 30 *AMER. J. COMP. L.* 297 (1982).



a growing worry over unwieldy levels of filings, shows that the possibility of alternative compensation is not rendered moot by such difficulties. And while the Dalkon Shield Trust and the Childhood Vaccination program may differ from our proposed system in that the former involved a trust set up in bankruptcy against one specific responsible party and the latter was conceived of as a purely compensatory scheme, their administrative systems and standards for claimants reveal the viability of an analogous, carefully molded system designed to compensate another class of injured consumers today—smokers.

### C. Proposed Causation-Based Systems for Tobacco-Related Harms

The idea of an causation-based compensation system specifically for smoking-related injuries is not new. Over twenty years ago, Donald Garner proposed a system in which welfare agencies could bring no-fault claims against cigarette manufacturers to recover direct medical costs and related transfer payments, such as social security disability payments.<sup>134</sup> These claims could be brought before a special tribunal established solely for the purpose and staffed with expert factfinders to manage any complicated scientific questions of causation.<sup>135</sup> In effect, Garner's proposal allowed only subrogated claims, as individuals were not eligible to participate. Claimants could invoke a rebuttable presumption of causation, if they could demonstrate that the victim had smoked for the designated period of time.<sup>136</sup> If the presumptions were not rebutted, liability would be apportioned among manufacturers according to the approximate number of each manufacturer's cigarettes that the victim smoked. In addition, there would be a presumption that all cigarettes are equally dangerous, a presumption that would be rebuttable by a manufacturer's showing that its brand is safer than the others.<sup>137</sup>

Since Garner's article, legal scholars have continued to explore the notion of a causation-based compensation scheme for tobacco-related injuries. Richard Ausness, for example, proposed creating an administrative

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134. Donald W. Garner, *Cigarettes and Welfare Reform*, 26 EMORY L.J. 269, 314 (1977). Even a cursory read of Professor Garner's article will reveal numerous similarities between his proposals and those discussed in this Article. Although we discovered his work relatively late in our thinking on this topic, we are indebted to him for his groundbreaking work in this area.

135. *Id.* at 319. He suggests the Court of Customs and Patent Appeals and the Patent Office Board of Appeals as possible models. *Id.*

136. *Id.* at 315.

137. *Id.* at 316–17.

board with rulemaking and adjudicative authority to process tobacco-injury claims.<sup>138</sup> As under Garner's system, Ausness's board would set presumptions of causation, presumptions that might even be irrebuttable for certain diseases; and damages would be limited to economic losses.<sup>139</sup> Most recently, Paul Lebel advocated a system that would minimize administrative costs by incorporating broad, categorical determinations of causation and damages.<sup>140</sup> Lebel's program would be open only to individuals with particular diseases and smoking patterns,<sup>141</sup> and those individuals would be allowed to collect only out-of-pocket medical expenses.<sup>142</sup> Lebel would also allow a modest benefit to families of smokers who die from smoking-related diseases, primarily for the symbolic value.<sup>143</sup> Both Ausness and Lebel would finance the payment of damages through an excise tax.<sup>144</sup>

Those earlier proposals were not designed to address all of the deterrence and cost-internalization goals that, in our view, should be central.<sup>145</sup> The Ausness-Lebel excise tax for instance, would impose costs of harm on all manufacturers, irrespective of their causal connection. As we have emphasized above, however, the goal of optimal deterrence requires that *each manufacturer bears that portion of the overall cigarette-caused harm that is attributable to that manufacturer's brands*. Only then will market forces lead manufacturers to design, produce, and market safer cigarettes. And only then will each brand of cigarette fully reflect its expected costs, thus leading to optimal activity levels.

Although none of the actual or proposed causation-based compensation systems provide a perfect model for a Smokers' Compensation system, they usefully highlight some of the major considerations and trade-offs in designing the ideal Smokers' Compensation system. We can draw on these

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138. Richard C. Ausness, *Compensation for Smoking-Related Injuries: An Alternative to Strict Liability in Tort*, 36 WAYNE L. REV. 1085, 1124-25 (1990).

139. *Id.* at 1127-29.

140. Paul A. Lebel, *Beginning the Endgame: The Search for an Injury Compensation System Alternative to Tort Liability for Tobacco Related Harms*, 24 N. KY. L. REV. 457, 474 (1997).

141. *Id.* at 490.

142. *Id.* at 492.

143. *Id.*

144. Ausness, *supra* note 138, at 1124-25; Lebel, *supra* note 140, at 493.

145. Alternative compensation systems generally have been proposed to serve insurance, administrative efficiency, and corrective justice goals. *See, e.g.*, Ausness, *supra* note 138, at 1088; Rabin, *supra* note 53, at 951. Lebel's and Garner's proposals are based in part on a cost-internalization premise to enhance safety. *See* Garner, *supra* note 134, at 277 (goals are removing government subsidies of tobacco and encouraging safety); Lebel, *supra* note 140, at 466 (goals are compensation, enhancing safety, administrative efficiency, and cost-internalization). Ausness's goal is corrective justice and administrative efficiency. *Id.* at 1125 n.178.

models as we attempt to meet the deterrence and incentive goals on which Smokers' Compensation is predicated while accommodating limitations imposed by technical impossibilities and political compromise.<sup>146</sup>

#### IV. TOWARD A BLUEPRINT

If Congress were seriously to consider adopting a Smokers' Compensation scheme, we would recommend that it begin by appointing some sort of special commission or panel to consider carefully the feasibility of the wide range of options available to it. The panel should comprise public health experts, epidemiologists, physicians, economists, lawyers, and the like, all of whom should have relevant expertise and an understanding of the goals of a Smokers' Compensation system. The panel would be asked to provide detailed answers to the sorts of questions we touch on in this Article and to assess whether, overall, the game would be worth the candle.<sup>147</sup> The role of this panel might be roughly similar to that of the trustees of the Dalkon Shield Claimants' Trust, who were charged with establishing procedures for disbursing the trust to claimants.<sup>148</sup> We see our discussion in this section as simply a possible starting point for the analysis that such a panel would need to conduct.

##### A. Who Decides?

As the models discussed above demonstrate, there are a variety of possible decision-making frameworks available. The choice may turn in significant part on how much expertise the decision maker or decision-making board must have. Just as judges on the Tax Court are typically experts in the tax field, the Smokers' Compensation board or administrative law judges might be drawn from experts fluent in the language of scientific and epidemiological evidence. Alternatively, there may be some advantage to mimicking the Vaccine Program by relying on federal courts to implement the program. Federal courts, although not specialists in epidemiology, are already in place and may be relieved of the threat of many costly tobacco-

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146. Procedural questions may loom large as well. For example, one threshold question is whether a Smokers' Compensation system would partially or fully preempt tort law.

147. For reasons that we discuss below, there may also be a significant role for such a panel once the Smokers' Compensation system were up and running.

148. See *supra* notes 118-19 and accompanying text.

related lawsuits were a Smokers' Compensation system implemented.<sup>149</sup> On the other hand, a potential flood of claims could overwhelm the federal judiciary, suggesting the need for an independent adjudicatory apparatus along the lines of the workers' compensation systems.

## B. What Losses Are Covered?

### 1. Current Practices in Other Causation-Based Compensation Systems

As indicated above, the measure of damages in all causation-based compensation schemes differ significantly from that in tort. Tort law provides individualized damages, which include full recovery for medical expenses and lost earnings and allow for limitless amounts of pain-and-suffering compensation.<sup>150</sup> In contrast, as we describe in this subsection, causation-based compensation systems usually provide compensation for economic losses only<sup>151</sup> and partial compensation at that.

#### a. Medical Expenses

Causation-based compensation systems usually are most generous with respect to medical losses. State workers' compensation laws provide for unlimited medical treatment, both in terms of cost and duration,<sup>152</sup> although some states put doctors' fees on a schedule.<sup>153</sup> Similarly, the federal government allows full recovery of all medical expenses for individuals covered by the Federal Employees' Compensation Act and the Longshore Act,<sup>154</sup> the Black Lung program,<sup>155</sup> and the National Vaccine Injury Compensation Program.<sup>156</sup> The Dalkon Shield Claimants' Trust takes a

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149. Also, if the federal judiciary were used, they could be specifically empowered, if necessary, to call on the help of scientific experts. See *infra* notes 274–76.

150. In recent years many states have enacted statutes capping pain-and-suffering damages in tort. See ROBERT COOTER & THOMAS ULEN, *LAW AND ECONOMICS* 458–59 (1988); Richard B. Schmitt, *While Congress Debates, States Limit Civil Lawsuits*, WALL ST. J., June 16, 1995, at B1.

151. Efficiency minded scholars typically characterize easily quantified losses, such as medical costs as economic. *But see* Croley & Hanson, *supra* note 37, at 1857–61 (arguing that medical losses are more accurately characterized as nonpecuniary losses).

152. U.S. CHAMBER OF COMMERCE, *supra* note 52, at 32–33.

153. *Id.* at 34.

154. *Id.* at 33.

155. 20 C.F.R. § 725.701(b) (1997).

156. 42 U.S.C.A. 300aa–15 (1997). Drug compensation programs in other countries also limit damages in this way. See *supra* note 133.

different approach (at least in Option 2, by which most claims are settled),<sup>157</sup> providing claimants with scheduled damage awards for particular injuries. The DSCT awards thus are based not on actual medical expenditures of given claimants, but an average award appropriate to the claimant's circumstances.

*b. Disability*

Causation-based compensation schemes are considerably less generous with respect to lost wages, since full compensation for lost wages might eliminate an injured worker's financial incentive to return to work.<sup>158</sup> To accommodate this practical difficulty, in compensating for full disability (either temporary or permanent), all state and federal workers' compensation systems calculate lost wages at a percentage of pre-injury earnings, usually 66-2/3%.<sup>159</sup> In addition, all of those programs have maximum benefits, usually a percentage of the average state weekly wage (ranging from 66-2/3% to 150%), and most have minimums.<sup>160</sup> This workers' compensation method for calculating compensable lost wages seems well-accepted. For example, Professor Rabin, in proposing a mass toxics compensation system, endorsed a two-thirds-of-wages award with an indexed ceiling.<sup>161</sup>

Lost wages resulting from permanent partial disabilities—the loss of a body part or hearing—are generally compensated separately from temporary full disability.<sup>162</sup> If a worker loses an arm, for example, he receives temporary full disability compensation while in convalescence, then lifetime

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157. See *supra* note 123 and accompanying text.

158. This moral hazard problem is less pronounced with respect to medical expenses, because the injured person usually has non-economic incentives to avoid needless medical procedures expenses. Also, despite the real differences in economic impact of missing work based on wage levels, some find it inequitable that individuals suffering the same injury receive different levels of compensation. Richard Ausness makes such an argument in advocating for uniform schedules of compensation for tobacco-related injuries. Ausness, *supra* note 138, at 1129. And David Rosenberg earlier made such an argument against income-varied damages in mass exposure tort cases. See Rosenberg, *supra* note 36, at 918.

159. See U.S. CHAMBER OF COMMERCE, *supra* note 52, at 22–25. Note that disability payments from workers' compensation programs are not taxed, so the benefits “replace approximately 90% of net wages lost for about 80% of workers who file claims.” DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 392.

160. See U.S. CHAMBER OF COMMERCE, *supra* note 52, at 22–25.

161. Rabin, *supra* note 53, at 971.

162. See U.S. CHAMBER OF COMMERCE, *supra* note 52, at 27. Five states deduct the compensation for temporary full disability from the compensation for permanent partial disability. Four others cap the compensation allowed for temporary full disability. *Id.*

permanent partial disability compensation. The permanent partial compensation is usually awarded according to a schedule and is not based on wage levels or estimated future wage loss.<sup>163</sup>

*c. Death Benefits*

While death does produce an economic loss, the nature of the loss is nevertheless somewhat different from the economic losses discussed above, inasmuch as that economic loss is borne not by the decedent but by the decedent's survivors. Most state workers' compensation systems provide death benefits to the spouse or dependent children of the decedent in an amount equal to compensation for total disability, plus a payment for burial expenses.<sup>164</sup> Because this compensation is supposed to replace the wages that would have been earned by the decedent, many states phase them out if the surviving spouse remarries.<sup>165</sup> The National Vaccine program pays a flat award of \$250,000 in the event of death,<sup>166</sup> an approach that Professor Lebel advocates.<sup>167</sup>

*d. Noneconomic Losses*

Workers' compensation and other alternative causation-based compensation systems are often said not to compensate injured parties for non-economic losses. Indeed, that limit on damages may be the most significant difference between administrative alternatives and tort law, where damages for pain and suffering are generally available, often for amounts exceeding economic damages. The difference may be slightly overstated, however, for there are ways in which causation-based schemes can be seen to provide de facto compensation for nonpecuniary losses. For example, scheduled permanent partial disability compensation payments under workers' compensation are paid to any claimant who fits the description. Those payments, ostensibly to compensate for wage loss, are made irrespective of the claimant's financial situation. As a consequence, claimants who suffer no wage loss may still receive compensation, making

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163. Eight states base compensation on the degree of impairment. *Id.*

164. *Id.* at 29.

165. *Id.* at 29-30.

166. 42 U.S.C.A. § 300aa-15(a)(2) (1997).

167. Lebel, *supra* note 140, at 492. The only death benefits provided under the Dalkon Shield plan appear to be for infant deaths, which may be compensated in a fixed amount under Option 2 in the amount of \$3,200. See Feinberg, *supra* note 121, at 107; Sobol, *supra* note 132, at 313.

the scheduled payments in those circumstances look more like compensation for intangible losses associated with permanent partial disability than for loss of wages.<sup>168</sup> One compensation program, the National Vaccine Injury Compensation Program, does allow claimants to receive up to \$250,000 for intangible (pain and suffering) damages at the discretion of the factfinder.<sup>169</sup>

## 2. *The Case for Limiting Smokers' Compensation Awards to Economic Damages*

In this section we argue that, given the policy goals and political constraints discussed above, a Smokers' Compensation system should, like most of the current cause-based systems, award only economic damages. More specifically, the Smokers' Compensation should provide, as do most workers' compensation programs, complete, though perhaps scheduled, medical benefits,<sup>170</sup> partial but substantial disability benefits, and death benefits. Compensation for noneconomic losses, if any, should be scheduled and modest.

The case is strong for treating the other causation-based compensation schemes as precedents worthy of emulation. First, by mirroring a workers' compensation system, a Smokers' Compensation system would make the tobacco industry subject to a type of regulation that would be perceived as neither too draconian nor too lenient. Put slightly different, the industry

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168. Cf. Patricia M. Danzon, *Tort Reform and the Role of Government in Private Insurance Markets*, 13 J. LEGAL STUD. 517, 524 (1984) (stating that lump-sum benefits of this sort bear "some resemblance to compensation for pain and suffering"). A number of jurisdictions, mostly in Canada, now explicitly recognize and compensate the non-economic harm suffered by permanent partial disability. Saskatchewan and Florida led the way, instituting dual track compensation for such disabilities under which they pay physical impairment benefits and lower lost wage benefits than they previously had. PAUL C. WEILER, *PERMANENT PARTIAL DISABILITY: ALTERNATIVE MODELS FOR COMPENSATION 3* (report submitted to the Minister of Labour, Province of Ontario, 1986). New Brunswick, Newfoundland, and Quebec later adopted similar provisions. *Id.* at 4. Advocates argue that the significant effect on the victim's life outside the workplace ought to be compensated, even if it is non-economic. *Id.* at 3.

169. 42 U.S.C.A. § 300aa-15(a)(4) (1997).

170. A more open question is whether monitoring costs prior to manifestation of disease ought to be covered. To the extent a smoker legitimately incurs additional expense in anticipation of smoking-related diseases, those costs are caused by cigarettes. Rabin would want to cover the monitoring expenses in his proposed system, although he acknowledges that the pragmatic difficulties given a large universe of the potentially injured (all exposed to the toxin) might make reimbursement of these expenses politically unacceptable. See Rabin, *supra* note 53, at 973; see also David Rosenberg, *Individual Justice and Collectivizing Risk-Based Claims in Mass-Exposure Cases*, 71 N.Y.U.L. REV. 210, 220 n.22 (1996) (listing a number of lawsuits in which plaintiffs have sought to recover medical monitoring costs); *id.* at 234-35 (discussing whether and when medical monitoring or mitigation claims are necessary).

would be subject to the very same sort of regulation to which other industries, seeking tort law protection, have been subject. Second, by deferring somewhat to precedent, the Federal government would be sending a clearer deterrence signal that would go well beyond the tobacco industry.<sup>171</sup>

The case is made considerably stronger when one recognizes that commonly made arguments against holding cigarette manufacturers liable in tort would lose most of their force if damages were limited as we have described.<sup>172</sup> One major critique of the tort system is that it is far too slow and expensive to administer and that it subjects manufacturers to liability for unpredictable and lottery-like damage awards. The Proposed Resolution, for example, emphasizes these themes, calling the civil actions now pending "complex, slow-moving, expensive and burdensome," and claiming that "[o]nly national legislation offers the prospect of a swift, fair, equitable and consistent result."<sup>173</sup> The Proposed Resolution purportedly reflects the "need to avoid the cost, expense, uncertainty and inconsistency associated with [the current] protracted litigation."<sup>174</sup> Presumably, much of the perceived problem stems from the fact that tort damages include pain-and-suffering damages and the assumptions that those damages can be costly to prove and calculate and tend to be more variable and unpredictable than economic damages. Clearly, one benefit of a Smokers' Compensation scheme is that it would be administratively cheaper and significantly more predictable and consistent than civil litigation, especially if liability is limited to just economic damages.<sup>175</sup> It may be worth noting that scholars and

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171. See generally Hanson & Logue, *supra* note 3, at 1302–04 (describing the potential general deterrence benefits of such government policies).

172. We want to be very clear here that we believe that most of the arguments against holding tobacco manufacturers liable are either wrong or vastly overstated. In this section, we will focus on only one type of counterargument—that is, again, showing how many of the anti-liability arguments are at least partially contingent upon an assumption that liability would be for both economic and noneconomic damages.

173. Proposed Resolution, *supra* note 4, at 4.

174. *Id.* There is considerable irony to this critique of tort liability in light of the facts that the liability costs of tobacco manufacturers had, at least prior to the proposed settlement, long been consistently low and that the gargantuan administrative costs of litigating a cigarette claim has always been disproportionately attributable to the tobacco industry's spare-no-expense legal strategies. Another difficulty with the critique is that manufacturers of virtually every other product in our economy have all been subject to the tort system, notwithstanding those putative problems, and providing special tort immunity to cigarette manufacturers on those grounds is hard to justify.

175. This is true in large part because there is no need to measure the very difficult-to-measure pain-and-suffering damages as is done in the majority of tort cases. On the other hand, the costs of measuring pain-and-suffering damages might be reduced through the use of some sort of injury-specific grid or schedule of damages for nonpecuniary losses associated with different sorts of smoking-related illnesses. For a description of a system in which pain-and-suffering damages were averaged and scheduled, see David Rosenberg, *Scheduling in Mass Exposure Cases*, 1 COURTS,



commentators have rarely complained about the costs of making damages calculations in workers' compensation proceedings.<sup>176</sup> Of course, administrative costs might be lowered further by, for example, awarding non-individualized economic damages according to injury type.<sup>177</sup>

Limiting compensation to economic damages would also address the objections of critics of cigarette-manufacturer liability who believe that expanded liability and compensation would have adverse incentive effects on consumers. For instance, some commentators assert that a system that compensates smokers for smoking-related injuries would remove from smokers much of the responsibility for their own actions.<sup>178</sup> The concern, which we do not share,<sup>179</sup> seems to be that the promise of compensation will

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HEALTH SCI. & L. 335 (1991). As we argue below, however, there may be several reasons for not awarding nonpecuniary losses even if they were easily measured. Many efficiency-oriented scholars have argued that nonpecuniary-loss damages are undesirable because they force consumers to purchase a type of insurance that they do not demand. Some of those scholars have concluded that the pain-and-suffering component of tort damages or no-fault compensation should therefore be lowered if not eliminated. See, e.g., DEWEES, DUFF & TREBILCOCK, *supra* note 65, at 393. See generally Croley & Hanson, *Nonpecuniary Costs*, *supra* note 37 (reviewing and then criticizing the conventional economic wisdom on pain-and-suffering damages).

176. Limiting damages in this way may reduce administrative costs further by encouraging collectivized subrogation claims instead of individualized direct claims. Scholars have begun to take seriously the possibility that insurers would use subrogation rights more often in personal injury contexts and to identify the potential benefits of this sort of arrangement. See generally Croley & Hanson, *Nonpecuniary Costs*, *supra* note 37, at 1812, 1867-71 (describing the role the subrogation rights currently play and the role that they could play in tort cases). See, e.g., David Rosenberg, *Of End Games and Openings in Mass Tort Cases: Lessons from a Special Master*, 69 B.U. L. REV. 695, 729-30 (1989) (describing some of the benefits including "that the insurer could efficiently aggregate claims dispersed over time and territory as well as the capital necessary to fund adequate presentation of the case. Agency problems between class members and their counsel would also be eliminated by transferring ownership of claims to the insurer"); David Rosenberg, *The Uncertainties of Assigned Shares Tort Compensation: What We Don't Know Can Hurt Us*, 6 RISK ANALYSIS 363 (1986) (making similar observations); Joseph B. Treaster, *State Farm Lawsuit Says Ford Hid Risk of Fire in Vehicles*, N.Y. TIMES, Jan. 21, 1998, at A1 (describing an actual case in which insurer is suing defendant on behalf of all of its insureds); cf. Robert Cooter, *Towards a Market in Unmatured Tort Claims*, 75 VA. L. REV. 383 (1989) (making a case for allowing a market in unmatured tort claims, which is, in essence, a case for allowing insurers to exercise subrogation rights for the full value of tort claims).
177. See *infra* notes 188-94 and accompanying text. Many workers' compensation programs provide a schedule of benefits for certain injuries. For instance, if a worker loses sight in one eye in a work related injury, then the worker might receive a pre-specified amount, even if the partial blindness does not create any disability. DAN B. DOBBS, TORTS AND COMPENSATION: PERSONAL ACCOUNTABILITY AND SOCIAL RESPONSIBILITY FOR INJURY 873-74 (2d ed. 1993). There may be another sort of administrative-cost benefit of limiting damages. That is, because other causation-based systems limit damages, it would be simpler for policymakers to do the same so that they can mimic and learn from the programs already in existence.
178. See *infra* notes 299-303 and accompanying text; Hanson & Logue, *supra* note 3, at 1350.
179. See Hanson & Logue, *supra* note 3, at 1181-1262.

give rise to what economists call "moral hazard"—that is, smokers would engage in greater quantities of risky activity than they would were they required to pay for all of the costs of their decisions. On the other hand, other commentators claim that just the opposite would occur. Their argument seems to be that because smokers are already aware of the risks and already take those risks into account when purchasing each pack of cigarettes; forcing smokers to pay a higher price for cigarettes that itself reflects the risks of smoking, will overdeter consumers from smoking. Smokers will internalize the risks once when deciding to buy another pack of cigarettes and then again when purchasing the pack at the increased price.<sup>180</sup>

We have argued elsewhere that neither the under deterrence argument nor the overdeterrence argument poses as significant a problem as scholars have suggested.<sup>181</sup> But the point that we want to make here is that, even if we accept the basic premises of the two arguments, ex post compensation will create neither an under deterrence problem nor an overdeterrence problem as long as damages are limited to economic damages. There are two reasons under deterrence is not a problem. First, where only economic damages are paid, the threat of noneconomic damages will more clearly encourage smokers to take appropriate precautions.<sup>182</sup> Second, even if there is some residual moral hazard problem, that problem would exist under the current regime anyway, inasmuch as many smoking-related losses are already covered by some sort of insurance.<sup>183</sup> Thus, a Smokers'

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180. *See id.* at 1232–36.

181. One major flaw in each argument can be easily glimpsed by placing the arguments side-by-side as we have here: each incentive effect offsets the other. That is, if consumers were required to pay in the price of the cigarettes that they purchase a de facto insurance premium for coverage against cigarette-caused harms, then they would not escape responsibility for their decisions to smoke. *See id.* at 1279–80, 1350–51. Similarly, insofar as consumers are compensated ex post for smoking-caused harms, they will not be overdeterred. For a fuller treatment of this argument, see *id.* at 1274–78.

182. *Cf.* Hanson & Logue, *Insurance Externality*, *supra* note 37, at 187 (explaining that the threat of nonpecuniary losses will help ensure that consumers take care, even where nonpecuniary-loss damages are awarded). Ausness, *supra* note 138, at 1129 (suggesting that disallowing nonpecuniary-loss damages may be an appropriate way of acknowledging some responsibility on the part of smokers).

183. *See* Hanson & Logue, *Insurance Externality*, *supra* note 37, at 172–73; *see also* Robert L. Rabin, No-Fault Compensation for Tobacco-Related Disease, Remarks at the Conference on the So-Called Global Tobacco Settlement 16, Univ. of Wisconsin Law School (Oct. 16, 1997) (transcript on file with authors). Even if injured smokers were entitled to compensation for all pecuniary and nonpecuniary losses, the ex ante moral hazard problem would not be very significant. Smokers would have to pay for the insurance with each pack of cigarette purchased and there may be little in the way of care-level precautions that consumers can take (or fail to take). *See* Hanson & Logue, *supra* note 3, at 1280.

Compensation program would not create a problem, at worst it would reproduce it.

Similarly, limiting damages to economic losses would, again for two reasons, largely overcome any overdeterrence problem. First, insofar as consumers anticipate that a Smokers' Compensation system would compensate for smoking-caused economic harms, the overdeterrence problem goes away.<sup>184</sup> Second, smokers would understand that the additional part of the price would reflect not a loss, but a de facto first-party insurance premium. That is, the assumption that consumers are well informed with respect to the economic risks is not relevant inasmuch as smokers are able to externalize those risks to those who finance public and private insurance arrangements that typically end up paying for the bulk of smoking-caused economic costs. Thus, a Smokers' Compensation program would not create an overdeterrence problem because consumer information with respect to those risks does not affect consumer behavior even under the current regime.

There are several other potentially significant benefits of limiting liability to economic damages, or perhaps even to just a portion of economic damages. For instance, while the economic damages may be substantial,<sup>185</sup> they may not be so significant as to bankrupt the entire industry.<sup>186</sup> Relatedly, they will also be less likely to stimulate a robust black market in cigarettes.<sup>187</sup>

The administrative cost savings of limiting compensation to economic damages could be dramatically increased if even economic damages were scheduled. Just as workers' compensation systems establish grids by which victims of permanent partial disabilities receive pre-determined amounts,<sup>188</sup> Smokers' Compensation could base damages on the average cost of a given injury or combination of injuries. Thus, if the average cost of treating, for example, a middle-aged, female victim of laryngeal cancer<sup>189</sup> is \$100, any such claimant would receive \$100, even if her actual expenditures were \$50 or \$150. If the schedule is set accurately to the average treatment costs, the lack of individualized damages may not affect deterrence.<sup>190</sup> Although in any

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184. See Hanson & Logue, *supra* note 3, at 1274–78.

185. See *infra* notes 292–98 and accompanying text [Bankruptcy Concerns section].

186. See Hanson & Logue, *supra* note 3, at 1305 & n.579. Cf. Ausness, *supra* note 138, at 1129.

187. For a discussion of whether and to what extent the black-market problem would be exacerbated by an ex post incentive-based form of cigarette regulation, see Hanson & Logue, *supra* note 3, at 1298–1301.

188. See *supra* notes 162–63 and accompanying text.

189. Depending on the variation in treatment costs across demographic boundaries, it might be advisable to create a greater or fewer number of categorical distinctions.

190. See *supra* note 36.

given case, manufacturers may be paying more than or less than actual damages, in aggregate, they would pay the same amount for the laryngeal cancer cases they caused as they would if each victim were paid actual costs.<sup>191</sup>

Perhaps counterintuitively, for several reasons, scheduled damages may well be preferred by claimants purely on compensation grounds—even by those claimants who experience above-average losses. First, as David Rosenberg has emphasized, removing the burden of proving the value of one's loss could more than offset the difference between what high-damages claimants would receive in an individualized system and the statistical average they would receive under a scheduled system.<sup>192</sup> So, returning to the previous example, if the costs of demonstrating damages is more than \$50, even a high-damage claimant is better off receiving the average \$100. Moreover, that a schedule would provide averaged, rather than individualized, compensation would not be a problem from the perspective of most likely claimants under a Smokers' Compensation system—that is, private and public insurers. Because of the law of large numbers, total insurance pay-outs should approximate averaged damages (e.g., \$100 per insurance pay-out), which is precisely what a scheduled system would compensate them. Furthermore, as Bruce Hay and David Rosenberg have argued, even individual claimants may, at least from an *ex ante* perspective, prefer a regime that provides averaged rather than individualized compensation.<sup>193</sup> They write:

For the prospective [claimant] who does not know the quality his case will have, an averaging system offers the same expected recovery as an individualizing system. If he were concerned only with the expected recovery . . . , therefore, he would simply be indifferent between the two systems. Averaging, however, tends to reduce both the expense and the

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191. If treatment costs of diseases caused by different cigarettes were not consistent—if, for example, certain brands caused a particularly virulent form of cancer that systematically cost more to treat than the treatment costs of cancer caused by other brands—then averaging damages may partially undermine the goals of Smokers' Compensation. Assume that Brand X caused an especially ferocious cancer while Brand Y caused the same disease, but a less intractable version. Although claimants that smoked either brand would collect the average cost, Brand X's customers would actually account for more of those costs than Brand Y. Thus the manufacturer of Brand X would be underdeterred while the manufacturer of Brand Y would be overdeterred. To put the point more broadly, a damages schedule will need to be accurate (and frequently updated) in terms of how diseases are categorized and in terms of the compensation levels allowed for each category.

192. See David Rosenberg, *Class Actions for Mass Torts: Doing Individual Justice by Collective Means*, 62 *IND. L.J.* 561, 572–73 (1987).

193. See generally Bruce L. Hay & David Rosenberg, *The Individual Justice of Averaging* (unpublished manuscript on file with authors).

riskiness associated with [bringing a claim], and for these reasons will often be strictly preferable to individualization in the eyes of the prospective [claimant]. The only way to realize the benefits is to make averaging compulsory, because ex post—once [claimants] know the quality of their case—they will have an incentive to avoid averaging. Yet transaction costs frequently prevent [claimants] from agreeing, ex ante, to a regime of compulsory averaging. Hence the argument for compulsory averaging imposed by the legal system.<sup>194</sup>

In sum, were a Smokers' Compensation program to mandate averaging of compensation through a scheduling approach, not only would administrative costs be reduced but also potential claimants may be made better off.<sup>195</sup>

In the Smokers' Compensation context, scheduling damages would mean that claimants would have to prove only the existence of their injury as well as causation. As we will discuss more fully below, there are options for collectivizing the causation inquiry through such mechanisms as evidentiary presumptions and proportional liability.<sup>196</sup> In tandem, these devices could conceivably streamline the claim procedure to a point where claims may be filed by mail without sacrificing the deterrence objectives of Smokers' Compensation.<sup>197</sup>

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194. *Id.* at 2 (footnote omitted). They conclude that everything should be averaged—including elements such as causation—except as deterrence or marginal-utility-of-wealth considerations otherwise require. *See id.* at Part IV.B.2. David Rosenberg is of the opinion that we may have, in light of the Hay and Rosenberg analysis, erred in favor of recommending more individualization (and less averaging) than is appropriate given the goal of deterrence. *See* Memo from David Rosenberg (March 19, 1998) (on file with authors). We are inclined to disagree, but, if wrong, we would happily embrace the conclusion that a Smokers' Compensation system could be made even less costly to administer than we have described.

195. Additional benefits of scheduling damages are that the increased predictability of such a system is likely to make Smokers' Compensation more attractive to manufacturers, and scheduled damages would encourage claimants to bring claims early in the disease cycle. Whereas in an individualized system a claimant might have an incentive to let costs mount before bringing claims, a scheduled award would create an incentive to bring claims as soon as possible. To the extent that accelerated claims lead to more preventative care, the total costs of treatment are likely to shrink. Moreover, accelerated claims mean less time between manufacture and liability, perhaps enhancing the deterrence effect. Finally reducing the length of time between smoking and claim might ease certain factual inquiries, such as which brands were smoked and for how long.

196. *See infra* notes 222–34 and accompanying text.

197. Here, as elsewhere, one would expect reductions in accuracy as the price of administrative savings. The question for policymakers is whether that price in accuracy outweighs the savings administrative costs. We would imagine that a strong case can be made for scheduling most damages.

### C. Who Can Bring a Claim?

We have already argued that the universe of Smokers' Compensation claimants should be limited to smokers themselves, their estates, and their subrogated insurers (private or public). This limitation suggests the following question: Under this approach, what class of potential claimants would be excluded from bringing a claim?

The most obvious class would be victims of environmental tobacco smoke ["ETS"], what used to be called passive or second-hand smoke. One could imagine a Smokers' Compensation system that would allow ETS victims to bring claims. However, given our interest in deterrence rather than in compensation, and given the administrative-cost problems that ETS claims would present, we would not recommend allowing ETS claims. As for the deterrence concern, it would be extremely difficult, if not impossible, to allocate ETS damages among manufacturers on anything other than a market-share basis (or an *ex ante* relative-risk basis). Therefore, one of the principal reasons for preferring an *ex post* incentive-based approach to, say, an *ex ante* approach (such as an excise tax) does not exist with respect to ETS exposure. In addition, if the system were made available to ETS claimants, administrative costs would soar, as the sheer number of claimants would rise dramatically. So ETS claimants would probably be excluded.<sup>198</sup>

Of those smoking victims whom we would allow to bring a Smokers' Compensation claim, perhaps the claimants that need the most justification are the insurers of the smokers. Under the system we propose, insurers would also be allowed to bring claims to recover for benefits they have paid to smokers or to families of smokers. By "insurer" here we mean not only private health, disability, and life insurers, but also federal and state

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198. If, however, the Smokers' Compensation system were thought to be a desirable means of compensating those harmed by smoking (and not just a deterrence mechanism), the additional administrative costs of such a system might be worth incurring. Moreover, it should be noted that allowing ETS claims, if done in tandem with substantial limitations on the types of damages that could be recovered, would not necessarily break the bank. For example, we might allow claims to be brought by nonsmokers who suffer from lung cancer or emphysema and who can demonstrate that they work in a setting in which smoking is allowed and have worked in that setting for a given number of years—documented by employment records. Or we might allow ETS claims to be brought by family members of smokers. Again, however, because these costs would not be readily allocable among manufacturers on a brand-specific causal basis, the deterrence benefit of Smokers' Compensation (over an excise tax) would be lost. In addition, even if Smokers' Compensation were an effective means of internalizing ETS-related harms, the efficiency case for imposing those harms on cigarette manufacturers instead of, say, on employers or on owners of public buildings, is somewhat less strong than is the efficiency case for imposing the costs to smokers themselves (and the costs to their insurers) on cigarette companies. See Hanson & Logue, *supra* note 3, at 1312–15.

governments acting as health, disability, and life insurers through programs such as Medicare, Medicaid, and the like. Allowing insurers to recover a Smokers' Compensation claim would be comparable (although perhaps not identical) to what is done currently by many private insurers—by way of the doctrine of subrogation—when their policyholders suffer insured losses for which some third party can be held legally responsible.<sup>199</sup> The justification for allowing insurers to recover under a quasi-subrogation theory is straightforward: Doing so ensures that the costs of relevant smoking-related harms ultimately will be borne by the manufacturers (and, through the price mechanism, ultimately by smokers), rather than by the nonsmokers in the insurance pools. Thus, first-party health, disability, and life insurance premiums (or, in the case of Medicare and Medicaid, the costs of those programs) would fall—just as cigarette prices would rise.<sup>200</sup>

Another benefit of allowing insurers to bring claims is that it may significantly simplify the administration of the Smokers' Compensation program. Insurers would have an incentive to aggregate claims in the most cost-effective manner and to stream-line the process of administering and settling claims. Because the insurers would be operating in the shadow of the Smokers' Compensation regime, even the aggregated claims and mass settlements (if they occur) would still send the brand-specific causal message to manufacturers (if it is cost-effective to do so). In other words, the manufacturers whose cigarettes are relatively more dangerous, and hence give rise to relatively large or numerous claims, would be forced to accept

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199. See generally ROBERT E. KEETON & ALAN I. WIDISS, *INSURANCE LAW: A GUIDE TO FUNDAMENTAL PRINCIPLES, LEGAL DOCTRINES, AND COMMERCIAL PRACTICES* 219–52 (1988).

200. The doctrine of subrogation is typically defended, by courts and commentators, as a necessary means of protecting the time-honored insurance-law principle of “indemnity.” See *id.* at 220–21. This principle, which serves as the basis for a number of insurance-law doctrines (such as the “insurable interest” doctrine), holds that “insurance contracts shall confer a benefit no greater in value than the loss suffered by an insured.” *Id.* at 135. And this principle of indemnity, in turn, is based on the idea that we do not want insurance contracts to produce net gains for the insureds, but rather we want them only to cover losses. *Id.* at 136–39; Croley & Hanson, *Nonpecuniary Costs*, *supra* note 37, at 1854. That idea can be justified on consumer-sovereignty grounds—that is, most purchasers of insurance, being risk averse after all (at least with respect to the risks for which they seek insurance), want to shift the risk of loss from themselves to their insurers. To allow policyholders double recovery in the event of an insured loss would be tantamount to allowing gambling, which is not thought to be the reason that people enter into insurance contracts. What is more, to the extent the insured had control over the probability or magnitude of the insured loss, the potential for double recovery could produce a significant moral hazard problem. See KEETON & WIDISS, *supra* note 199, at 136–39. Without the principle of indemnity and the doctrine of subrogation (whether provided explicitly in the insurance contract or implied by a court), insureds would be able to recover twice for some harms, a possibility that would produce an increase in premiums that most risk-averse insureds would prefer not to pay.

relatively expensive deals with subrogated first-party insurers, thus sending the desired deterrence message.

#### D. How Does One Prove a Smoking-Related Injury?

Questions of causation arise at three levels. First is the question of *general causation*: could a given harm have been caused by smoking cigarettes? If the answer to that question is affirmative, the system must then determine whether, in the given case, tobacco actually did cause the harm (*claimant's specific causation*) and, if so, which brand or brands of cigarettes actually caused the harm (*brand-specific causation*). In this section we look at questions of whether smoking generally caused a claimant's injury, that is, general and claimant-specific causation. In the next section we will examine how to establish brand-specific causation.

##### 1. *General Causation: Could Smoking Have Caused the Injury?*

The question of general causation may logically be subsumed within the specific causation inquiry. After all, in answering the question, "did smoking cause the claimant's injury?," the tribunal would also be addressing the more general question of whether such an injury could possibly result from smoking. Typically, however, causation-based compensation systems separate the two inquiries to reduce administrative costs.<sup>201</sup> General causation serves as a gatekeeper, only admitting plausible claims.

##### a. *Thresholds*

As a limited-purpose system designed to compensate only certain harms, the first inquiry of a Smokers' Compensation board would likely be to determine whether cigarette smoking could have caused the injury claimed. The decision-maker would have to establish whether the claim has sufficient merit to warrant a hearing. Claims might fail that test and thus be non-compensable because the type of injury is not considered smoking-related, or because the claimant's smoking history is not considered likely to have resulted in the injury alleged. To minimize administrative costs, these standards may be pre-established as thresholds. The system may compensate

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201. Examples include the limitation of the Childhood Vaccine Compensation Program to certain diseases, *see supra* note 156 and accompanying text, and the presumptions of the Black Lung program, *see supra* note 155 and accompanying text.



only for certain diseases that are considered more than likely to result from smoking.<sup>202</sup> Only people who have smoked a given number of packs per day and a given number of years might be eligible to bring claims. To increase the accuracy of the system, the thresholds may vary depending on the injury. A science panel might establish, for instance, that some diseases are likely to develop after five years of smoking while others arise only after ten years. Similarly, claims for certain diseases with known, constant latency periods might also be barred until a given period of time has passed.

Because such thresholds will bar non-conforming claims, the levels at which they are set will greatly shape the system. The question of thresholds makes plain the tension between accuracy and cost. The cheapest option would be to set very strict thresholds so that only presumptively valid claims are allowed. If, for example, only claims by twenty-year smokers with lung cancer or emphysema were heard, the subsequent decision as to whether this claimant was injured by smoking would be simplified. The trade-off, of course, is that a large number of would-be claimants injured by tobacco products would not be compensated, and the deterrence objective of the system would be significantly compromised. Greater accuracy might mean a large variety of thresholds, depending on the amount smoked, injury, demographic factors, or other considerations. It might mean simply a low threshold that only weeds out obviously frivolous claims. As in crafting other aspects of the system, the threshold level should be set based on considerations of the marginal cost of increasing accuracy and the political realities discussed above.

#### *b. Smoking History*

A Smokers' Compensation system could, just as our current tort system may, create incentives for people diagnosed with diseases that are often smoking-related to overstate the extent to which they smoke. By exaggerating his or her smoking history, a claimant may be able to overcome certain evidentiary thresholds or enjoy certain evidentiary presumptions that the system might employ. Our preliminary investigations suggest, however, that problem is unlikely to be significant. Smokers and former smokers

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202. Cf. Frank J. Vandall, *Reallocating the Costs of Smoking: The Application of Absolute Liability to Cigarette Manufacturers*, 52 OHIO ST. L.J. 405, 423 (1991) (proposing a presumption of causation with respect only to cancer of the lung, larynx, oral cavity, and esophagus within a system of absolute liability for cigarette manufacturers).

would likely be able to establish their smoking histories credibly and relatively inexpensively.<sup>203</sup>

The effects of long-term smoking often manifest themselves in ways that can be identified through reasonably straightforward medical tests. For example, long-term smokers often develop Chronic Obstructive Pulmonary Disease (COPD),<sup>204</sup> and even many short-term and medium-term smokers develop symptoms related to but less serious than those of COPD. COPD is a clinical term for patients with chronic bronchitis, emphysema, or a mixture of the two.<sup>205</sup> Pulmonary function testing with spirometry to measure lung volume is a simple, inexpensive, and effective preliminary indicator of COPD and other smoking-caused reductions in lung function. The so-called "FEV<sub>1</sub> test," which is a measure of forced expiratory volume per one second (the amount of air exhaled during the first second of expiration), shows smokers to have a greatly reduced volume.<sup>206</sup> COPD's symptoms sometime emerge in the early stages of smoking, but typically develop fully over the course of twenty to thirty years, worsening over time.<sup>207</sup> Smoking cessation can only partially, and usually insignificantly

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203. Put differently, manufacturers, with the aid of witnesses or medical tests, could, where appropriate, rebut any overstated or fraudulent smoking-history claims.

204. See DAVID DAIL & SAMUEL P. HAMMAR, PULMONARY PATHOLOGY 835 (2d ed. 1994). Smokers also develop brown pigmented macrophages (which are blood cells that clear particles from the lungs). The small airways have "prominent intraluminal collections of slightly pigmented alveolar macrophages ("smokers macrophages") which are crowded into tight clusters. See Anthony A. Gal & Michael N. Koss, *Differential Diagnosis*, in PATHOLOGY: PULMONARY DISORDERS 40 (Jonathan I. Epstein, ed. 1997).

205. See KRISTINE NAPIER ET AL., THE AMERICAN COUNCIL ON SCIENCE AND HEALTH, CIGARETTES: WHAT THE WARNING LABEL DOESN'T TELL YOU 9 (1996); see also *id.* ("Cigarette smoking is the single most important cause of both chronic bronchitis and emphysema; it accounts for almost all cases of both.").

206. See JOHN B. WEST, PULMONARY PATHOPHYSIOLOGY 68-77 (1992); see also *id.* at 71 ("[S]ome physicians regard this prolonged time as a useful simple bedside index of obstruction."). In addition, more involved inert gas elimination techniques can also be used to test ventilation and gas-exchange abnormalities. *Id.*

207. See GERALD L. BAUM & EMANUEL WOLINSKY, TEXTBOOK OF PULMONARY DISEASES 1004 (1994) ("Functional abnormalities have consistently been demonstrated in survey studies in male and female smokers of all ages. The extent of these abnormalities worsens with advancing age and increased tobacco consumption.").

reverse the effects of the disease.<sup>208</sup> Thus, damages from years of smoking are often evident from spirometric tests.<sup>209</sup>

In addition to spirometric tests (and other simple medical tests, including urine tests, blood tests, and chest x-rays), which can be administered at the time a claim is made, claimants can also be required to provide corroborative evidence in the form of, say, affidavits from doctors, friends, co-workers and others who may have been in a position to observe the claimant's smoking habit in years prior to the claim being made.<sup>210</sup> In sum, it appears that there may be reasonably reliable and inexpensive ways to verify a claimant's alleged smoking history. It is unsurprising, therefore, that establishing a claimant's smoking history has generally not posed a significant source of dispute in *tort* suits brought by smokers against cigarette manufacturers.<sup>211</sup>

## 2. Claimant-Specific Causation: Did Smoking Cause the Injury?

Of course, a determination that smoking *could* have caused any compensable injury does not imply that, in the given case, smoking *did* cause the injury. Although smoking gives rise to several signature diseases (e.g., lung cancer, oral cancer, emphysema),<sup>212</sup> some smoking-related diseases

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208. *See id.* at 1012 ("Smoking cessation does not result in appreciable improvements in lung function in most patients . . . Improvement in lung function was detected by spirometry and by the single-breath nitrogen test after both reduction and the cessation of smoking. While statistically significant, the average magnitude of the change was quite small. These findings were confirmed in another study of similar design, and they indicate that the reversible component of cigarette smoke-induced lung injury is relatively slight, even in the earlier stages of COPD.").

209. *See id.* It might be argued that such symptoms are often caused by air pollution. However, the evidence indicates that air pollution would be a rare and minor contributor to such symptoms as compared to smoking. In the words of two physicians who have studied the matter, "personal pollution (cigarette smoking) is more than a hundred times worse than general air pollution in terms of simple particulates." DAIL & HAMMAR, *supra* note 206, at 834. Furthermore, "outdoor air pollution levels in most Western cities are probably not high enough to cause . . . clinically significant impairment of lung function except in persons with unusual susceptibility." JOHN F. MURRAY & JAY A. NADEL, TEXTBOOK OF RESPIRATORY MEDICINE 1271 (1994). Of course, if manufacturers believe that pollution, and not smoking, is the cause of such symptoms in a particular claimant, they may be given the opportunity to rebut any presumption created by the tests with the use of other types of evidence.

210. A Smokers' Compensation system could certainly adjust compensation levels according to what evidentiary thresholds a claimant is able to clear.

211. Interview of Richard Daynard (November 17, 1997); Norwood Wilner (November 17, 1997).

212. *See supra* note 47.

have more than one potential cause.<sup>213</sup> In trying to assign responsibility among potential causes, there are several standards that the system might invoke: the “arising from” standard borrowed from workers’ compensation law, the preponderance of the evidence standard familiar from tort law, and the “probabilistic causation” approach that many scholars have recommended in contexts where causation takes place, if at all, at the molecular level. The choice of standard of specific causation required implicates the likelihood of bringing a successful claim and thus the effectiveness of the system as well as the administrative costs.<sup>214</sup>

a. “Arising from”

Under workers’ compensation’s “arising from” standard, a smoker who could show that smoking was a contributing factor to her disease would prove specific causation. Workers’ compensation, which evolved in response to industrial accidents, has struggled to account for occupational disease. In many cases, it is not at all clear that a worker exposed to toxic fumes develops cancer as a result of that exposure rather than genetics or environmental toxins. Long latency periods complicate the inquiry. Workers’ compensation systems generally consider a disease “occupational” if the victim was likely to have contracted it due to the nature of his work.<sup>215</sup> The distinctive nature of the work may be in the type of risk to which it exposes workers, such as those working around toxic chemicals, or the degree to which workers must face everyday risks, such as a worker handling ice all day.<sup>216</sup> A disease which may be common may nevertheless become occupational if the employment facilitates its transmission. For example, a telephone operator who contracted tuberculosis qualified for workers’ compensation because it was found that the close-fitting mouthpiece she used at work contributed to her contraction of the disease.<sup>217</sup> The

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213. In addition to the signature diseases, smoking is known to be a significant contributor to cancer of the bladder, kidney, pancreas, stomach, and cervix. Michael C. Fiore, *Cigarette Smoking: A Clinical Guide to Assessment and Treatment*, 76 MED. CLINICS OF N. AM. 305, 318–22 (1992). The causal relationship between smoking and heart disease was first established nearly 60 years ago, in 1940, by the Mayo Clinic. Carl E. Bartecchi et al., *The Human Costs of Tobacco Use*, 330 NEW ENG. J. MED. 907, 907 (1994). Nearly one-fifth of deaths from cardiovascular disease are attributable to smoking according to the Office of Technology Assessment. *Id.*

214. For a general discussion of the deterrence concerns raised by choices among burdens of proof, see Kaplow, *supra* note 36, at 358–62 (describing how choosing burden of proof so as to optimize deterrence is a function of, among other things, the social cost of sanctions).

215. 1 ARTHUR LARSON, *LARSON’S WORKERS’ COMPENSATION LAW* 7–100 (desk ed. 1976 & Supp. 1997).

216. *Id.* at 7–113 to 7–114.

217. *Id.* at 7–107.

employment need not be the sole or even dominant cause, so long as it contributes to development of the disease.<sup>218</sup>

Following this standard theoretically would allow a great number of smokers to collect damages for their injuries.<sup>219</sup> A claimant would need only show that her injury was in some way furthered by smoking to recover fully through the Smokers' Compensation system. For example, the medical evidence indicates rather unequivocally that smoking contributes to the likelihood of contracting heart disease.<sup>220</sup> Given that evidence, most long-time smokers could likely show that their heart disease was complicated or accelerated by smoking, and, thus, under an "arising from" standard, receive full compensation. Such a system carries the risk of "overdeterrence," in that tobacco companies may end up paying for injuries they did not cause, or at least that they alone did not cause. If so, this approach would constitute a policy decision to make cigarette manufacturers subsidize certain health care costs of smokers. Some smokers would be getting an extra benefit from the tobacco companies—payment for non-smoking-related injuries—in addition to compensation for their smoking-related injuries. As we explain below, however, it may be possible to reduce compensation in such a way as to minimize the overdeterrence (or subsidy) problem.

*b. Preponderance of the evidence*

Under the traditional cause-in-fact standard found in tort law, smokers would have to show that tobacco was more likely than not the cause of their injury. This is sometimes called the "preponderance of the evidence" rule. Whereas the "arising from" standard would allow any claim in which tobacco played a role, a preponderance of the evidence standard would raise the bar. Tobacco would have to be a dominant cause of the disease rather than simply a contributing factor. In cases such as mass toxic torts and tobacco-related harms, the reliance on statistical evidence means that a strong preponderance rule, requiring "particularistic proof" of causation as to the

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218. *Id.* at 7–124.

219. In theory, anyway. Despite this apparently liberal standard, the workers' compensation system does not get high marks for responding to occupational disease. The American Law Institute Reporters' Study, for example, called workers' compensation "notably unsuccessful in delivering compensation" to occupational disease victims. AMERICAN LAW INSTITUTE, ENTERPRISE RESPONSIBILITY FOR PERSONAL INJURY: VOLUME I: THE INSTITUTIONAL FRAMEWORK 111 (1991) [hereinafter A.L.I., FRAMEWORK].

220. See Bartecchi et al., *supra* note 213, at 907 ("[I]t has been well documented that cigarette smoking substantially increases the risk of cardiovascular disease, including stroke, sudden death, heart attack, peripheral vascular disease, and aortic aneurysm.").

individual, bars all claims.<sup>221</sup> While epidemiological evidence shows a clear causal connection between smoking and, say, lung cancer, little is known about *how* smoking causes lung cancer. The state of science is such that a claimant simply cannot prove by a preponderance of the evidence that in her particular case, her disease was the result of smoking. A weak preponderance rule, one that allows statistical proof of causation provided the risk at issue accounts for greater than 50% of the risk, has the same result in many cases, since the toxic risk rarely exceeds the background risk.<sup>222</sup>

This “all-or-nothing” approach has some significant drawbacks, particularly in contexts where causation can be demonstrated only probabilistically. Suppose, for example, that science demonstrates quite clearly that smoking nearly doubles a person’s risk of heart disease (a probability factor of just under 50%). Smokers with heart disease would be unable, absent some additional evidence, to collect in a Smokers’ Compensation system that adopted a “preponderance of the evidence” causal requirement. Alternatively, if science demonstrated that smoking just barely doubles a person’s risks of heart disease (a probability factor of just over 50%), then manufacturers would be liable in circumstances when their products were not responsible (or at least not fully responsible) for the claimant’s harm. Consequently, a “preponderance of the evidence” approach risks underdetering or overdetering cigarette manufacturers and their consumers.

### *c. Probabilistic Causation and Proportional Liability*

The problems with those two causal standards help to highlight the potential benefits of a “probabilistic causation” approach. This approach allows claimants to use epidemiological and statistical evidence to establish probable specific causation, and then discounts damages accordingly. If we suppose again that smoking nearly doubles the risk of heart disease (assume a probability factor of 45%), under probabilistic causation a claimant with heart disease would collect 45% of the costs she has incurred. In 55% of the cases, smokers’ heart disease would not be caused by smoking, but all smokers could win discounted damages for their heart disease. In the aggregate, then, the industry would thus pay the full cost of the injuries it is

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221. Rosenberg, *supra* note 36, at 858.

222. *Id.*

causing, albeit not to the exact victims since they cannot be accurately identified.<sup>223</sup>

Proposals for probabilistic causation have grown out of toxic tort cases that pose many of the same proof-of-causation dilemmas that smoking does. Both types of cases face what the American Law Institute Reporters' Study terms "individual attribution uncertainty." This problem arises when trying to use aggregate statistics to show specific causation.<sup>224</sup> Epidemiology might show statistics that, among smokers with lung cancer, 95% of the lung cancer cases are caused by smoking (i.e., general causation), but a smoker with lung cancer may not be able to prove that he is in that 95% (i.e., specific causation). Unlike traditional notions of causation, the probabilistic notion does not depend on physiological evidence of causation in the victim. Troyen Brennan and Robert Carter argue that such a change in concepts of causation mirrors changes in scientific thought. Science no longer looks for absolute, deductive explanations of occurrences, but allows for probabilities.<sup>225</sup> Brennan and Carter acknowledge the difficulty of establishing a statistically precise probability factor, but believe that with epidemiological studies and expert testimony, fact-finders could generally "arrive at some good estimate of the probability of causation in the individual case."<sup>226</sup> Epidemiologists whom we have spoken with about the specific topic of smoking-caused illness agree.

This notion of causation based on probability is particularly apt in cancer cases.<sup>227</sup> Scientists do not know precisely how carcinogenesis occurs, a fact that makes proof of causation in any individual case difficult. Indeed, it is on that basis that cigarette manufacturers have long maintained that there is no "proof" that smoking causes cancer. Yet there is ample statistical and epidemiological evidence for scientists to infer with confidence that smoking causes some types of cancer. Basing causation on statistical probability accounts for the known correlation in the aggregate despite the inability to prove causation in the individual.

For these reasons, probabilistic recovery may be appropriate for smoking-related harms, harms that involve the same sort of clear but difficult

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223. For a leading work on notions of proportional liability, see *id.*

224. AMERICAN LAW INSTITUTE, ENTERPRISE RESPONSIBILITY FOR PERSONAL INJURY: VOLUME II: APPROACHES TO LEGAL AND INSTITUTIONAL CHANGE 326-27 (1991) [hereinafter A.L.I., APPROACHES].

225. Troyen A. Brennan & Robert F. Carter, *Legal and Scientific Probability of Causation of Cancer and Other Environmental Disease in Individuals*, 10 J. OF HEALTH POL., POL'Y & L. 33, 39 (1985).

226. *Id.* at 58. This task might be undertaken by an advisory science panel. See *infra* notes 272-84 and accompanying text.

227. See Brennan & Carter, *supra* note 225, at 58.

to prove causal link that is found in other settings in which probabilistic recovery is most frequently recommended. For example, the American Law Institute Reporters' Study endorsed Professor Rosenberg's recommendation of proportional liability in environmental tort cases.<sup>228</sup> Brennan and Carter also recommend applying proportional liability to cases in which an increased risk is attributed to an "environmental agent."<sup>229</sup> Some states have begun to turn theory into practice in their workers' compensation programs. For one specific example, Arkansas currently allows for probabilistic recovery in occupational disease cases. If an occupational disease is aggravated by another noncompensable disease, or if work plays a role in aggravating another disease, compensation may be reduced accordingly.<sup>230</sup>

While probabilistic recovery may be the most accurate means of establishing specific causation on a system-wide (rather than individual) level, such accuracy carries with it administrative costs. Successfully implementing probabilistic recovery would require experts to establish the probability factors of smoking with respect to various harms in a variety of situations. If these determinations are to be as accurate as possible, they would be made on a case-by-case basis; after all, accurate probabilities will depend on the other potential causes of the harm to which the claimant may have been subject. Such inquiries would be expensive, however, both in terms of fact-finders' time and to the parties, who would almost certainly need to hire attorneys, conduct discovery, and adopt other trappings of litigation.

The administrative costs of case-by-case probability determinations most likely outweigh the accuracy benefits, particularly as those costs fall heavily on the parties. The goal, then, in designing the system is to determine what level of accuracy yields the benefits equal to its costs. A science panel might establish probability charts depending on demographic variables, quantity and brand smoked, family histories, employment conditions, and so on. The degree of detail will be contingent upon the optimization calculus and political realities.<sup>231</sup>

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228. A.L.I., *APPROACHES*, *supra* note 224, at 371.

229. Brennan & Carter, *supra* note 225, at 59.

230. Ark. Code Ann. § 11-9-601(c)(1) (1987).

231. It is worth reiterating that the theoretical optimization point is arguably of little utility in identifying the appropriate level of detail. Although on a macro level, the complexity of the probability determinations should be increased until the marginal accuracy benefit equals the marginal cost, political considerations are unlikely to operate on that principle. The costs of administering the Smokers' Compensation system will fall either on the government or the industry, in all likelihood. If on the government, the policymakers may be expected to put a premium on keeping costs down, even if the result is that the system is less likely to compensate the right victims the correct amount.



*d. Evidentiary Presumptions*

While probabilistic causation has been recommended for cases similar to those posed by cigarettes, it has not been widely implemented. A more common feature of proposed causation-based compensation systems is the use of evidentiary presumptions.

Garner, Ausness, and Lebel all propose presumptions of causation for certain diseases depending on the claimant's smoking history.<sup>232</sup> Rabin discusses two proposed systems for mass toxic tort cases that would create rebuttable presumptions of causation when the alleged source of the harm was in the hazardous waste business (generation, transport, or disposal) at the time of exposure, the claimant was exposed, and the injury was of the kind known to result from such exposure.<sup>233</sup> There is also precedent for presumptions of causation in federal law, as they are key features of both the Black Lung Benefits Program and the National Vaccine Injury Compensation Program.<sup>234</sup>

Presumptions could play a role in Smokers' Compensation by reducing the obstacle facing claimants of proving a causal connection that is often difficult or costly to establish. Presumptions could also be used to expedite the claims process by avoiding the necessity of proving repeatedly that, for example, smoking causes lung cancer. Smokers' Compensation might include presumptions that smoking over a certain number of years causes certain diseases. Depending on the system, such prescriptions could be rebuttable or irrebuttable. Failure to satisfy the conditions of the presumption might, depending on the system, bar compensable claims from being brought, or it might simply shift the burden of proving causation to the claimant.

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If the industry funds the system, the policymakers would have an incentive to maximize accuracy determinations beyond the optimization point since the cigarette manufacturers would be footing the bill.

232. See *supra* notes 134–46 and accompanying text.

233. Rabin, *supra* note 53, at 961.

234. The law establishing the Black Lung Benefits Program created two rebuttable presumptions for miners with at least ten years' experience in the mines: 1) that pneumoconiosis (black lung disease) is work-related; and 2) that death due to respiratory disease is caused by pneumoconiosis. There were also two irrebuttable presumptions concerning miners with complicated pneumoconiosis: 1) that the miner is totally disabled; and 2) that death was due to the disease. Federal Coal Mine Health and Safety Act of 1969, Pub. L. No. 91–173, § 411(c); 83 Stat. 742, 793 (1969). Subsequent amendments created new presumptions and eliminated others. The National Vaccine program relies on a “nearly irrefutable presumption of liability” for certain diseases contracted within a given period of time from vaccination. Rabin, *supra* note 53, at 959.

### 3. *The Cigarette Card: Either Credit Card or Stored Value Technology*

Another method of gathering information regarding a person's smoking history—for purposes of determining both general causation and claim-specific causation—would involve an idea that we first introduced in the *Yale* article; namely, the “cigarette card.”<sup>235</sup> The idea would be to require individuals who wish to smoke first to purchase a cigarette card. This card would then have to be presented to the cigarette retailer, at the time of purchase, whenever a pack of cigarettes is purchased. As described in that article, the card could be designed along the lines of a credit card or ATM card so that every time a cigarette purchase occurred information regarding the brand of cigarette being purchased, the date of purchase, the number of packs, perhaps the age of the purchaser, among other things, would be recorded. Then, if a smoker were later to bring a Smokers' Compensation claim against cigarette manufacturers, the smoker's cigarette-card information could be used to help resolve the difficult causal issues discussed in the preceding two subsections. This information could also be used to determine how to allocate the damages among cigarette manufacturers (in cases in which the smoker has smoked multiple brands) so as to maximize the brand-specific deterrence effect of the Smokers' Compensation regime.<sup>236</sup>

Notwithstanding the deterrence benefits of the cigarette card idea (discussed in greater detail in the earlier article), this version of the cigarette card idea—the credit-card version—is subject to two principal criticisms, the first having to do with administrative costs and the second having to do with privacy concerns. The administrative costs of such a system would obviously be substantial. Every store that sold cigarettes would be required to have a machine that could read the cigarette card, and that machine would have to be connected to the cigarette-card network, which presumably would be done over a telephone line. Those machines would cost money, and maintaining the network would cost money. The privacy concern seems to be the most troubling aspect of the cigarette-card idea for most people (based on the feedback we have received from the *Yale* article). Many are extremely troubled by the notion that detailed information regarding everyone's smoking habits would be kept in some central data-bank.

In the *Yale* article, we offer some responses to these administrative-cost and privacy concerns,<sup>237</sup> and we will not rehearse those responses here.

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235. See Hanson & Logue, *supra* note 3, at 1291–95.

236. See *infra* Part IV.E.

237. See Hanson & Logue, *supra* note 3, at 1292, 1295.

Rather, we will suggest an alternative version of the cigarette card that might entail lower administrative costs than the credit-card version and that would virtually eliminate the privacy concerns. Instead of using credit-card technology, which stores information in a central data-bank, we might adopt the so-called stored value technology, which stores information instead on a magnetic strip or tiny computer chip embedded in the card itself.

The potential administrative-cost savings would come from not having to maintain a network connecting all of the cigarette-card machines or a centralized databank. Each cigarette retailer need only have a machine that can read the data on the card. And the privacy benefits would be enormous. All of the information that would be so valuable for purposes of determining causation (and, as we will see in the next section, for allocating payments among companies)—number of packs and brand purchased, dates of purchase, age at time of purchase, etc.—could all be kept on one's own cigarette card. And that information would be seen by no one but the smoker, unless and until the smoker decided to bring a Smokers' Compensation claim, at which point the card would be presented and mined for data that would be relevant to the causal determinations not only in that particular case but in other cases as well.<sup>238</sup> It is our understanding that the technology already exists for creating stored-value cigarette cards along the lines we have described.<sup>239</sup>

One major drawback of the type of stored-value card just described is that, if the card is lost, all of the valuable data regarding the individual's smoking history would be lost as well.<sup>240</sup> There are a number of potential responses to that problem that the Smokers' Compensation regime might adopt, if it were to use a stored-value cigarette card. First, we could do nothing; that is, we could just count on smokers to keep up with their cards, and if they lose their cards require them to go through all of the standard methods of establishing causation that were discussed in the preceding two

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238. And although one might complain about the loss of privacy at that point, such a complaint would not be specific to a Smokers' Compensation regime, but rather would apply to any compensation regime that requires the smoker to make a factual showing regarding her smoking history.

239. For a thorough discussion of the stored-value card (the technology behind it, its growing use as a system of payment that may eventually rival the credit card and the check, and its overall advantages and disadvantages), see generally RONALD J. MANN, PAYMENT SYSTEMS AND OTHER FINANCIAL TRANSACTIONS (forthcoming Aspen 1999) (copy of manuscript on file with authors).

240. What we have thus far been discussing is a version of an "unaccountable" stored-value card. With such a card, the data exists only on the card. If the card is lost or stolen, the data is lost. An alternative is the "accountable" stored-value card, which stores the information not only on the card itself but also at some centralized backup location so that if the card is lost or stolen, the operator of the system can reconstruct the lost data from the centralized data bank. *Id.* See MANN *supra* note 241 (manuscript Assignment 15, at 2-3). Most of the stored-value cards currently in use are of the unaccountable variety. *Id.*

sections. Second, we could try to develop methods by which smokers could back up the data from their cards onto their home computers or in some other way. This approach would add to administrative costs, and it may be impractical to expect smokers to be so conscientious as to regularly back up their cigarette cards. Third, we could develop a system that would back up the cigarette-card data at the point of purchase and store the information, not only on the card itself, but also in some centralized location.<sup>241</sup> Although this approach would seem to reintroduce all of the administrative-cost and privacy concerns that the stored-valued card was intended to eliminate, that need not necessarily be so. It might be possible to design a backup system, where individuals' cigarette data could be stored centrally, but that would allow access to that data only by the smoker herself in cases in which her card is lost or stolen. In other words, although the data would be gathered and stored by some third party (perhaps the federal government or perhaps some private company would administer the system), by law the only parties who would be allowed to gain access to the information would be the smoker herself or someone authorized by her to retrieve the information.<sup>242</sup> This would not eliminate the privacy concern. The information would still be out there. But it would lessen the concern.

In any event, we do not pretend to know the optimal tradeoff among the privacy concerns, the administrative-cost concerns, and the deterrence concerns in connection with the cigarette card. We mean here only to make clear that the tradeoff exists.

#### E. How Are Payments Allocated Among Companies?

If, as is true of the vast majority of smokers, a claimant smoked only one brand of cigarette or several brands of cigarettes produced by the same manufacturer,<sup>243</sup> then establishing claimant-specific causation would be sufficient. When the smoking-related injuries must be divided among multiple brands produced by multiple manufacturers, however, a Smokers' Compensation system needs to allocate liability across different brands. As we have seen, Ausness and Lebel do not address this question; under their proposals, damages across manufacturers would be financed by excise taxes

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241. This would be a version of the accountable stored-value card, discussed *supra* note 240.

242. There is some evidence that the technology exists to develop this sort of backup system as well, although such systems are not currently in wide use where stored-value cards are being used. MANN, *supra* note 239 (manuscript Assignment 15, at 2-3).

243. See *supra* note 46.

such that liability would, in effect, be determined by market share.<sup>244</sup> The Black Lung and National Vaccine programs are similarly funded by taxes,<sup>245</sup> with liability allocated according to market share rather than causal share.

### *1. Division of Liability*

In this subsection, we identify five possible methods of allocating liability among cigarette manufacturers other than market-share liability. We begin with the least accurate and probably least administratively expensive and move toward the most accurate and most expensive. We do not speculate here as to whether the trade-off in terms of greater accuracy justifies the added administrative costs. Our goal is simply to highlight a few of the possible options.

First, responsibility could be divided *equally* among the manufacturers that produced cigarettes smoked by the claimant. This method would be the easiest to administer, as it would require only information regarding which brands were smoked and some basic arithmetic. Such an approach is at least one step better than an allocation based solely on market-share, because under an equal allocation approach only those companies that manufactured the particular smoker's cigarettes would pay for that smoker's harms. If many consumers are reasonably brand loyal or if those who are not brand loyal switch brands randomly (at random time intervals),<sup>246</sup> then manufacturers of relatively safe cigarettes should thrive, and competition for safety should emerge. Nevertheless, the nexus between causation and payment of damages might be fairly attenuated, reducing the beneficial incentive effects of the system.

Second, rather than dividing liability equally, a Smokers' Compensation System could pro-rate liability according to the length of time a smoker consumed each manufacturer's product. This method would require the factfinder to establish additional information, and thus would add to the administrative costs of the process. Presumably, however, pro-rated liability could represent an improvement over the equal allocation method proposed immediately above, inasmuch as it would allocate damages in a way that

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244. See *supra* note 144 and accompanying text.

245. 26 U.S.C. § 9501 (1994) (Black Lung); 26 U.S.C. § 9510 (1994) (National Vaccine).

246. If brand switching were independent of the risks posed by the different brands, then makers of more dangerous cigarettes would bear more liability. To be sure, in some cases, those manufacturers will be charged only half of the damages (assuming only two brands smoked) when they caused more than half. However, they will more often be charged half than the other brands because, by hypothesis, their cigarettes are more dangerous.

more closely approximated the harm done by the respective manufacturers. This approach, too, may have problems. For example, insofar as smokers systematically smoke disproportionately dangerous cigarettes for disproportionately short durations, this equal allocation-by-time method will not yield an ideal deterrence signal. To help address any such problem, this allocation system could adopt a rebuttable presumption that all cigarettes are equally dangerous.<sup>247</sup> Manufacturers of demonstrably safer cigarettes would be permitted to rebut that presumption and thereby reduce their shares of liability.<sup>248</sup>

Estimating the number of cigarettes smoked of each brand would further refine the allocation process. It may be that a smoker begins smoking a half-a-pack-per-day of Brand X and does so for 10 years. If that person then moves on to Brand Y for another 10 years, while also increasing consumption to a pack per day, she has smoked twice as many Brand Y cigarettes, though the time frame for each brand was the same. Donald Garner has suggested the per-number means of allocating liability, coupled with a rebuttable presumption that cigarettes are equally dangerous.<sup>249</sup> Underlying both the time- and number-allocation approaches is an assumption that it does not matter if a cigarette is the first or last smoked.

For a variety of reasons, it may be desirable to allocate on other than a pro-rata basis. One possibility is a "winner-take-all" system, by which the manufacturer who produced the most cigarettes smoked by the claimant assumes all liability. This method would reduce administrative costs incurred as a result of disputes among manufacturers with regard to who should bear what portion of the liability. If we assume a random distribution of smoking patterns across brands, this method should balance out

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247. See Garner, *supra* note 134, at 316–17.

248. Although the administrative board may lack information to judge adequately the relative riskiness of cigarettes, manufacturers probably do not. By placing the burden on manufacturers, therefore, the presumption forces the well informed manufacturer to inform the poorly informed regulator. Furthermore, it does so in a way that pits manufacturers against manufacturers in contrast to the current regime in which manufacturers' regulatory incentives is basically to stick to one simple story—there is no proof that cigarettes of any type cause cancer and smoking cigarettes is not addictive. A code of silence in response to such a presumption, however, is certainly not unimaginable given the industry's history, and would partially undermine the primary motivation of ex post incentive-based regulation by sharply reducing care-level considerations from manufacturing decisions. While this behavior would not be in individual companies' best interests, oligopolistic decision-making might prompt such action, particularly if the industry felt that the Smokers' Compensation system could be dismantled if it failed to produce results. But even were it the case that manufacturers could not manage to cooperate in that way, it is not clear that administrative regulators could be sufficiently competent to sort out any informational disputes and competing claims among manufacturers.

249. Garner, *supra* note 134, at 316–17.

manufacturers' liability in the aggregate. If, however, certain brands are "starter" cigarettes, or for other reasons are smoked disproportionately for shorter periods of time, those brands would be underdeterred. Another option would be to give a larger share of the liability to the company producing the first brand smoked. This "addiction penalty" might be warranted for a number of reasons. For example, first-brands are arguably more costly in that they create the addiction. Assigning greater liability to the manufacturer of the first cigarette smoked may further deter tobacco companies from marketing to children and nonsmokers. They would presumably place a greater premium on converting existing smokers, for whom the liability risks are lower, than creating new smokers. Moreover, the toxins of the first brands may be more dangerous, other things being equal, inasmuch as those toxins linger in a smoker's body for more years than do those of later-smoked brands. That point suggests a third non-pro-rata option, which is to weight liability according to estimated marginal damage. If the evidence shows that smoking for five years is relatively harmless, and that the cigarettes smoked between years six and ten are more destructive, the system might put greater liability on those manufacturers of brands smoked between years six and ten.

## 2. *Danger Quotients*

To further encourage tobacco companies to develop safer cigarettes, pro-rata liability allocations might be refined by establishing and regularly updating a danger quotient for each brand of cigarette. A science panel might, for instance, use data, including those created through the Smokers' Compensation system, to run epidemiological regression analysis in order to identify which cigarettes were most dangerous, holding other variables constant.<sup>250</sup> With that information, each brand of cigarette would be assigned a quotient indicating its danger level. After allocating liability, for example according to number of cigarettes smoked or length of time each brand was smoked, the tribunal would adjust the allocation amounts based on the relative danger quotients of the relevant brands.<sup>251</sup> To further refine the

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250. Cf. Hanson & Logue, *supra* note 3, at 1274, 1292 (suggesting ways in which an ex post incentive based system might create valuable information).

251. For example, assume the manufacturers of Brands A and B are initially adjudged to be liable for 40% and 60% respectively of a claimant's damages, and that the danger quotients of their brands are 8 for A and 5 for B. The final percentages of damages owed by each would be the initial allocation weighted by the danger quotients, a ratio of 320:300 (40 x 8 for A; 60 x 5 for B), or 51.6% for A and 48.4% for B. Thus, while a claimant may have smoked more of Brand B, the

system, the science panel might establish various danger quotients for each brand with respect to different diseases. Speaking entirely hypothetically, it may be that while Marlboro is particularly prone to cause lung cancer, it is less likely to cause heart disease, and Camel is the opposite. Separate danger quotients would account for such variations.

By using danger quotients, the system would further accommodate for the fact that cigarettes are not equally dangerous. All but the last of the allocation methods suggested above assume that cigarettes are interchangeable.<sup>252</sup> Each method allocates liability pro-rata, whereas the reality may be that the cigarettes did not play an equal role in causing the injury. Two parties may each dump twenty barrels of waste at a site, but if one dumps benzene and the other old clothes, their contribution to the resulting pollution is hardly equal. The danger quotient adjustment makes the allocation of liability more accurate, by estimating the relative contribution of each brand to the smokers' injury not just quantitatively, by time or number of cigarettes, but qualitatively. Adopting this feature only makes sense, of course, if the benefit of the added accuracy warrants the probably significant costs of developing and maintaining the danger quotients.<sup>253</sup>

### 3. *Establishing Brand-Specific Smoking History*

Any of these methods of allocating liability depends on first establishing which brands of cigarettes the claimant smoked. As discussed above, there is strong evidence that smokers are quite brand-loyal and even more manufacturer loyal.<sup>254</sup> Thus, the smoking history inquiry is likely to be

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manufacturer of A would wind up paying slightly more than half of the damages because its cigarette was more dangerous than Brand B.

252. To be clear, that does not mean that the other methods would not require manufacturers of relatively dangerous cigarettes to pay more compensation than that paid by manufacturers of relatively safe cigarettes, other things equal. *See supra* note 246. More dangerous cigarettes cause more injuries, resulting in higher payments by their manufacturers, even under a pro-rata allocation system.
253. For reasons discussed below, the danger quotient idea should be used, if at all, only to allocate liability among manufacturers, not to set the level of damages. If the amount of damages were to turn in part on the brands smoked, the system would create an incentive to lie about one's smoking history.
254. *See supra* note 48. It should be noted that there is some "wiggle" room with respect to liability allocation. As long as the correct manufacturers are identified, errors in allocation by brand are irrelevant. If, for example, a smoker smoked five different products, all manufactured by Philip Morris, then any allocation among brands would result in the same payment by Philip Morris, and Philip Morris would probably have a fairly accurate sense of relative dangerousness of each of its own brands. *Cf. generally* David Rosenberg, *Joint and Several Liability for Toxic Torts*, 15 J. HAZARDOUS MATERIALS 219 (1987) (arguing that by confronting a manufacturer with the aggregate



manageable, as smokers tend to change brands infrequently. The obvious source of this information is the smoker. The claim procedure could require an affidavit by the smoker estimating the number of years and quantity smoked of each brand over her smoking life.

Although an affidavit by the smoker would be difficult to verify without new systems in place,<sup>255</sup> the system could be designed such that smokers would have little incentive to lie. Indeed, it is worth noting that the question of brand-specificity has not played a prominent role in cigarette litigation to date.<sup>256</sup> For several reasons, the issue would likely be even less significant under a Smokers' Compensation program. First, as we explained above, compensation would probably be limited to economic losses for which people commonly carry insurance. In such a scenario, many claims will be brought by insurance companies in subrogation. Since the smoker would not be collecting the damages, the smoker would have no reason to lie about the brands he smoked. More fundamentally, however, as long as the amount of liability does not turn on which brands were smoked, neither smoker nor insurer will have an interest in filing a claim against a particular manufacturer. The brands smoked would dictate only the source of the damage payments, not the amount.<sup>257</sup> In any event, insofar as the system did create an incentive to lie about what brand or brands a claimant smoked, substantial fines for intentional misrepresentation could further diminish the likelihood that a smoker would lie about his or her smoking history.<sup>258</sup>

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relative risk, the manufacturer would take optimal precautions and charge the right price with respect to each of its brands). As the number of manufacturers involved in a given claim increased, it would become more important to make accurate brand-or manufacturer-specific causal determinations. Moreover, even if a smoker smoked only one manufacturer's brands, the manufacturer may itself benefit if a reasonably accurate brand-specific causal link can be established. See Hanson & Logue, *supra* note 3, at 1274.

255. One such verification system is the cigarette card. See *supra* notes 235-42 and accompanying text.

256. Interview with Daynard and Wilner, *supra* note 211.

257. This proposition does not mean that all cigarettes must be treated equally. Adoption of the damage quotient proposal would not create an incentive to lie about which brands a claimant smoked. In the proposal above, the danger quotients would be used to alter the allocation of liability among manufacturers, not to fix the amount of liability.

258. Another way of looking at this question is through the lens of the accuracy-administrability trade-off. The accuracy of the liability calculations, and consequently the deterrence function of the system, might be enhanced by factoring the smokers' brands into the calculus. For example, epidemiological evidence might suggest that certain brands are more likely to cause heart disease, but less likely to cause lung cancer. Others might pose a relatively significant risk of emphysema but be relatively safe with respect to heart disease. Such evidence could affect outcomes, particularly in a probabilistic causation system. If brands were taken into consideration, the probability factors would change, resulting in more or less of a discount in damage awards. In that case, then, the savvy lung cancer claimant might claim that she or he smoked a cigarette more likely to cause lung cancer. Such an increase in accuracy would therefore require additional administrative

## V. OTHER ADMINISTRATIVE AND POLITICAL ISSUES

### A. Transition Issues

If lawmakers decide to adopt some form of Smokers' Compensation, they still must determine how best to make the transition from the current system to a Smokers' Compensation system. This transition presents two general questions: First, to what extent should Smokers' Compensation claimants be allowed to recover for losses caused by smoking that occurred before the adoption of the new program?<sup>259</sup> Second, given the relatively long latency periods of most smoking-related illnesses, when will claimants be allowed to bring claims for losses resulting from post-enactment smoking? Although a complete answer to those questions is beyond the scope of this article, in this section we suggest the types of issues that would need to be addressed. Throughout this analysis, again, the goal is to provide the optimal degree of deterrence within the constraints of political and administrative feasibility.

One approach would be to make the Smokers' Compensation program purely prospective, in the sense that claims could be brought only for harm resulting from post-enactment smoking. The rationale for such an approach might be that, since our principal goal is deterrence, and since past smoking-caused harms are, in effect, sunk costs, the only relevant costs from a deterrence perspective are those associated with future smoking. Under such an approach, smokers who brought claims immediately following the enactment of the program would recover nothing, given that the smoker's cancer, lung disease, or heart disease—even if attributable to cigarettes—would not have been attributable to post-enactment smoking. Under a purely prospective transition rule, therefore, smokers would not be able to bring claims for several years after enactment of the program. The precise length of the delay would depend upon the state of medical science regarding how long it takes for a person's smoking habit to produce one of the covered diseases.

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costs to verify the claimant's smoking history, or risk skewing the results. In this situation, the cost of verifying smoking history, such as requiring the production of receipts, would likely outweigh the benefit of additional accuracy.

259. See Hanson & Logue, *supra* note 3, at 1301.

To illustrate this purely prospective approach, consider the following stylized example. Assume that, five years after the Smokers' Compensation program is enacted, a smoker brings a claim; and assume that this person has been smoking for 20 years—5 years post-enactment and 15-years pre-enactment. If she meets all of the proof requirements, she would recover for the portion of her costs attributable to the five years of post-enactment smoking. To minimize administrative costs, we could assume that the last five years of smoking contributed as much to the smoker's health condition as the first fifteen years, in which case the smoker in this example would be allowed to recover for 25 percent of her economic losses. Alternatively, if we determined that the early years of smoking contributed the most to the smoker's condition, the percentage for recovery in this case would be something less than 25 percent of her losses. In any event, under a purely prospective transition rule, the percentage of losses recoverable under Smokers' Compensation would increase each year following the enactment of the program. And after, say, 20 years have passed following the enactment of the regime (or whatever period of time is determined by the standing science panel), the system would be fully phased in; and claimants' damage awards would no longer be discounted.

Notwithstanding its initial theoretical plausibility from a deterrence perspective, we almost certainly would not, and should not, adopt a purely prospective transition approach to a new Smokers' Compensation regime, for several reasons. First, again from a deterrence perspective, to apply the system purely prospectively would send a dangerous message to other industries whose products may pose similar risks but who have not yet been held liable.<sup>260</sup> Moreover, allowing smokers to recover for at least a fraction of their pre-enactment smoking would increase the incentive for smokers to bring claims, which may be especially important in the early years of the program when post-enactment benefits would be relatively small. In addition, to the extent the system is also intended to serve a compensation function, retroactive claims are desirable. Allowing cigarette smokers to recover for at least some of their pre-enactment smoking-related costs would provide a form of first-party health and life insurance coverage, which will be especially beneficial to those who are uninsured or underinsured for such losses.

Deterrence and compensation concerns, therefore, suggest that some recovery for the cost of pre-enactment smoking would be appropriate. In a purely theoretical world, in fact, optimal deterrence might require that the

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260. Hanson & Logue, *supra* note 3, at 1302–03.

Smokers' Compensation regime be fully retroactive, even to the point of bankrupting the industry.<sup>261</sup> In our view, however, the current political climate (and perhaps concerns of administrative costs) foreclose the option of full retroactivity. So how much retroactivity would be enough to generate some of the benefits mentioned above, but not so much as to bankrupt the industry? That will depend on a determination of how large a financial hit the industry can take without bankrupting many of the existing manufacturers. And the answer to that question will depend, in turn, on how much the existing companies will be able to raise their prices to cover claims for pre-enactment smoking without being driven out of the market by new start-up companies, who will be required to pay only claims for post-enactment smoking.

We do not presume to know what that number will be, and we leave its ultimate determination to the expert panel that would be assigned the job of the working out the details of the system. However, for the purpose of illustration, let's assume that all of the objectives—optimal deterrence within cost and political constraints—would be achieved if, say, one-half of all economic costs from pre-enactment smoking were recoverable from manufacturers, along with all of the economic costs of post-enactment smoking. Recall the example of our 20-year smoker who brings a Smokers' Compensation claim five years after the regime is adopted. In that situation, the claimant would be allowed to recover five-eighths (or 62.5%) of her total economic losses. That includes the one quarter of her economic losses attributable to post-enactment smoking *plus* one half of the three quarters of her total economic losses that are attributable to pre-enactment smoking. Again, we have chosen these fractions to illustrate one approach to dealing with the transition to a Smokers' Compensation regime, but other fractions could be chosen, depending upon how the concerns of accuracy, complexity, and political feasibility are balanced.

## B. Preemption of State Tort Law

A central question facing any tobacco regulation is the degree to which it will preempt state tort law options currently available to victims of smoking injuries. The Proposed Resolution would, in effect, go much of the

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261. *Id.* at 1304–07.

way towards preempting tort law in favor of command-and-control and performance-based regulation. Under the terms agreed to by the industry and states' attorneys general, only individual trials would be available to injured parties.<sup>262</sup> The Proposed Resolution precludes class actions and other consolidations, suits by any governmental entity, and punitive damages for past conduct.<sup>263</sup> The immunity that the tobacco industry seeks is not itself unprecedented, but the prospect of immunity from tort law without some new form of *ex post* incentive-based regulation may be. Tort claims for most workplace injuries, injuries resulting from work in coal mines, and injuries caused by vaccines are all preempted to varying degrees, but replaced with new *ex post* compensation regimes.<sup>264</sup> Another common example of regulation preempting tort law is no-fault auto insurance. The preemption of tort law is not unprecedented, but it ought to be preempted in favor of an alternative that better meets the deterrence and compensation functions that tort law traditionally performs.

One possibility is that Smokers' Compensation would not really preempt tort law at all. Like the Childhood Vaccination Compensation Program and the Dalkon Shield Claimants Trust, Smokers' Compensation could represent an encouraged alternative, but not a bar to tort law.<sup>265</sup> Filing a Smokers' Compensation claim might be a prerequisite to bringing a tort action, with claimants having the option of accepting or rejecting the Smokers' Compensation result. A variation on the co-existence model is to allow injured smokers the choice between bringing a tort claim, a Smokers' Compensation claim, but not both. Unlike the first possibility, here the claimants would not know what the Smokers' Compensation result would be before making this decision. Allowing dual systems accommodates concerns about industry capture of the Smokers' Compensation system. If smokers believed that the Smokers' Compensation system was shortchanging their claims, they would have redress in the courts.<sup>266</sup> The maintenance of a tort option with other alternative systems has also sometimes been justified to accommodate the rare claims that exceeded the compensatory caps of the

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262. "Proposed Resolution," *supra* note 4, at 39.

263. *Id.*

264. *See supra* notes 51–133 and accompanying text.

265. *See supra* notes 81–88 and accompanying text (CVCP) and *supra* notes 116–133 and accompanying text (DSCT).

266. *Cf.* David Rosenberg, *Of End Games and Openings in Mass Tort Cases: Lessons From a Special Master*, 69 B.U. L. REV. 695, 705 (1989) (arguing that "the opt-out procedure [in class actions] provides a check on whether the efficiencies of the collective process can be and have been translated into adequate compensation for victims").

administrative system.<sup>267</sup> Given a system that proposes to compensate all economic losses and would deliberately exclude other losses, this rationale is inapposite. In any event, due to the political constraints discussed above, this option is not viable. This system would give injured smokers the upside of a causation-based compensation system without limiting the tort options available to them.

A more viable possibility is to focus the claims to which Smokers' Compensation will be open, leaving other alleged injuries to be adjudicated in tort law. The width or narrowness of that focus turns in large part on the questions of accuracy and cost with which we are now familiar. If an objective is minimizing the cost of the system, one would try to structure Smokers' Compensation to resemble a world in which all diseases are signature diseases. Thus, only claimants suffering from diseases such as lung and esophageal cancer and emphysema might bring claims. Others, such as those suffering from heart disease and other diseases of less certain causation, might be left to pursue their claims through the tort system. Under such a plan, the science panel might be authorized to certify new diseases for Smokers' Compensation as new epidemiological evidence emerges. Alternatively, the system might require that all injury claims be brought in the Smokers' Compensation system unless intentional or reckless misconduct is alleged. Workers' compensation systems often bar tort claims for workplace injuries with such an exception.<sup>268</sup>

One particular advantage to allowing some role for tort law, even if limited to cases of intentional and reckless harms, is to preserve its information-forcing function.<sup>269</sup> As the recent attorneys' general actions, particularly the recently settled case in Minnesota, have shown, litigation can play a significant role in bringing to light information of great importance to the public generally and smokers in particular.<sup>270</sup> Without tort law's extensive discovery, Smokers' Compensation is not set up to delve as deeply into questions of conduct. While a fully functioning Smokers' Compensation system would theoretically provide information about cigarette safety through the pricing mechanism, a tort option for the most egregious instances of

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267. See Rabin, *supra* note 53, at 974 (discussing no-fault automobile insurance).

268. See *supra* note 54.

269. See Rabin, *infra* note 271, at 11.

270. See, e.g. Barry Meier, *Cigarette Maker Manipulated Nicotine, Its Records Suggest*, N. Y. TIMES, Feb. 23, 1998, at A1.

industry deception could provide an important further check on manufacturers.<sup>271</sup>

One final option, the one undoubtedly preferred by cigarette manufacturers, is to fully preempt all tort claims arising from smoking-related injuries. Although workers' compensation usually allows claims of intentional torts to be pursued in tort as noted above, in most cases absolute preemption by Smokers' Compensation would mirror the familiar tradeoff of workers' compensation. A bar on tort claims could be characterized as the price smokers would pay for the more lenient causation-based alternative of Smokers' Compensation. This preemption option would, however, result in a broader, and hence more expensive Smokers' Compensation system. The best alternative, given the political constraints and the desire to optimize efficiency within those constraints, therefore might be one that channels most but not all claims to Smokers' Compensation, reserving some residual role for tort law.

### C. Expert Tobacco Disease Panel

Regardless of the decision-making structure chosen, the complexity of the medical and scientific issues raised in tobacco-related injury cases makes a Tobacco Disease Panel ("TDP") of experts a potentially valuable adjunct of the Smokers' Compensation system. As the legal system has grappled with increasingly complicated questions of science, particularly with respect to causation, commentators have proposed various methods of incorporating facts and concepts that are beyond the expertise of most judges, to say nothing of juries.<sup>272</sup> The American Law Institute Reporters' Study recommends science panels in mass tort cases when individual attribution uncertainty is a problem, as it is in tobacco cases.<sup>273</sup> Judges too have begun increasingly to recognize the benefits of and to rely on experts in toxic tort

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271. See Robert L. Rabin, No-Fault Compensation for Tobacco-Related Disease, Remarks at the Conference on the So-Called Global Settlement 11, Univ. of Wisconsin Law School (Oct. 16, 1997) (on file with authors) ("To me, this constitutes the strongest argument for keeping tort open, even if a no-fault plan were adopted—that is, to promote this informational function, or, more precisely: to make sure that the industry won't in the future engage in the kind of misconduct and deceit that it has in the past.").

272. See Troyen A. Brennan, *Helping Courts with Toxic Torts: Some Proposals Regarding Alternative Methods for Presenting and Assessing Scientific Evidence in Common Law Courts*, 51 U. PITT. L. REV. 1 (1989).

273. A.L.I., APPROACHES, *supra* note 224, at 343. See *supra* note 224 and accompanying text (discussing individual attribution uncertainty).

cases.<sup>274</sup> Still, while the Federal Rules of Evidence now allow courts to appoint expert witnesses,<sup>275</sup> judges have rarely taken advantage of the opportunity.<sup>276</sup> There are several science panels working in regulatory contexts, however, that demonstrate the potential functions of the TDP.<sup>277</sup>

The TDP's central role would likely be to develop policies for the Smokers' Compensation system with respect to the causal connection between smoking and specific diseases. This function could be modeled after Ontario's Industrial Disease Standards Panel, which assists that province's Workers' Compensation Board. The Ontario panel investigates potential occupational diseases, establishing a position on causation that determines eligibility for benefits and guides workers' compensation boards.<sup>278</sup> Similarly, the TDP would develop the presumptions and probability tables that the Smokers' Compensation board would use in weighing claims. As in Ontario, the administering body of the Smokers' Compensation system could refer particular questions to the TDP in situations in which the TDP has not yet determined causation.<sup>279</sup> The TDP might also appoint a neutral expert to testify in cases involving novel claims or claims which the TDP has not yet taken up.<sup>280</sup>

Another role for the TDP is to establish the danger quotients for each brand of cigarettes, based in significant part on epidemiological data that emerges from the Smokers' Compensation program.<sup>281</sup> This function

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274. See articles on breast-implant panel; *see also Justice Breyer Calls for Experts To Aid Courts in Complex Cases*, N.Y. TIMES, Feb. 17, 1998, at A17 (stating that even though "a judge is not a scientist and a courtroom is not a scientific laboratory" neutral experts "play an important role in educating judges on potentially relevant technical matters, helping to make us not experts but educated lay persons and thereby helping to improve the quality of our decisions").

275. FED. R. EVID. 706.

276. Brennan, *supra* note 272, at 7.

277. There is precedent for expert advisory panels within the federal government. Troyen Brennan cites the ATSDR and the Environmental Protection Agency's Scientific Advisory Panel as successful science panels. These bodies demonstrate, he asserts, the workability of such boards, that experts are available and willing to serve in such a role, and that the adversarial process is not essential to accurate factfinding. *See* Brennan, *supra* note 272, at 18.

278. Weiler, *supra* note 168, at 16.

279. For example, the Ontario Industrial Disease Standards Panel conducted research into the link between gold mining and stomach and lung cancer at the request of the Workers' Compensation Board. The panel appointed a strictly scientific panel to examine the toxicological and epidemiological evidence and reach a consensus on the science, then the full panel factored in economic and policy considerations before making a finding concerning eligibility criteria. *Id.* at 17. Unlike the model in Ontario, we may prefer to draw a clear line between the determination of causation and the policy recommendations concerning compensation.

280. *See* Brennan, *supra* note 272, at 65 (proposing a Federal Toxic Substance Board that could provide lists of neutral experts whom courts might appoint in toxic tort cases).

281. *See supra* notes 250-551 and accompanying text.



resembles the establishment of toxicological profiles of hazardous substances by the Agency for Toxic Substances and Disease Registry (ATSDR). Under the 1986 Superfund amendments, ATSDR is to interpret available toxicological and epidemiological information to "ascertain the levels of significant human exposure . . . and the associated . . . health effects."<sup>282</sup> Like ATSDR's toxicological profiles, the TDP's danger quotients would "amount[] to generic expert testimony by a neutral administrative science panel."<sup>283</sup> More generally, the TDP would monitor and sponsor research into the health effects of smoking and the individual ingredients in cigarettes. This function of the TDP might go beyond the ATSDR, and involve the TDP conducting and sponsoring its own research rather than pursuing a limited mandate.

The TDP thus could play a significant role in Smokers' Compensation. If damages are scheduled, the TDP could add new diseases to the compensation schedule as science reveals new connections between smoking and disease.<sup>284</sup> The panel could also establish the average treatment costs for covered diseases in order to set the schedule. Drawing on scientific and medical data, it could establish presumptions of causation with thresholds that reflect the correlation between smoking history and disease. The TDP could study the interaction of smoking with other factors to set guidelines or presumptions for allocating causation among potential causes of diseases. If the system incorporates notions of probabilistic causation, the TDP might develop a matrix of probability factors for certain diseases. Based on regular testing of all cigarette brands, it could establish danger quotients. In cases that raise novel or disputed medical or scientific theories, the TDP could appoint an expert to assist the factfinder. The panel would also continually monitor, and perhaps sponsor, research into the health effects of smoking, and periodically review and adjust as necessary the presumptions, probability factors, and other science-driven elements of the system. The objective of such a blue-ribbon board is to base decisions on the best available science and to establish consistency within the system.

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282. E. Donald Elliot, *Planning and Managing Mass Toxic Tort Cases*, C534 ALI-ABA 605, 626-27 (1990) (quoting Superfund Amendments and Reauthorization Act of 1986, § 110(3)(A), 42 U.S.C. § 9604(i)(3)(A) (Supp. IV 1986)).

283. *Id.* at 627.

284. The silicone breast implants settlement creates a Medical Panel to fulfill such a function. Diseases may be added to the Disease Compensation Program by the five member court-appointed panel upon finding that the "then-existing medical and scientific evidence demonstrates that the disease or condition is caused by breast implants." *In re Silicone Gel Breast Implant Prods. Liab. Litig.*, No. Civ. A. CV94-P-11558-S, 1994 WL 578353, at \*8 (N.D. Ala. Sept. 1, 1994).

#### D. Financing the System

Although the money to administer the Smokers' Compensation system might come from any number of sources, it should probably ultimately fall on cigarette manufacturers and smokers. It might be argued that the costs of administering a Smokers' Compensation program should be paid out of general tax revenues, particularly given that all taxpayers—smokers and nonsmokers alike—will benefit from the system at least to the extent that public and private insurance mechanisms will be spared many of the costs of cigarette-related harms. The savings of as much as \$40 billion per year that would accrue to those entities currently paying for tobacco-related diseases<sup>285</sup> might be expected in some measure to be passed on to consumers and taxpayers in the form of lower insurance premiums and taxes. In our view, however, the fact that nonsmokers have long had to share the costs of cigarettes does not justify requiring them to share in the costs of regulating cigarette market. That regulation of any sort is necessary in this context is aptly understood as a cost created by the cigarette market and one that should not be externalized to parties outside that market.

Thus, we recommend the Smokers' Compensation system be funded as follows. The up-front start-up costs of setting up a Smokers' Compensation program should be paid for through a single lump sum charge against the industry, in proportion to each manufacturer's market share over the past several decades. Once the system is up and running, all subsequent costs of operation and administration should be charged to manufacturers in proportion to the harmfulness of their cigarettes. Supposing, for example, that the administrative costs of the Smokers' Compensation system was roughly 10% of the program's total pay-outs,<sup>286</sup> then a 10% "harm-share tax" could be added to every dollar of compensation required of each manufacturer. Manufacturers of more dangerous cigarettes would, quite appropriately, be charged more in absolute terms for the system than would manufacturers of relatively safe cigarettes. One important advantage of such a harm-share tax is that it would charge each manufacturer in accordance with the demands each makes on the system. A second significant advantage is that it would enhance the incentives created by the system to make safer cigarettes, without also giving rise to any sort of moral hazard problem on the part of claimants.

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285. See *infra* note 302.

286. See *supra* note 74–75 and accompanying text summarizing evidence regarding the administrative costs of some existing no-fault compensation schemes).

### E. Strategic Avoidance: The Judgment Proof Problem and Black Markets

One potential objection to the workability of Smokers' Compensation is that the lag between the sale of cigarettes and the realization of the costs of those cigarettes presents an opportunity for manufacturers to evade those costs. For example, after profiting for twenty years or so, a cigarette company—finding itself on the verge of paying out a slew of maturing Smokers' Compensation claims—might simply distribute its assets to its shareholders, rendering itself largely immune to the threat of Smokers' Compensation claims. Legal scholars sometimes describe this strategy as a form “judgment-proofing.” To be sure, the judgment-proof manufacturer would then be bankrupted by the Smokers' Compensation claims, but only after many years of profiting substantially and distributing those profits to shareholders. Moreover, a company expecting to engage in such a strategy would be able to sell its cigarettes at a price substantially lower than the prices charged by companies that expect to be around to pay Smokers' Compensation claims. Thus, to avoid loss of market share and perhaps imminent bankruptcy, companies would have an incentive to cut prices similarly, taking the risk of long-run, strategic bankruptcy.

There are several factors, however, that would tend to lessen the incentive toward judgment proofing. First of all, Smokers' Compensation claimants are not the only creditors of tobacco companies who have an interest in overcoming the judgment proof problem. In fact, one suspects that sophisticated long-term creditors of the tobacco companies would, as in other industries, find ways to protect themselves, protections that would (at least derivatively) protect Smokers' Compensation claimants as well. For example, those lenders might include loan covenants prohibiting (or, more generally, increasing the cost of) various judgment-proofing strategies—such as excessive dividends.<sup>287</sup> There are regulatory policies that could be

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287. It may be the case, however, that cigarette companies engage in very little long-term borrowing, but instead rely primarily on large amounts of short-term debt, such as commercial paper. If that is the case, the lenders would be relatively unconcerned about long-term judgment-proofing strategies, so long as insolvency was not expected to occur during a year in which the manufacturers have substantial loans outstanding. Thus, short-term lenders, like shareholders, would be beneficiaries (albeit perhaps unknowing beneficiaries) of the manufacturers' judgment-proofing strategy. One possible response to this problem would be to forbid short-term lending to cigarette companies. Thus, if the companies wanted to borrow, they would have to make a long-term commitment to their lenders not to engage in judgment-proofing strategies; and their lenders would have an incentive to monitor compliance with that commitment. Another analogous proposal, discussed in the text below, would be to require tobacco companies to purchase a certain amount of liability insurance,

adopted that would prevent manufacturers from evading the threat of future liability. For instance, as is provided for under the Proposed Resolution, manufacturers might be required to put up a substantial bond, to ensure that some assets are available in the future.<sup>288</sup> Similarly, as is the case in for virtually all European corporations, manufacturers might be required to meet minimum capitalization requirements, which would serve the same purpose as a bond. In addition, cigarette manufacturers could be required to purchase a minimum amount of liability insurance which would cover the costs of future potential liability.<sup>289</sup>

It is also worth noting that opportunities for strategic avoidance of regulatory incentives exist for virtually *all* forms of regulation. For instance, manufacturers could avoid the effect of an excise tax by directly or indirectly selling their brands on black markets (as may be common in other countries that have substantial cigarette tariffs).<sup>290</sup> That evasion strategy would be less effective under a Smokers' Compensation system because manufacturers would have to pay for the harms caused by all of their cigarettes, even those purchased on black markets.<sup>291</sup>

#### F. Additional Bankruptcy Concerns

One concern about Smokers' Compensation that we have heard is that imposing all (or substantially all) of the costs of smoking on the tobacco companies would bankrupt the industry. For a number of reasons, we regard the possibility of bankrupting several large manufacturers to be a politically non-viable alternative.<sup>292</sup> Nevertheless, a Smokers' Compensation system as outlined in this Article could be designed specifically to accommodate any desired target cost without sacrificing its public health

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which would give insurers, rather than lenders, the incentive to monitor the manufacturers.

288. Cf. Proposed Resolution, *supra* note 4, at 28–29 (requiring new market entrants to put up such a bond). Cf. Rosenberg, *supra* note 36, at 919–22 (describing an insurance-fund proposal intended to address these problems (and others) and under which claimants would bring their claims after a toxic exposure but, unlike Smokers' Compensation claimants, before an injury manifested itself).

289. For example, if Philip Morris wanted to continue selling cigarettes, it would either need to post a bond or purchase a liability insurance policy or perhaps somehow make available some of the assets held by the parent companies' non-tobacco subsidiaries.

290. See AP, *Cigarette Smuggling Probe Eyeing Employees at RJR*, BOSTON GLOBE, Aug. 23, 1997, at A5; Raymond Bonner & Christopher Drew, *Cigarette Makers Are Seen as Aiding Rise in Smuggling*, N.Y. TIMES, Aug. 25, 1997, at A1.

291. Indeed, for that reason, manufacturers would have a strong incentive to discourage the emergence of black markets in their own cigarettes.

292. See *supra* note 42 and accompanying text.

aims. Indeed, the Smokers' Compensation system can be designed so as to impose no greater costs on the industry than the proposals currently on the table.

If, as we have suggested, Smokers' Compensation would cover only pecuniary losses<sup>293</sup> and incorporated proportional liability,<sup>294</sup> the liability costs to manufacturers may not exceed the cost of current legislative proposals by as much as some might imagine.<sup>295</sup> Some of the bills before Congress may cost the industry as much as \$30 billion per year.<sup>296</sup> If Smokers' Compensation forced manufacturers to internalize the full current economic losses, the cost would likely substantially exceed that \$30 billion figure.<sup>297</sup> As described above, however, we foresee a transition period in which the manufacturers would not have to internalize all costs of pre-enactment injuries.<sup>298</sup> Furthermore, if, as we predict, the incentive effects

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293. See *supra* notes 170–87 and accompanying text.

294. See *supra* notes 223–31 and accompanying text.

295. We have not done a detailed economic analysis, but have done rough estimations simply to demonstrate that smokers' compensation need not be an unrealistically heavy cross for the manufacturers to bear.

296. For example, Sen. McCain's latest Commerce Committee bill, which he is putting forward as a bipartisan proposal, could carry a price-tag of \$600 to \$700 billion over twenty-five years, or as much as \$28 billion per year. See Jeffrey Taylor & Suein L. Hwang, *Tobacco Plan Is Criticized by Industry*, WALL ST. J., Mar. 26, 1998, at A10. A \$1.50 per pack tax increase, also proposed, would likely cost even more, since Sen. McCain's bill contemplates a price increase of \$1.10 per pack. See Bob Hohler, *Senators Put a Cap on Tobacco Liability*, BOSTON GLOBE, Mar. 31, 1998, at A1.

297. According to the Centers for Disease Control and Prevention, in 1993 medical treatment for tobacco use cost \$50 billion. *Medical-Care Expenditures Attributable to Cigarette Smoking—United States*, 1993, 43 MORBIDITY & MORTALITY WEEKLY RPT. 469, 470 (July 8, 1994) (pub. by Centers for Disease Control and Prevention) [hereinafter Centers for Disease Control]. *Id.* at 470–71. Another study found that in the early 1980s, direct health care costs resulting from smoking that would not otherwise have been incurred totaled \$186 billion over five years. Thomas A. Hodgson, *Cigarette Smoking and Lifetime Medical Expenditures*, 70 *Milbank Quarterly* 81, 109 (1992). Of that sum, 54.1% was paid by private insurers, 16% by Medicare, 11.6% by Medicaid, and 18.3% by the smokers themselves. *Id.* After accounting for health care inflation and Hodgson's 3% discount rate, Hodgson's calculation of tobacco-caused expenditures is likely to approximate the Centers for Disease Control and Prevention's figure. Between 1987 and 1993 the health care costs attributable to smoking more than doubled. Centers for Disease Control, *supra* note 297, at 470.

Although we have not found any studies of the lost wages attributable to smoking, a study of tobacco-attributed deaths found that in 1985, 45% of all such deaths in developed countries were of individuals younger than 65. Richard Peto et al., *Mortality from tobacco in developed countries: indirect estimation from national vital statistics*, 339 *LANCET* 1268, 1272 (May 23, 1992). Robert Rabin corroborates this figure, stating that the average age at which victims contract lung cancer is 65. Thus, he concludes, roughly half of those individuals are stricken before retirement age. Rabin, *supra* note 183, at 12. This number would suggest that fairly sizeable wage loss might be expected, although smokers disproportionately earn lower incomes.

298. See *supra* notes 259–61 and accompanying text (describing transition options).

of Smokers' Compensation significantly change industry behavior, then smoking-related injuries should significantly decline.

In any event, although we believe that a strong case can be made that cigarette manufacturers should bear the full health costs of their products, even if they do exceed the costs of current proposals, damages could be capped while maintaining many of the deterrence benefits of Smokers' Compensation. If policy makers determine that bankruptcy is a real concern, they could have tobacco companies pay out damages at a percentage of actual costs. The central goals of Smokers' Compensation—incorporating damage costs into cigarette prices and fostering a market for safety—rely more on accurate relative distribution of costs than accurate total cost shifting. The system could discount damages to any desirable level, and so long as the discount is across the board, the objectives of Smokers' Compensation will be met.

#### G. The Question of Personal Responsibility

Others might object to a Smokers' Compensation system (or to any other type of victim-initiated ex post incentive-based system) on the ground that it compensates smokers for the harms caused by cigarettes and thus removes from them any responsibility for their own decisions. The goal of a Smokers' Compensation system is to enhance public health. As Robert Rabin has noted, where no-fault compensation systems have been adopted, "a preoccupation with personal morality is alien."<sup>299</sup> For example, a worker who negligently contributes to his own injury is not barred from collecting workers' compensation.<sup>300</sup> Nevertheless, if another goal of tobacco regulation were to force individuals to take responsibility for their actions, no policy response would be superior to a Smokers' Compensation system.<sup>301</sup>

The concern about personal responsibility presumably derives from an impression that smokers may indulge themselves with impunity for decades, then they get to collect payments with relative ease when they get ill. This picture, however, fails to notice that smokers will have to pay for their right to make that claim. Smokers will be taking responsibility for their actions with each pack of cigarettes they purchase, in the form of higher cigarette

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299. Rabin, *supra* note 183, at 6.

300. *Id.*

301. For a fuller treatment of this argument and a related argument regarding the obligation of the cigarette industry to take responsibility for its actions, see Hanson & Logue *supra* note 3, at 1350–51.

prices. The arrangement is no different from the arrangement that currently exists between insureds and their first-party insurers. Indeed, by forcing smokers to bear the costs their addiction causes, and by allowing public and private first-party insurers to bring quasi-subrogation claims against manufacturers, Smokers' Compensation would result in lower insurance premiums for nonsmokers. As smokers would effectively buy separate insurance for most smoking-related injuries, private insurers and government programs such as Medicaid and Medicare would be relieved of an estimated \$39.5 billion in smoking-related illnesses per year.<sup>302</sup> By forcing smokers to pay the costs caused by their smoking, the system would be far stricter than the status quo, in which smokers pay a fraction of the actual cost of smoking and many are covered by insurance. It is the current system far more than Smokers' Compensation that allows smokers to disregard the substantial costs that their smoking poses to themselves and to others.

There are several other characteristics of Smokers' Compensation and smoking injuries that mitigate any problem of personal responsibility. First, as noted above, we propose limiting recovery to economic damages. Insofar as individuals suffer substantial non-economic harms that are not compensated, they do not get something for nothing. Moreover, the harms caused by cigarettes are, of course, often quite serious. Even to the extent smokers or their families receive monetary compensation for some of the costs of cigarette-caused harms, it is difficult to say that the dead or seriously-ill smoker ever fully evades the ultimate responsibility for her smoking decisions. Finally, of course, smokers are not the only actors who should be accountable for their actions. Under an ex post incentive-based regime, tobacco *manufacturers*, too, would be forced to bear responsibility for *their* actions.<sup>303</sup>

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302. See Centers for Disease Control, *supra* note 297, at 470-71. The estimated savings are almost certainly low, as the figure is based on 1993 data. In 1987, medical expenditures attributable to cigarettes came from the following sources: self pay (21.0%), private insurance (33.4%), Medicare (20.4%), Medicaid (10.2%), other federal (9.5%), other state (3.2%), and other (2.2%). *Id.* According to the 1987 breakdown of source of payments, and the 1993 health care costs, assuming *no* health care inflation in the last five years, Medicare alone would stand to save more than \$10 billion per year.

303. Recent reports suggest that the Proposed Resolution would have the perverse effect of increasing net profits of tobacco manufacturers. An ex post incentive-based regime would not have such an effect.

## VI. CONCLUSION

As this article goes to press, a variety of Congressional committees are considering a slew of tobacco bills. While anybody concerned about public health would take heart in this new-found attention to the need to regulate the market for cigarettes, we are concerned that the current momentum will not be marshaled to significantly alter the behavior of the tobacco companies. For all of the Proposed Resolution's discussion of reforming the corporate culture of the cigarette manufacturers,<sup>304</sup> the incentives of these companies would, as far as we can tell, remain basically unchanged. Under any of the proposals now on the table, cigarette manufacturers can be expected to continue resisting or attempting to evade the spirit of any regulation that would shrink their market or increase their costs. The Proposed Resolution and the spin-off bills in Congress would certainly change the regulatory framework in which tobacco companies operate, but they would not change the way those companies operate; their priorities would remain the same.<sup>305</sup>

We fear that without altering the cigarette manufacturers' basic incentive structure, attempted regulation will not result in the intended public health improvements but nevertheless will give the cigarette manufacturers a tremendous public relations boost and virtual immunity from future regulation for at least a generation. The tobacco industry has shown a knack for evading regulations and even turning regulations to its advantage. A recurrence of that phenomenon is not only the prediction of a sizable scholarly literature,<sup>306</sup> it is also the lesson of virtually every previous attempt to regulate the tobacco industry.<sup>307</sup>

Indeed, such efforts may already be underway. A recent Wall Street Journal article provides some disturbing information regarding emerging advertising practices of cigarette manufacturers in response to anticipated new restrictions.<sup>308</sup> For instance although RJR retired the famous Joe Camel last summer amid mounting public and regulatory pressure, "it is now introducing photographs of *real animals*, which *aren't* barred in the settlement proposal. A new menagerie for RJR's Winston brand includes a

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304. See Proposed Resolution, *supra* note 4, at 21–23 (describing steps that the parties will take to alter cigarette manufacturers' "corporate culture").

305. See generally Hanson & Logue, *supra* note 3, at 1316–48 (carefully examining the likely effects of the Proposed Resolution).

306. For a summary of that literature, see *id.* at 117–75, 126–81.

307. See *id.* at 1168 & n.9.

308. See Yumiko Ono, *Tobacco Ads Seek Glamor Without Camels, Cowboys*, WALLST. J., Feb. 29, 1998, at B1.



perky, bucktoothed mule and a chubby pig.”<sup>309</sup> Perhaps, in light of the Wall Street Journal article, legislators will now remember to ban all advertisements that include real, perky, bucktoothed mules, but is it realistic to expect them to anticipate all of the industry’s other countermoves?

The political reality is that we will only get one bite at the apple of comprehensive tobacco reform. It is vitally important, therefore, that any reform enacted avoid the pitfalls described above—that it achieve, in other words, public health gains without relying on the industry’s good faith. The Proposed Resolution and its offspring fail this test. Perhaps the broadest yet least obvious example of this failure is in the proposed bills’ emphasis on preventing underage smoking. We are, of course, strongly supportive of any efforts to keep children from smoking. Even assuming that the proposed strategies would be completely effective,<sup>310</sup> however, it remains a significant problem in our view that the regulations may do little more than delay by a few years the age at which the same number of smokers initiate their habit.

Supporters and opponents of the Proposed Resolution have argued that the trick to preventing people from ever smoking is simply to make certain they do not begin smoking before they are eighteen. This theory is based on the fact that “[t]he FDA and other health authorities have concluded that virtually all new users of tobacco products are under legal age.”<sup>311</sup> Evidence of when smokers start under the current regime, however, reveals little about when they would start under the proposed regime. We are quite skeptical of, and concerned by, the apparently widely held view that the current average age of initiation is somehow predetermined by nature. If one assumes, as many industry critics do, that marketing efforts have been partially—if not substantially—responsible for encouraging underage consumers to start smoking, then one should be seriously concerned that manufacturers will woo eighteen-year olds just as they have younger children. If manufacturers can successfully target fourteen year-olds, it seems plausible that they will be just as successful at targeting eighteen year-olds.

By directing the bulk of the regulatory firepower on reducing youth smoking as a means to achieving significant public health gains, the proposed regulations may be squandering a great opportunity.<sup>312</sup> These regulations

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309. *Id.* (emphasis added).

310. We detail in our Yale article the reasons why many of those regulations are unlikely to substantially reduce underage smoking. See Hanson & Logue, *supra* note 3, at 1322–37.

311. Proposed Resolution, *supra* note 4, at 1.

312. We recognize that there also are a number of provisions designed to increase FDA’s authority over tobacco products in order to mandate safer cigarettes. As we discuss in Part II *supra* and explore more thoroughly in the Yale article, however, we do not have confidence that command-and-control and performance-based regulations alone will have the intended effects. See Hanson & Logue,

will not change the industry's strategies, merely their tactics. Cigarette manufacturers will continue to produce and market products with the minimum possible investment in safety. They will continue efforts to expand their markets. They will simply change the demographic target slightly. In short, if we don't supplement more directed regulations with a general backdrop of ex post incentive-based regulation, we risk frustrating the true goals of directed regulations.<sup>313</sup>

Instead of launching an arms race of regulation and evasion, the Smokers' Compensation system gives cigarette manufacturers a stake in safety. Instead of relying on regulators in Washington to wheedle information out of resistant cigarette manufacturers and then determine what are the appropriate investments in safety, the Smokers' Compensation regime lets the party with the most information make that decision. As we argued above, to regulate effectively using either command-and-control rules or performance-based standards, a regulator would need to have much more information than any regulator now has or can be expected to have in the future. A regulator would need to know, among other things, how to design, manufacture, and successfully market less dangerous cigarettes. The reality is, however, that the only parties with that type of information are the cigarette manufacturers themselves. By forcing the manufacturers to pay for the health costs of their cigarettes, Smokers' Compensation gives them an incentive to keep those costs low. In the current era of privatization, most agree that the market is a powerful force. And no one doubts that market forces explain the cigarette industry's basic disregard for public health considerations to date. Under a Smokers' Compensation system, manufacturer profits would be tied directly to the safety of their cigarettes. Unlike any other proposals we have seen, a Smokers' Compensation system would harness market forces to align the industry's profit motive and the public's interest in health.

This Article is not meant as a detailed roadmap to a functioning Smokers' Compensation system, but simply attempts to lay out some of the major considerations and some possible alternatives. There are almost certainly potential problems and potential solutions that we have overlooked. We offer this Article not as the last word, but as a contribution to the existing literature and to what we hope will become a robust policy

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*supra* note 3, at 1322–42.

313. As described above, any of the proposed efforts to supplement the leaky command-and-control regulations with taxes, fines, or penalties are subject to the same fundamental problem—that is, they create no incentive for manufacturers to reduce the public health costs of cigarettes and may actually create the opposite incentive. See *supra* notes 22–25 and accompanying text.

discussion regarding how to construct an effective Smokers' Compensation system. Given the large number of policy and technical judgments that need to be made in order to design and implement Smokers' Compensation, we strongly recommend that, if there is to be such a discussion, Congress charge a panel (or task force, or commission), composed of members with diverse areas of professional and technical expertise and representing a diverse range of vantage points, with the task of setting up the system.

At the very least we hope that this Article will prompt closer scrutiny of other tobacco regulation plans and the ways they purport to change industry behavior. The current window of opportunity is almost certainly short. We should take advantage of it to change the incentives of tobacco companies so that, finally, they make the health of their customers a priority.