

A Comment on Causation, Law Reform, and Guerrilla Warfare

JERRY L. MASHAW*

It seems appropriate in a conference concerned with the conjunction of law and science to mention what lawyers can teach scientists and vice versa. For example, this morning the lawyers may be teaching the scientists that the lawyers have invented the “perpetual motion machine,” an elusive apparatus long sought by scientists. It turns out to be a social rather than a physical mechanism, and in legal circles it usually goes by the name “law reform.”

Law reform is indeed a perpetual motion machine. From any location in the legal system we can always imagine another point (by which I mean another configuration of the relevant legal rules) we would prefer. If we were to array these points incrementally on a graph, they would probably describe a circle. Whenever we actually find ourselves in a regulatory system, we tend to prefer taxes. Whenever we are using taxes, we suspect that subsidies might work better. Of course, when evaluating the use of subsidies, we are strongly attracted to criminal penalties. And to complete the circle, when we are considering the ineffectiveness of the criminal law, we long for the strengths of the tort system.

For most of this conference our discussion has been confined to the tort system. As Don Elliott has suggested, however, that is not the only system of law available to us.¹ We can reform the law of “toxic torts” without concentrating on the law of “torts.” We can set out on a journey via the law reform perpetual motion machine. Although that journey may take us in some sense back to where we began, when we return the tort system need not be the same as we left it. We can try to put the pieces of the machine together in novel ways that will produce better and better results, so that its motion traces an upward spiral rather than a mere circle. The panel has been given this sort of problem of systems design. How can we make motion yield progress?

The question put to the panel—“What do we wish from the system?”—is so broad that the meanings of both “we” and “the system” are unclear. For present purposes, I will imagine that the “we” in the question is some sort of, if you will forgive the term, neutral placeholder. That is, we do not know who we are. We, the system’s engineers, might turn out to have any position in the social system we design. The social “system,” as I imagine it, should include but not be limited to law.

From the Olympian perspective of systems design, the notion that causation in toxic torts is a major problem seems peculiar. For the problem of establishing causation in toxic torts can be solved by the simple expedient of eliminating the tort system. To see how this is accomplished, and why it might be a good idea, imagine first that we have a perfect technology of justice, including a perfect technology of proof. We know who caused what out there in the real world, at

* William Nelson Cromwell Professor of Law, Yale Law School.

1. See Elliott, *Goal Analysis v. Institutional Analysis of Toxic Compensation Systems*, 73 *Geo. L.J.* 1357 (1985).

least in the sense that we have been discussing causation up to now. We can tell whether chemical x causes disease y and whether plaintiff A 's y was caused by defendant B 's x .

Next let us imagine that in designing a system for dealing with illness and injury from toxic substances we have two purposes: first, to compensate for injury and illness; and second, to provide optimal deterrence to those who manufacture, sell, or use toxic substances. Given these goals, a compensation-deterrence system that neither includes tort compensation nor focuses on questions of causation seems quite plausible, even desirable.

Consider the deterrence goal. Taking money from A and giving it to B , even if you know that B 's x caused A 's y , is not optimal deterrence. There is always some earlier point in time at which A could have avoided coming into contact with x . According to deterrence theorists, the system should impose the full cost of injury on both A and B *ex ante*, so they will have incentives to avoid the costly interaction.² The toxic torts system does not do that. It is not a particularly well-designed deterrence system.

Moreover, it is extremely difficult to find any empirical evidence that the tort system produces deterrence in the sense normally talked about,³ that is, increased caretaking, and not just reduction in the level of the activity that gives rise to tort litigation. If we also consider one of the peculiarities of the toxic torts problem—long latency periods that may stretch out twenty to forty years—deterrence becomes almost meaningless. The present value of a liability thirty years from now is almost zero, even if the exposure is enormous. In short, current tort law is not only not designed for optimal deterrence in theory. It also may have no deterrent effect in practice.

Now, consider our other goal, compensation. What exactly is this goal, and how does tort liability support it? Suppose we encounter two injured persons who need some compensation. We can prove that one of them has been injured by a particular toxic substance produced by a particular manufacturer. We can prove that one of them has been injured by a naturally occurring environmental contaminant. These plaintiffs are left with similar abilities and similar difficulties in getting on with their lives. Why should we want to compensate one of them at the rate of \$40,000, which is the approximate present discounted value of the average Social Security disability payment, and one of them at, I don't know, \$500,000, \$5.1 million, or whatever it is the tort system might provide? From a compensation perspective, this question has no good answer.

Moreover, when I think about designing a compensation system and realize that I can pay Social Security disability benefits at something less than a penny on the dollar in administrative costs, while it costs \$2.71 to pay \$1.00 in compensation to an injured asbestos worker through tort litigation,⁴ then the torts system seems a very poor choice for getting money into the hands of injured parties.

2. For discussions of the economic efficiency of various accident liability rules, see Brown & Holohan, *Taxes and Legal Rules for the Control of Externalities When There are Strategic Responses*, 9 J. LEGAL STUD. 165 (1980); Green, *On the Optimal Structure of Liability Laws*, 7 BELL J. OF ECON. & MGMT. SCI. 553 (1976).

3. See generally G. EADS & P. REUTHER, *DESIGNING SAFE PRODUCTS: CORPORATE RESPONSES TO PRODUCT LIABILITY LAW AND REGULATION* (1983).

4. Wellington, *Toxic Torts: Managing the Asbestos Problem*, 31 YALE L. REP. 20, 23 (Spring 1985).

Nor will eliminating problems of proof of causation eliminate all, or even most, of the disparity between the administrative costs of these systems. In addition, because the tort system is uncoordinated, one jury or court in some region of the country may bankrupt the potential defendants, leaving all future plaintiffs uncompensated. Nobody controls the budget of the litigation-compensation system, and that surely is poor compensation system design.

In short, assuming that we solve the problem of establishing causation in toxic injuries and illnesses, a tort-like process still has major flaws as a system because it produces neither practical deterrence nor adequate compensation. We really need to go to some quite different system. It may be a system like Don Elliott's, although I suspect that it needs to be even broader; a compensation fund for those injured by toxics invites all sorts of line-drawing problems. I suspect that if we go to a general compensation fund, we will want to socialize risks so that causation questions can be avoided. A truly general system might simply focus on a person's current state and on the degree to which society would like to make that person better off financially. Such a system obviously raises a series of considerations that we usually consider outside of the tort system: Who are appropriate donors? How much compensation do we want to fund for what sorts of conditions given the necessities of running a market economy? And so on.

Deterrence, uncoupled from compensation, can be built back into the overall system in any number of ways, including, for example, the taxing scheme to fund the compensation program. Both first-party and third-party payments can be partially experience-rated by risk categories, and additional regulatory, tax, or criminal devices could be employed. From the visionary perspective I have adopted, these are merely details.

Yet it is fair to ask even visionaries how in the world they think we might get from here to there, even if we all agree that "there" is a good system. What is the social mechanism by which we would move from our fragmented, complex, and apparently incompetent tort system, to a system that seems, at least abstractly, appealing?

Strangely enough, that brings me to the relevance of the issue of causation in toxic torts, and to what I believe to be one function of the tort system—a function we have not really addressed at this conference. As the foregoing reveals, I believe that the tort system does not provide optimal deterrence and effective compensation. Rather, it seems to provide a whole series of other social functions, none of which demands accurate causal determinations. I am tempted to suggest that in the toxic torts context we should describe the tort system as primarily a system of guerrilla warfare. We seem to have a lot of potential revolutionaries (plaintiffs and jurors) who are throwing bombs (litigation) and who aren't too interested in what shape the rubble (the civil liability system) takes after the litigation is over. The major social goal of this activity may be to ensure that society is sufficiently shaken up to do something about these fearful toxic risks. And if you are interested in moving rapidly from one configuration of the social system to virtually any other, revolution or guerrilla warfare is certainly a way to get something moving.

In this vision of tort litigation as guerrilla warfare, causation becomes the main line of defense of the established order. We have heard a lot of argument, much of it quite convincing, that all these plaintiffs' victories in the courts are

based on shockingly bad science. Good science in the courts, of course, favors defendants in toxic torts litigation. If taken seriously in litigation, all the imponderable causation issues are going to prevent many wealth transfers from defendants to plaintiffs, and the defense bar's faith in scientific method—as it clings to the best techniques of epidemiology and toxicology as the basis for determining facts in tort suits—makes perfect sense. But apparently the juries and the judges are not having it. For some reason the system is ignoring the rules of causation—at least as scientifically, and perhaps as legally, understood—in order to let plaintiffs win. Why?

One answer may be that ignoring legal and scientific precepts allows the tort *system* to play a role in social mobilization where issues are too large, complex, or “systemic” to be settled within the tort *doctrine*. Imagine judges and juries, therefore, as engaged in politics. If you think about political mobilization, you will certainly ask the question, “Whom can we encourage to mobilize the country politically to do something about the problem of toxic risks?” And if you have a choice between (1) unorganized and perhaps impecunious potential plaintiffs and (2) a group of people and firms representing a very large proportion of the wealth of the United States, you probably would like to mobilize the latter. Indeed, law reform really seems to get going when plaintiffs start winning.

This account of causation as largely irrelevant to our genuine social goals, and as a mere counter in a strategic game of social mobilization, may be irresponsible. It fails to address the fact that we are ignoring the facts. And, if the liability system stops caring about what is really going on out there—whether toxics are causing any sort of serious injury to anybody—then it may create social pressure for expensive cures to nonproblems. Yet, without in any way suggesting the irrelevance of this concern, I do in closing want to remind us that causation is treated both in science and in law in accordance with the social purposes of the affected community.⁵

Dr. Evans⁶ has given us an excellent presentation on the intellectual history of the development of criteria for causation in toxicology.⁷ The short form of the story was that, over several hundred years, every time a researcher discovered the cause of a disease or toxic effect that failed to satisfy the prior postulates for attributing causation, the scientific community developed another set of postulates capable of recognizing the new discovery. That fascinating story led me to “Mashaw's Postulate.” It goes like this: “Once convinced of a causal relation, it is possible to rationalize one's conviction in a set of causal criteria, which will be abandoned whenever they fail to establish another causal relation in which one is subsequently also prepared to believe.” If that is good science, and I have no reason to think that it is not, then even the more swashbuckling approaches to causation now inhabiting the toxic torts jurisprudence may be good law, that is, they may represent what we currently want from a system that needs to be dis-

5. See generally Calabresi, *Concerning Cause: An Essay for Harry Kalven*, 43 U. CHI. L. REV. 69 (1975) (analyzing causation in terms of deterrence, risk spreading, and distributional goals).

6. Alfred S. Evans, M.D., M.P.H., John Rodman Paul Professor of Epidemiology, Yale University School of Medicine.

7. Dr. Evans participated in another Symposium panel in which he discussed the rules for establishing causal relations in the sciences. See Evans, *Causation in the Biological Sciences: Evolution of Our Concepts of Causation and Disease* (1985) (unpublished paper; copy on file at the *Georgetown Law Journal*).

mantled and reconstructed in a very different fashion. For the perception of error is one of the major forces that drives our perpetual motion machine.

