SECOND THOUGHTS ABOUT APPORTIONMENT IN ASBESTOS LITIGATION

Michael D. Green*

I had the privilege to work on apportionment of liability for the American Law Institute, having been a co-reporter for the Restatement Third of Torts project that addressed comparative fault, contribution, and indemnity.[1] I have, since early in my academic career, also been interested in asbestos litigation. I can still recall hearing in the early 1980s about some of the innovative efforts of Judge Robert Parker of the Eastern District of Texas to clear out the many asbestos cases that were clogging his docket and being filed at a faster rate than he could resolve them. So several years ago when I was invited to speak at a symposium on the future of asbestos litigation, I naturally gravitated toward thinking about how liability should be apportioned in that litigation.

The idea that liability is not all or nothing—a basic tenet of the common law—but could be apportioned in a fine-grained manner—that is using a scale of 100, whether you call it comparative negligence, fault, responsibility, or causation—is a reform of the twentieth century and one of the most influential in tort law of that century.[2] The availability of comparative fault not only to apportion liability between plaintiff and defendant but also to apportion liability among defendants has had an enormous effect on who can recover and who will pay or bear what portion of the plaintiff's damages.[3] Beyond its impact on apportionment of

* Williams Professor of Law, Wake Forest School of Law.

1. RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY (2000).

2. *See* Guido Calabresi & Jeffrey O. Cooper, *New Directions in Tort Law*, 30 VAL. U. L. REV. 859, 868 (1996) (characterizing apportionment of liability as the most important development in tort law since the advent of liability insurance early in the 20th century); Robert L. Rabin, *Past as Prelude: The Legacy of Five Landmarks of Twentieth Century Injury Law for the Future of Tort Law*, *in* EXPLORING TORT LAW 52, 70-72 (Stuart Madden ed. 2005) (identifying comparative fault as one of the five most significant developments in 20th century tort law).

3. *See, e.g.*, Ellen M. Bublick, *Citizen No-Duty Rules: Rape Victims and Comparative Fault*, 99 COLUM. L. REV. 1413, 1415 (1999).

liability, the adoption of comparative fault and contribution has had a ripple effect on a vast array of tort doctrine that are still in the process of being sorted out.[4]

I addressed apportionment in asbestos litigation assuming that we could start over with it—indeed, my thinking then was influenced by the fact that Japan was at the outset of its own asbestos litigation—claims by asbestos victims against their employers were just emerging,[5] and I had an LLM student who was going to return to Japan and work for one of the companies involved in the emerging litigation.

As I thought about asbestos litigation, I thought about several characteristics of it that bear on apportionment:

1) the fact that frequently plaintiffs are exposed to multiple entities' asbestos products[6]—often dozens[7] (some of which may not be parties) and sometimes for very different lengths of time;[8]

2) sometimes, as with Clarence Borel,[9] there is a claim of fault on the part of the victim;

4. I catalogued some of those ripple effects in Michael D. Green, *The Unanticipated Ripples of Comparative Negligence: Superseding Cause in Products Liability and Beyond*, 53 S.C. L. REV. 1103, 1106-07 (2002). Recent work revealed yet another area in which classical tort doctrine–specifically, the duties of land possessors to those on the land–has been influenced by the existence of contributory negligence as a complete bar to recovery. *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL AND EMOTIONAL HARM § 51 cmt. j & rptrs. note (Council Draft No. 7, Nov. 13, 2007) ("The rule that a land possessor was not subject to liability for any open and obvious danger is much easier to justify in an era when contributory negligence constituted a complete bar to recovery.").

5. *See Asbestos Victims? Kubota To Be Quizzed Over Worker Deaths*, THE JAPAN TIMES, July 1, 2005, *available at* http://search.japantimes.co.jp/cgi-bin/nn20050701a3.html; *31 Deaths Tied to Hyogo Asbestos Plant*, THE JAPAN TIMES, July 18, 2005, *available at* http://search.japantimes.co.jp/cgi-bin/nn20050718a3.html.

6. I use a variety of descriptions for defendants in asbestos litigation. The vast majority of them manufactured products containing asbestos. In recent years, owners of buildings with asbestos have also been defendants. Employers, because of the exclusive remedy provision of workers' compensation, have not been defendants. Regardless of the specific role played by a given defendant, I mean to refer to any defendant who, through its tortious conduct, exposed the plaintiff to respirable asbestos fibers.

7. STEPHEN J. CARROLL ET AL., ASBESTOS LITIGATION 7, 78 (RAND Inst. for Civil Justice 2005). The Civil Justice Institute at Rand found that, in the early years of asbestos litigation, the number of defendants per case averaged twenty. DEBORAH R. HENSLER ET AL., ASBESTOS IN THE COURTS: THE CHALLENGE OF MASS TOXIC TORTS 15 (1985).

8. *See, e.g.*, Tragarz v. Keene Corp., 980 F.2d 411, 414-15 (7th Cir. 1992); Borel v. Fibreboard Paper Prods. Corp., 493 F.2d 1076, 1081 (5th Cir. 1973); Eckenrod v. GAF Corp., 544 A.2d 50, 52 (Pa. Super. Ct. 1988) (plaintiff exposed to three different defendant's products for 20, 15, and 8 years).

9. Clarence Borel was the plaintiff in the first successful asbestos case. *See Borel*, 493 F.2d at 1076. For an account of the efforts of Ward Stephenson, Clarence Borel's lawyer, to successfully prosecute that seminal asbestos case, see PAUL BRODEUR, OUTRAGEOUS MISCONDUCT: THE ASBESTOS INDUSTRY ON TRIAL 3-70 (1985).

3) there are at least three diseases for which asbestos has a strong causal link—asbestosis, lung cancer, and mesothelioma, two of which are malignancies, while asbestosis is a progressive respiratory disease;[10]

4) there is another powerful cause of lung cancer, smoking, which is often present in asbestos victims with lung cancer;[11]

5) many major asbestos producers have been through bankruptcy and in the process have adjudicated their obligations to future claimants, which is reflected in a trust established on behalf of future claimants and payment from those trusts often will fall short of the bankrupt entity's share of liability;[12] and,

6) in the aftermath of widespread adoption of comparative fault and the tort reform of the latter part of the twentieth century, joint and several liability no longer is a majority rule; indeed, there are only about a dozen jurisdictions that retain it.[13]

So I began with the first principle of apportionment that is set forth in the Apportionment of Liability Restatement: If all the parties were not a cause of all of plaintiff's harm we must first determine which parties were a cause of which portions of the plaintiff's harm.[14] By "cause," I mean factual cause: the defendant's tortious conduct was a necessary condition for the harm suffered by the plaintiff.[15]

Now, if all parties are a cause of all of the harm, then we can skip that step. But frequently the claim is that a defendant caused less than all of the plaintiff's harm. When that is the case, we need to determine which parties caused which harm for the simple yet powerful reason that tort law does not impose liability on those who are not a cause of the harm.[16] As my students appreciate, intuitively, before we begin our study of causation, even a very

10. The National Academies of Science studied the causal connection between asbestos and five other cancers and concluded that there was sufficient evidence of a causal connection between asbestos and laryngeal cancer. For the other four cancers studied, the evidence was deemed no stronger than suggestive of a causal relationship. INSTITUTE OF MEDICINE, NATIONAL ACADEMIES OF SCIENCE, ASBESTOS: SELECTED CANCERS (2006).

11. *See* Piero Mustacchi, *Lung Cancer Latency and Asbestos Liability*, 17 J. LEGAL MED. 277 (1996).

12. James L. Stengel, *The Asbestos End Game*, 62 NYU ANN. SURV. AM. L. 223, 262 tbl.1 (2006-07) (providing payments made by bankrupt asbestos manufacturers pursuant to the trusts for claimants established in the bankruptcy proceedings).

13. *See* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 17 Topic 2 tbls. (2000).

14. *Id.* § B19.

15. I do not employ the "substantial factor" standard that the first two Torts Restatements made quite popular for reasons not important to this paper. I will, however, attend below to the idea of multiple sufficient causes, the primary reason for the substitution of the substantial factor rubric for but-for or sine qua non in those Restatements.

16. *See* 1 DAN B. DOBBS, THE LAW OF TORTS § 166 (2000).

culpable driver—drunk, 35 miles over the speed limit, and weaving from lane to lane because he is fornicating in the front seat while driving—is not liable to someone on the other side of town who is hurt in an unrelated accident. Similarly, when a pedestrian is hit simultaneously by two automobiles, one of which breaks her arm and the other her leg, the driver who broke the arm does not pay damages for the broken leg and vice versa.

The second step in apportioning liability is, among all of the parties who are a cause of the same harm to the plaintiff, to determine their relative culpability—apportion liability based on negligence or fault or, in the terminology of the Restatement, responsibility, to each of the parties to determine what proportion of the damages should be assigned to each party or borne by the plaintiff.[17]

Operationalizing that two-step process in asbestos litigation is quite complicated. It requires consideration of the initiation, progression, severity, and conclusion of the disease process in order to assess the causal role of those to whose asbestos the plaintiff was exposed. Different diseases may call for different approaches, for example if it is a progressive disease dependent on the quantity of asbestos to which a victim is exposed, then each defendant may have caused at least a marginal portion of the plaintiff's harm.[18] On the other hand, if the disease is one, like cancer, whose severity is independent of dosage ("dose-independent disease"), then one (or some) defendant(s) will be liable for all of the plaintiff's harm while others would not be liable at all. Those not liable would include all defendants responsible for exposures after the plaintiff's disease was determined. After all you can't kill a horse that is already dead.[19] It may also be true of defendants implicated in early exposures that were irrelevant to the disease initiation process.[20]

17. The idea that there are two different and independent bases for apportioning liability and a hierarchy to their employment is one of the most difficult concepts to teach law students in a torts course. It is also a concept that escapes many courts. *See* Sparks v. Owens-Illinois, Inc., 38 Cal. Rptr. 2d 739, 748 (Ct. App. 1995); W.R. Grace & Co.-Conn. v. Dougherty, 636 So. 2d 746, 748 (Fla. Dist. Ct. App.1994); Lagueux v. Union Carbide Corp., 861 So. 2d 87, 88-89 (Fla. Dist. Ct. App. 2003); Boryszewski ex rel. Boryszewski v. Burke, 882 A.2d 410, 423 (N.J. Super. Ct. App. Div. 2005).

18. *Borel*, 493 F.2d at 1092. The court in *Borel* was correct in applying this principle to the asbestosis from which plaintiff's decedent suffered. The court neglected to attend to the fact that plaintiff's decedent also contracted mesothelioma, which is a non-progressive disease.

19. *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 26 cmt. k (Prop. Final Draft No. 1, 2005).

20. I set forth the details of disease pathologies and their implications for causal apportionment in Michael D. Green, *A Future for Asbestos Apportionment?*, 12 CONN. INS. L.J. 315 (2006).

Assessing causal roles in asbestos gets into some of the knottiest causal problems in tort law: Consider two of the most interesting, yet perplexing: First, suppose that for a plaintiff to contract lung cancer, a threshold dose, say 100 units of asbestos exposure is required. Suppose that defendant has been exposed to 105 units of asbestos by 21 defendants, each providing 5 units of exposure. Each one can claim that it was not a but for cause of the harm because absent its asbestos, the plaintiff still would have contracted lung cancer.

This is the toxic substances analog of the classic problem of two independently set fires, each of which would have burned down the plaintiff's house at the same time.[21] Courts have, uniformly in the case of two tortfeasors who set the fires, held them both liable, employing the "substantial factor" rubric of the Second Restatement.[22] Does it matter if, instead of 21 defendants, there are two—one who provides 100 units, sufficient by itself to cause the disease, while the second defendant provides five units?[23]

The second problem occurs when other defendants provide 105 units and the 22nd defendant contributes but one-tenth or even one-hundredth of a dose, a trivial dose. This gets to the frequency, regularity, and proximity requirement that many states have imposed, which sets a threshold of involvement before a defendant can be found a cause at all.[24]

But consider—suppose other defendants have contributed 99.9 units—not quite enough to cause lung cancer and the same lilliputian defendant comes along with the last tenth of a dose. Does it matter whether, chronologically, the tenth of a dose is the first or last exposure? Is not the

21. *See* Anderson v. Minneapolis, St. P. & S. S. M. RY. Co., 179 N.W. 45, 46 (Minn. 1920).

22. *See* RESTATEMENT (SECOND) OF TORTS § 432(2) (1965); RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27 (Prop. Final Draft No. 1, 2005); Eagle-Picher Indus., Inc. v. Balbos, 604 A.2d 445, 459 (Md. 1992) (defendant cannot defend on the grounds that plaintiff would have contracted disease even without exposure to defendant's asbestos). Yet this is a point that at least some experienced asbestos litigators fail to appreciate. *See* Richard O. Faulk, *Dispelling the Myths of Asbestos Litigation: Solutions for Common Law Courts*, 44 S. TEX. L. REV. 945, 963-64 (2003) (insisting that each exposure must be a but-for cause of plaintiff's disease).

23. *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27 cmt. i (Prop. Final Draft No. 1, 2005).

24. *See* Lohrmann v. Pittsburgh Corning Corp., 782 F.2d 1156, 1162 (4th Cir. 1986); RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 28 cmt. (c)(2) & rptrs. note (Prop. Final Draft No. 1, 2005). Note that the assessment of what constitutes a trivial dose is comparative in nature and requires that the magnitude of a dose deemed trivial be small in relation to the doses provided by the other parties. If 10,001 defendants each provide .01 percent of the threshold dose, none of those doses is trivial. The "frequency, regularity, and proximity" test also serves the function of screening those who have *no* exposure to a defendant's asbestos products. *See Lohrmann*, 782 F.2d at 1162.

straw that breaks the camel's back a cause of the broken back? Is it coherent to impose liability on the minimal defendant in the latter situation but not in the overdetermined harm case?[25]

These are the sorts of issues that require resolution to accomplish the first step—causal apportionment—under Third Restatement principles.[26] Then comparative responsibility would be employed to apportion liability among the defendants who are found to have been a cause of the disease.[27] That is the gist of what I set forth in my previous work on asbestos apportionment.[28] Depending on the type of disease—progressive or dose independent—some defendants to whose asbestos the plaintiff was exposed may be liable for a portion of the harm, some for the entirety of the harm, and some, including those whose asbestos the plaintiff was not exposed to until after the disease was fully determined, may not be liable for anything.[29] The applicable law is the same as the law employed in an automobile accident when a physician's malpractice enhances the harm suffered by an accident victim or in a products liability action involving the crashworthiness of an automobile, in which an initial tortfeasor negligently causes an accident and an uncrashworthy aspect of the car produces more serious injuries than would have occurred in a properly designed vehicle.

I have a most embarrassing confession: I was wrong. After talking with judges, lawyers, and reading an English case in the House of Lords[30] in the time since I wrote that earlier article, I reached the conclusion that I needed to rethink apportionment in asbestos.

Before I explain, let me add that I do not think that the case for a different basis for apportionment in asbestos changes the fundamental principles for apportionment in other litigation: 1) Apportion on the basis of causation, first finding which parties caused which portions of the plaintiff's harm; then 2) Apportion on the basis of comparative responsibility.

25. The Third Restatement does just that, providing that the defendant who provides a small dose that is necessary for the harm is a cause of the harm. At the same time it provides as a matter of proximate, rather than factual, cause an exemption from liability for the defendant who provides a trivial dose that is not necessary because the harm is overdetermined but is contained in a sufficient set of conditions to cause the harm. *See* RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 27 cmt. g & § 36 (Prop. Final Draft No. 1, 2005).

26. *See* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 26 (2000).

27. *Id.*

28. *See* Green, *supra* note 20.

29. *See id.* at 328-37.

30. Barker v. Corus UK Ltd., [2006] UKHL 20, (2006) 2 A.C. 572 (appeal taken from Eng.) (U.K.).

So, in addition to confessing error and providing my amended views about asbestos apportionment, I need to explain why asbestos is different from automobile, medical malpractice, and crashworthiness cases.

Barker v. Corus was decided by the House of Lords in 2006. England does not have workers' compensation, so those who suffer occupational harm, including asbestotic disease, sue their employers.[31] *Barker* was a follow on to *Fairchild v. Glenhaven Funeral Services Ltd.*,[32] the first important asbestos case in England. A plaintiff with mesothelioma had been exposed to multiple sources of asbestos. While it was clear that Fairchild's mesothelioma was caused by asbestos exposure,[33] what he could not show was which of those exposures was a but-for cause of his disease—it could have been any one or combination of exposures, but because of lack of evidence about the disease's pathology, the plaintiff was unable to show which exposures were a but-for cause of the mesothelioma.

The law Lords did not provide entirely consistent grounds for their decision, but they held that the defendants responsible for each of the plaintiff's exposures could be held liable to Mr. Fairchild, even though he could not show which were a but-for cause of his harm.[34] What the court did not decide, and left for the *Barker* day, was the extent of liability of each defendant who exposed the plaintiff to asbestos.[35]

31. *See* Ken Oliphant, *Liability of Employers*, *in* THE LAW OF TORTS ch. 20, at 1033 (2d ed. Ken Oliphant ed. 2007).

32. [2002] UKHL 22, (2003) 1 A.C. 32 (appeal taken from Eng.) (U.K.).

33. Mesothelioma is commonly described as a signature disease, which means that asbestos exposure is necessary for its occurrence. There is some debate in the scientific literature about whether some modest proportion of mesothelioma occurs without asbestos exposure. *Compare* Jack T. Peterson, Jr., Md. et al., *Non-Asbestos Related Malignant Mesothelioma: A Review*, 54 CANCER 951 (1984) *with* E.J. Mark & T. Yokoi, *Absence of Evidence for a Significant Background Incidence of Diffuse Malignant Mesothelioma Apart from Asbestos Exposure*, 643 ANNALS N.Y. ACAD. SCI. 196 (1991); *see also* R. Spirtas et al., *Malignant Mesothelioma: Attributable Risk of Asbestos Exposure*, 51 OCC. & ENVTL. MED. 804 (1994) (finding attributable proportion of risk of mesothelioma due to asbestos exposure to be 88 percent).

34. *Fairchild*, [2002] UKHL 22, (2003) 1 A.C. at 36, 45.

35. One issue addressed in *Barker* that I do not further address was the question of whether non-tortious exposures obviated the principle in *Fairchild*. In *Fairchild*, all exposures were tortious, but in *Barker*, which was a consolidated appeal of three cases, some exposures were due to the victim's negligence and some could not be ascribed to any tortious conduct. Thus, plaintiff's disease may not have been caused by anyone's tortious conduct. If one takes a causal approach to this problem (rather than the risk-contribution scheme adopted by the House of Lords in *Barker*), we should ask whether one or more of the tortious exposures was more likely than not a necessary condition for the harm or part of a causal set capable of causing disease that is overdetermined. If not, then there should be no liability, as the likelihood is that the plaintiff was not harmed due to tortious exposures. If so, then, on the same grounds as in *Fairchild*, all of those responsible for tortious exposures should be liable for the harm.

Confronting that question in *Barker*, the court was faced with two choices: Since mesothelioma is an indivisible harm,[36] one option would be for each defendant to be treated as a cause of the entirety of the indivisible harm, and since England, unlike the United States, retains joint and several liability, the insolvency of any defendants would be borne by the other defendants.[37] The second choice was to impose liability on defendants based on their contribution to the *risk* of plaintiff contracting mesothelioma.[38] Not for their comparative role in causing the disease—with a sine qua none test for causation, you either are or are not a cause and there is no basis for comparison.[39] But contribution to risk can be compared—for example, when one defendant uses asbestos fibers of a type twice as likely to cause mesothelioma as another defendant's—and used as a basis for apportionment.

Employing this method, under English law, would result in several liability for each defendant for its comparative share of risk contribution. The court chose the latter method, which by its terms apportioned liability among defendants based on their contribution to the risk.[40] *Barker* reveals that the House of Lords was motivated by its concern that liability be several rather than joint and several, but I leave that matter aside here because in the United States we have states that have already chosen up their sides on that question—largely through legislation—and courts are not reexamining that resolution for asbestos litigation.[41]

36. Mesothelioma is causally indivisible because it is a dose-independent disease rather than a progressive one. Green, *supra* note 20, at 332-33.

37. *See* W. V. H. ROGERS, WINFIELD & JOLOWICZ ON TORT § 21.1, at 735-38 (16th ed. 2002).

38. *Barker*, [2006] UKHL 20, (2006) 2 A.C. at 597.

39. As J.L. Mackie has put the point, "if two factors are each necessary in the circumstances, they are equally necessary." J. L. MACKIE, THE CEMENT OF THE UNIVERSE: A STUDY OF CAUSATION 128 (1980); *see also* McDowell v. Davis, 448 P.2d 869, 871-72 (Ariz. 1968) ("[i]t is not how little or how large a cause is that makes it a legal cause, for a proximate cause is any cause which in a natural and continuous sequence produces the injury and without which the result would not have occurred"); Culver v. Bennett, 588 A.2d 1094, 1099 (Del. 1991) (same, quoting McDowell); Lacy v. District of Columbia, 408 A.2d 985, 991 (D.C. 1979), *aff'd on rehearing*, 424 A.2d 317 (1980) (same, quoting *McDowell*); Waste Mgmt., Inc v. S. Cent. Bell Tel. Co., 15 S.W.3d 425, 433 (Tenn. Ct. App. 1997) ("Causation in fact is an all-or-nothing proposition. . . . While there may be different degrees of liability or fault, specific conduct is either a cause in fact, or it is not."); ARNO C. BECHT & FRANK W. MILLER, THE TEST OF FACTUAL CAUSATION IN NEGLIGENCE AND STRICT LIABILITY CASES 132 (1961) ("we cannot see that there is any justification for distinguishing among causes on the strength of quantity"). The contrary case is made by Robert N. Strassfeld, *Causal Comparisons*, 60 FORDHAM L. REV. 913, 913 (1992).

40. *Barker*, [2006] UKHL 20, (2006) 2 A.C. at 592.

41. *See* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 17 tbls. to rptrs. note (2000).

Thus, whether liability is joint and several or several only, *Barker*'s use of risk contribution could form the basis either for contribution among jointly and severally liable defendants or as the basis for determining the share of damages for which a severally liable defendant would be responsible. And it seems to me that using risk contribution as the basis for apportionment, whether under a regime of joint and several or several liability or some hybrid of the two, is preferable to the causation-responsibility apportionment scheme that I sketched out earlier. Why?

First, there is a matter that I skipped over lightly when I considered asbestos apportionment previously. We just do not have information adequate to apportion asbestotic diseases on a causal basis. If cancer is indeed initiated in a one-hit process,[42] we have a situation in which only one defendant's asbestos is the cause, and all the other exposures played no role in the disease. But we have no idea which one. It is as if we have a dozen or more hunters out firing randomly, one bullet hits the plaintiff, but we have no idea which hunter's bullet it was.[43] Instead, it may be that cancer is initiated when an individual is exposed to a threshold dose of asbestos — large enough that the individual's ability to ward off environmental insults is overcome. Even for dose-dependent progressive diseases, such as asbestosis, we don't really have any good idea about the role of each successive dose in initiating the disease process, enhancing its severity once the disease has been initiated, or the point at which exposures no longer have a role because the course of the disease—perhaps causing the death of the victim—has already been determined.[44] In short, we do not even know which asbestos manufacturers are a cause of *any* harm much less the extent of harm each one caused.

If we can not determine the role of each defendant in causing all, some,

42. The "one-hit" theory of cancer initiation has currency among some cancer researchers. *See* COMM. ON RISK ASSESSMENT OF HAZARDOUS AIR POLLUTANTS, NAT'L RESEARCH COUNCIL, SCIENCE AND JUDGMENT IN RISK ASSESSMENT 123-24 (1994); COMM. ON THE INSTITUTIONAL MEANS FOR ASSESSMENT OF RISKS TO PUBLIC HEALTH, NAT'L RESEARCH COUNCIL, RISK ASSESSMENT IN THE FEDERAL GOVERNMENT: MANAGING THE PROCESS 19-20 (1983); Joseph V. Rodricks & Susan H. Rieth, *Toxicological Risk Assessment in the Courtroom: Are Available Methodologies Suitable for Evaluating Toxic Tort and Product Liability Claims?*, 27 REG. TOXICOLOGY & PHARMACOLOGY 21, 23-24 (1997). The one-hit theory is consistent with known facts about the risk of mesothelioma – those who are exposed to low doses can contract the disease, yet the higher the dose, the greater the probability of contracting mesothelioma. *See* Victor L. Roggli et al., *Mesothelioma*, *in* PATHOLOGY OF ASBESTOS-ASSOCIATED DISEASES 109-64 (V. Roggli et al., eds. 1992).

43. This analogy of course, invokes the classic *Summers v. Tice*, 199 P.2d 1 (Cal. 1948), albeit with more hunters. Recall that the California Supreme Court did not hold that plaintiff had proved causation but instead shifted the burden of proof to the hunters to exonerate themselves on a causal basis.

44. *See* Green, *supra* note 20, at 334-35.

or none of plaintiff's harm, then two choices exist. One is to deny plaintiffs any recovery because they have failed to prove causation. The other is to hold all defendants who *could* have been a cause liable for all of the plaintiff's harm. Courts in the United States have, not only in asbestos litigation, but across a wide swath of torts cases with inadequate evidence about causation adopted the second approach, especially since the middle of the twentieth century.[45]

Second, we really do not want to incur the transaction costs of litigating the comparative responsibility of the defendants (and other non-parties who might also be liable)[46] in every asbestos case that goes to trial. The typical asbestos case has multiple defendants—and even if some or most settle, we will need to know the comparative share of responsibility of each for purposes of providing the non-settling defendants with a credit for their contribution claim in jurisdictions with joint and several or hybrid liability.[47] This will require the remaining parties to litigate the responsibility of settling parties in order to determine their comparative share of the damages. Not only will the comparative responsibility share of settling parties have to be determined, but in states where several or hybrid liability is employed, the comparative share of insolvent or bankrupt parties will have to be determined.[48] We may be able to bear the administrative cost of determining the comparative responsibility of one of two automobile drivers who settles with the plaintiff for the policy limits of her insurance in order to determine the liability of the other driver, but the costs of

45. An intermediate step is to shift the burden of proof to defendants. *See, e.g.*, RESTATEMENT (SECOND) OF TORTS § 433B (2) & (3) (1965). But when evidence is unavailable, shifting the burden of proof is functionally equivalent to ruling that causation is satisfied.

46. In jurisdictions that have adopted several liability or some hybrid form of liability that includes a component of several liability, logically the tortious conduct of non-parties should be considered to determine the several shares of the parties in the case. *See* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § B19 cmt. c (2000). However, some such jurisdictions do not permit assigning comparative responsibility to non-parties. *See id.* § 19 cmt. c rptrs. note. Several liability jurisdictions as well as those with joint and several liability that employ a comparative share credit for settling defendants require assigning comparative responsibility to all settling parties. Since the trusts established in asbestos bankruptcies constitute a form of "settlement" of the bankrupt's liability to the plaintiff, consideration of the comparative responsibility of any bankrupt company, to whose asbestos plaintiff was exposed, would also be necessary.

47. In jurisdictions that still apply joint and several liability in asbestos cases and provide a dollar-for-dollar credit for settling parties, there would be no need to consider the comparative responsibility of the settling parties.

48. The employer, who is not subject to liability because of the exclusive remedy provision of worker's compensation, may also require consideration. A number of jurisdictions permit apportionment of responsibility to an employer in order to determine the several liability share of defendants. *See, e.g.*, Cardinal Indus. Insulation Co. v. Norris, 2006 WL 1360293, at *13 (Ky. Ct. App. May 19, 2006).

determining the comparative responsibility of every asbestos manufacturer to whose products the plaintiff has been exposed dwarfs the ordinary automobile accident case. Moreover, in the automobile context, it is likely that the settlement will occur after significant discovery has already occurred about the role of the settling defendant that will provide much of the evidence relevant to that settling party's culpability. That will not be the case with bankrupt or insolvent defendants who never were parties from the outset of the case.[49]

I do not want to write an article about the use of collateral estoppel in asbestos litigation—but a critic might inquire whether there is any potential for collateral estoppel to truncate the costs of determining the comparative shares of asbestos manufacturers. The answer is that I am dubious. In the early stages of asbestos litigation, there were some, most notably Judge Robert Parker, who thought that collateral estoppel might hold the potential for significant efficiency gains.[50] He rapidly was educated by asbestos defendants and the Fifth Circuit about the difficulties of employing estoppel.[51] The primary difficulty I anticipate would be that so long as the array of defendants in different cases is different, the issue of *comparative* responsibility is not identical. When a plaintiff's comparative responsibility is involved, the determination of the parties' comparative responsibility is unique to that case.

By contrast with the litigative quagmire I have laid out above, consider apportionment based on each defendant's contribution to the risk. That picture looks better—if far from attractive—particularly if we adopt a principle proffered by the defendant's counsel in *Barker*: "All other things being equal length of exposure should be the factor which determines the proportion of liability each defendant should bear."[52]

49. There may have been considerable evidence developed in other earlier cases about many asbestos manufacturers—especially the primary ones—that could be brought to bear more readily in apportioning liability based on comparative responsibility.

50. Hardy v. Johns-Manville Sales Corp., 509 F. Supp. 1353, 1363 (E.D. Tex. 1981) *rev'd on other grounds*, 681 F.2d 334 (5th Cir. 1982) (reaffirming application of collateral estoppel to several asbestos defendants on issues that had previously been litigated); Flatt v. Johns Manville Sales Corp., 488 F. Supp. 836, 841 (E.D. Tex. 1980) (applying collateral estoppel on the issue of whether asbestos products "were defective and unreasonably dangerous").

51. *Hardy*, 681 F.2d at 346-47; *see also* Michael D. Green, *The Inability of Offensive Collateral Estoppel to Fulfill Its Promise: An Examination of Estoppel in Asbestos Litigation*, 70 IOWA L. REV. 141, 224 (1984) (concluding "collateral estoppel has little potential to make a significant contribution in resolving the judicial administration difficulties engendered by asbestos litigation").

52. *See Barker* [2006] UKHL 20, (2006) 2 A.C. at 576. In the early days of asbestos litigation, Judge Robert Parker, one of the handful of trial judges who attempted to address the demands created by the burgeoning asbestos litigation, adopted a market share basis for contribution among asbestos defendants. *Hardy*, 509 F. Supp. at 1358-59.

Of course, all other things will not be equal. Length of exposure is not the same as dose, as some asbestos products produce more respirable fibers than others.[53] The plaintiff may be in closer proximity to some defendants' products rather than others, especially at large and complex job sites.[54] A debate continues to rage about the relative potency of different asbestos fibers in causing mesothelioma, which could be invoked if risk contribution were the basis for apportionment.[55]

A further apportionment question arises for non-signature diseases. By "non-signature," I mean diseases for which there are independent non-asbestos causes capable of causing it. Lung cancer is paradigmatic, as smoking can independently cause lung cancer as well as cause it in conjunction with asbestos. Should risks from non-asbestos sources be apportioned a portion of the harm?

Here, a fundamental conceptual question arises. Is liability being imposed, in the first instance, based on the asbestos defendant having been a cause of the disease, as was the theory adopted by Judge Wisdom in the seminal asbestos case, *Borel v. Fibreboard Paper Products Corp.*?[56] Judge Wisdom brushed away two defendants' claim that they could not have been a cause of plaintiff's disease because he was not exposed to their products until twenty-six and thirty years, respectively, after his initial exposure—not until 1962 and 1966. Judge Wisdom explained that asbestosis is a "cumulative" disease, and therefore the jury could find each defendant caused some injury to plaintiff. The court suggested that each exposure might cause an "additional and separate injury."[57] While there is plausible

53. *See, e.g.*, *In re* Related Asbestos Cases, 543 F. Supp. 1152, 1158 (N.D. Cal. 1982) ("[A]sbestos fibers are of several varieties, each used in varying quantities by defendants in their products, and each differing in its harmful effects.").

54. The House of Lords expressed what I suspect is a naive aspiration that "the parties, their insurers and advisers will devise practical and economical criteria for dealing with" how to determine each defendant's contribution to the risk. Great Britain should have an easier time in this endeavor than we would obtain here, since employers are the defendants, so there will not be issues such as proximity to a defendant's product as there would be in the United States. *Barker*, [2006] UKHL 20, (2006) 2 A.C. at 594. For an effort to develop a model for just such an apportionment scheme among defendants for mesothelioma victims, see Bertram Price & Adam Ware, *Mesothelioma: Risk Apportionment Among Asbestos Exposure Sources*, 25 RISK ANALYSIS 937 (2005).

55. *Compare* Richard A. Lemen, *Chrysotile Asbestos as a Cause of Mesothelioma: Application of the Hill Causation Model*, 10 J. OCCUP. ENVTL. HEALTH 233, 233 (2004) *with* J.C. McDonald & A.D. McDonald, *Chrysotile, Tremolite and Carcinogenicity*, 41 ANN. OCCUP. HYG. 699, 699 (1997); *see* Nolan v. Weil-McLain, 851 N.E.2d 281, 284-85 (Ill. App. Ct. 2006).

56. 493 F.2d at 1094.

57. *Id.* If each exposure caused a separate, additional injury, then defendants such as those in *Borel* to whose asbestos plaintiff was exposed very late should not have been liable for the harm suffered due to earlier exposures.

patina to this theory for asbestosis, which is a dose-dependent disease, it does not fit the pathology of mesothelioma or lung cancer, which are diseases whose severity is not dose-dependent.[58] Yet even in cases involving those cancers, courts have proceeded conceptually as if all defendants to whose asbestos plaintiff was exposed are a cause of the harm.[59]

By contrast, a court might craft a different basis for liability—one in which contribution to the *risk of disease* is the harm for which an asbestos defendant is liable. Similar—though not identical—to the lost chance theory employed in medical malpractice, the harm is reconceptualized from the physical harm to the risk of such physical harm that was caused by defendant's asbestos.[60] That is the theory on which the House of Lords

58. Evidence to support this proposition has proved exceedingly difficult to find. While asbestotic malignancies have been much studied, researchers have not evidenced interest in the relationship between dose and disease severity. *See, e.g.*, John T. Hodgson & Andrew Darnton, *The Quantitative Risks of Mesothelioma and Lung Cancer in Relation to Asbestos Exposure*, 44 ANN. OCCUP. HYG. 565 (2000) (examining relationship between dose or each of three major types of asbestos fiber and the risk of *developing* asbestotic malignancies). That may be because the variation in severity of cancers in victims is narrow. *See* Giorgio Vittorio Scagliotti & Giovanni Selvaggi, *Advances in Diagnosis and Treatment of Malignant Pleural Mesothelioma*, 1 ONCOL. REV. 91, 96 fig. 1 (2007) (graphing comparison survival time of mesothelioma victims who were treated with two different regimens; survival at 25 months is under 10%). It may also be that studying this question would be difficult because victims are diagnosed at different times in the stage of their disease depending on the severity of clinical symptoms and a variety of other factors. One researcher of asbestotic disease, a co-author of the first-cited article above, expressed the view that dose is unlikely to affect the severity of cancer, concluding, "Cancer is cancer." E-mail from Dr. John Hodgson, Epidemiology and Medical Statistics Unit, Health and Safety Executive, United Kingdom, to Michael Green, Professor of Law, Wake Forest School of Law (Apr. 3, 2008, 8:49 AM EDT) (on file with author).

59. As the Third Restatement of Torts reports:

> Since the first asbestos case in which a plaintiff was successful, courts have allowed plaintiffs to recover from all defendants to whose asbestos products the plaintiff was exposed. *See* Borel v. Fibreboard Paper Prods., 493 F.2d 1076, 1094 (5th Cir. 1973) (applying Texas law); *see also* Ingram v. ACandS, Inc., 977 F.2d 1332, 1340 (9th Cir. 1992) (applying Oregon law); 3 DAVID L. FAIGMAN ET AL., MODERN SCIENTIFIC EVIDENCE: THE LAW AND SCIENCE OF EXPERT TESTIMONY (Supp. 1999); Richard W. Wright, *Causation, Responsibility, Risk, Probability, Naked Statistics, and Proof: Pruning the Bramble Bush by Clarifying the Concepts*, 73 IOWA L. REV. 1001, 1073 & n. 384 (1988). Courts have not required plaintiffs to prove the unprovable: which asbestos exposures were the actual cause of plaintiff's disease. *See* Rutherford v. Owens-Illinois, Inc., 941 P.2d 1203, 1219 (Cal. 1997).

RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM § 28 rptrs. note to cmt. c (2000); *see also* Jane Stapleton, *Two Causal Fictions at the Heart of U.S. Asbestos Doctrine*, 122 L.Q. REV. 189 (2006).

60. Similarly, the market share theories of liability crafted for DES manufacturers relied on the manufacturers' having contributed to the plaintiff's risk of contracting vaginal adenocarcinoma or one of the other DES diseases. *See* Hymowitz v. Eli Lilly & Co., 539 N.E.2d 1069 (N.Y. 1989). Notably, for the administrative cost concern that is explained above for asbestos apportionment, the *Hymowitz* court adopted a *national* market share approach because it was more efficient than using a more local market share. *Id.*

found that asbestos defendants were only severally liable for their proportionate contribution to the risk of plaintiff's disease in *Barker v. Corus*.[61]

The next issue is how to apportion liability for non-signature diseases when the plaintiff has been exposed to other known causes. In asbestos litigation, this arises when a plaintiff who smokes contracts lung cancer. If we take the American-causal conceptualization (rather than the contribution to the risk scheme of *Barker*) and the most likely case, based on the scientific evidence available, which is that it was both tobacco and asbestos that were a cause of the plaintiff's lung cancer,[62] then a second question arises. Is the exposure to tobacco the result of someone's tortious conduct? Here, it could be the plaintiff's contributory fault or the cigarette manufacturer's sale of a defective product, but either one would require proof and a determination by the fact finder. Otherwise, causes that are of innocent origin do not affect the liability of those who are responsible for tortious causes.[63] Let us suppose, however, that the jury finds that the plaintiff was contributorily negligent for smoking, I am now confronted with how to coordinate different apportionment schemes when the universes in which they operate overlap, not dissimilar to the problem confronted when an employee who suffers occupational injury attributable to the employer and a third party sues the employer in tort.[64]

Tentatively, my inclination is that for contributorily negligent plaintiffs or non-asbestos defendants, comparative responsibility is a better means for apportioning than risk contribution. First, the difficulties of determining the

61. *Barker*, [2006] UKHL 20, (2006) 2 A.C. at 592.

62. As I believe is the case. *See* Green, *supra* note 20, at 342-43, figs. 11, 12 & 13.

63. To elaborate a bit, when there are multiple causes necessary for an outcome–as there always are–that there are innocent ones that concur with tortious ones does not diminish the liability of those responsible for the tortious ones. *See, e.g.*, Alaska v. Abbott, 498 P.2d 712, 726 (Alaska 1972); Peterson v. Gray, 628 A.2d 244, 246 (N.H. 1993) (defendant's tortious conduct must be *a* cause of harm, not "the" cause); Conklin v. Hannoch Weisman, 678 A.2d 1060, 1067 (N.J. 1996) (single paragraph of jury instruction that stated that, if another event was "the proximate cause" of harm then defendant's negligence was not, required retrial of case despite numerous other correct statements of law on causation; first trial required 11 weeks); Camp v. Jiffy Lube # 114, 706 A.2d 1193, 1196 (N.J. Super. Ct. App. Div. 1998); *see also* Dedes v. Asch, 521 N.W.2d 488, 491 (Mich. 1994) (rejecting argument that statutory language, "the proximate cause," meant that defendant's conduct must be the only cause of harm); David A. Fischer, *Causation in Fact in Omission Cases*, 1992 UTAH L. REV. 1335, 1338 (1992) ("Clearly, however, there can never be a single cause of an event. A very complex set of circumstances must be present for any effect to occur.").

64. *See* Arthur Larson, *Workmen's Compensation: Third Party's Action Over Against Employer*, 65 NW. U. L. REV. 351, 351 (1970) (describing the meshing of overlapping tort and worker's compensation systems as "[p]erhaps the most evenly-balanced controversy in all of workmen's compensation law").

magnitude of risk contribution are enhanced when the source of the risk is a different substance or activity—very few other risk factors have been studied as extensively as asbestos, are as prevalent as asbestos, or are such powerful toxic agents.[65] Indeed that is the principle objection to a broader scheme in which tort liability is imposed on a risk contribution basis.[66] Second, various plausible, yet complicated, methods for determining risk contribution exist for the situation in which there is a synergistic effect between two or more of the sources of risk.[67] Third, apportioning between the non-asbestos parties (including the plaintiff) and the asbestos defendants as a group on the basis of comparative responsibility does not entail the same huge administrative costs that lead me to conclude that intra-defendant apportionment based on comparative responsibility in asbestos cases would be undesirable.[68]

In the British scheme in which liability is based on contribution to the risk, the question of apportionment is dependent on whether such a risk contribution scheme is available when there are different sources of risk or in which there are exposures to the agent that are non-tortious. To take the latter matter first, unlike a causal-scheme, if exposure to non-tortious sources of asbestos also create a risk of harm, there is no conceptual or practical reason why those exposures could not be apportioned along with the tortious causes, with the plaintiff bearing the share of risk attributed to non-tortious causes. We all, after all "assume the risk" of non-tortiously caused harm, and this is just one more risk to which we are all subject without tort law providing compensation.

The former issue was never confronted in the market share regime adopted for DES cases because all of the diseases for which recovery was sought were signature diseases, which necessarily excluded other risk factors.[69] Although American academics became quite enamored of

65. The latter two conditions, which facilitate finding causal relationships, no doubt contribute to the first.

66. *See* Michael D. Green, *The Future of Proportional Liability: The Lessons of Toxic Substances Causation*, *in* EXPLORING TORT LAW 352, 353 (M. Stuart Madden ed. 2005).

67. *See* Mario J. Rizzo & Frank S. Arnold, *Causal Apportionment in the Law of Torts: An Economic Theory*, 80 COLUM. L. REV. 1399, 1410 (1980); David Kaye & Mikel Aickin, *A Comment on Causal Apportionment*, 13 J. LEGAL STUD. 191, 197-98 (1984); Mario J. Rizzo & Frank S. Arnold, *Causal Apportionment: Reply to the Critics*, 15 J. LEGAL STUD. 219, 220 (1986); Susan R. Poulter, *Science and Toxic Torts: Is There a Rational Solution to the Problem of Causation?*, 7 HIGH TECH. L.J. 189, 234 (1992).

68. *See supra* text accompanying notes 46-49.

69. *See* Arthur L. Herbst et al., *Adenocarcinoma of the Vagina: Association of Maternal Stilbestrol Therapy with Tumor Appearance in Young Women*, 284 NEW ENGL. J. MED. 878 (1971); Michael D. Green, *Products Liability: Pharmaceutical and Medical Device Issues*, ALI-ABA Course of Study, Aug. 18-19, 2005, at 166, *available at* SL038 ALI-ABA 139.

proportional liability schemes in the aftermath of the DES market share cases, the devil is in the details, which virtually all of those academics ignored.[70] The details are the dearth of any good data on the extent of risk imposed by most tortious conduct, toxic substances, innocent conduct, and conditions such as a genetic predisposition to a specific disease.[71] Whether that explains the courts' steadfast refusal to accept a broader regime of proportional liability or some other reason was at work, avoiding the evidentiary murk of measuring risk contribution across a broad swath of risky behavior, non-tortious risk factors, and possibly risky substances strikes me as wise.[72] That leads me to conclude that any risk contribution scheme should be limited to a single toxic substance whose risk profile is established (asbestos is surely that) and in which multiple defendants contributed to the risk but plaintiff is unable to prove which one(s) is the actual cause of her harm.[73]

> Examples of signature diseases are vaginal adenocarcinoma in the daughters of mothers exposed to DES and asbestosis in those exposed to asbestos. Once a signature disease is identified, there is no need for proof of either general causation or specific causation, as the existence of the disease is tied to exposure to the signature agent.

Id. at 167-68.

70. Most of the academic reformers focused on schemes that would award damages based on the probability of having caused the plaintiff's harm. The probability of causing harm is not the same as risk contribution, the former operating ex post and the latter ex ante, but they would be determined based on the same evidence. Sam Estep is the first legal academic to confront the thorny issues posed by toxic substances for the tort system, and in the course of advocating for a compensation fund, adverted to the possibility of compensation for all victims based on the probability that the agent caused the victim's harm. *See* Samuel D. Estep, *Radiation Injuries and Statistics: The Need for a New Approach to Injury Litigation*, 59 MICH. L. REV. 259 (1960). Estep did recognize the difficulty of accurately determining whether a toxin was truly a risk agent. *See id.* at 297. Others who were less cognizant of the difficulties of determining the existence and magnitude of an agent's contribution to the risk include: Glen O. Robinson, *Multiple Causation in Tort Law: Reflections on the DES Cases*, 68 VA. L. REV. 713 (1982); Richard Delgado, *Beyond Sindell: Relaxation of Cause-in-Fact Rules for Indeterminate Plaintiffs*, 70 CAL. L. REV. 881 (1982); David Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 HARV. L. REV. 849 (1984).

71. Lord Scott expressed the same concern in *Barker*: "One reason why I would not do so is that the identification of the proportion of risk of the eventual outcome attributable to each particular agent would, to my mind, be well nigh impossible and highly artificial." *Barker*, [2006] UKHL 20, (2006) 2 A.C. at 599-600.

72. *See* Green, *supra* note 66, at 52.

73. I realize that this position leaves me with the uncomfortable position that in a lung cancer case in which an asbestos defendant claims that a tobacco manufacturer is also liable, risk contribution would not be available, at least if the defendant could show that the tobacco manufacturer's tortious conduct contributed to the risk of the victim's lung cancer. That is precisely the box that the House of Lords appears to have gotten itself into by adopting a risk contribution theory for asbestos liability and apportionment. *Compare Fairchild*, [2003] UKHL 22, (2003) 1 A.C. at 32 (permitting plaintiff to maintain claim against employers who exposed him to risk of asbestotic disease despite plaintiff's inability to show by a preponderance of the

Moreover, these observations lead me to prefer the American scheme for assessing liability in asbestos cases, which is based on a causal model—so long as the plaintiff is exposed to a non-trivial dose of a defendant's asbestos. Risk contribution, as recently endorsed by the House of Lords in *Barker v. Corus*, leads to the sort of questions about innocent contributing risk factors and other tortious conduct that is laid out above.[74] The impetus for the court in *Barker* to adopt its risk contribution scheme was to modify the established rule of joint and several liability and limit each asbestos defendant's liability to its risk contribution share.[75] Unlike England, United States courts do not have to adopt a new system to limit joint and several liability.[76] That has already occurred in the United States for other reasons thereby obviating an important reason for the *Barker* scheme.

How shall we apportion if the plaintiff's comparative responsibility is an issue? Once again we confront the question of whether we are operating in a risk contribution or causal scheme. In the former, the plaintiff's conduct[77] would concur with at least some of the defendants in failing to take precautions against exposure to those defendants' asbestos. To illustrate, suppose that the plaintiff failed to wear appropriate protective devices during the last 10 percent of his occupational career, during which he was exposed to asbestos providing 10 percent of his risk of contracting mesothelioma. Suppose also that the protective device would have reduced the risk by 90 percent. In this situation, plaintiff would be responsible for 9 percent of the risk of his disease, along with the defendants who supplied the products to which the plaintiff was exposed during this period. We would thus be apportioning among parties responsible for 109 percent of the risk because of the overlap explained. But apportioning 9/109 of the damages to plaintiff would be incorrect, because the plaintiff's contribution to the risk is only with respect to the defendants responsible for exposures during the last 10 percent of his career. So, defendants responsible for exposures during the first 90 percent of his career should be liable for their

evidence which one caused the harm) *with* Wilsher v. Essex Area Health Auth., [1988] AC 1074 (H.L.) (U.K.) (rejecting liability (proportional or otherwise) for a physician whose malpractice exposed a premature infant to the risk of eye disease where plaintiff could not show by a preponderance of the evidence that malpractice was a cause of the harm as opposed to other risk factors for the eye disease).

74. *See supra* text accompanying notes 65-73.

75. *See Barker*, [2006] UKHL 20, (2006) 2 A.C. at 592.

76. *See* MARC A. FRANKLIN ET AL., TORT LAW AND ALTERNATIVES 371-72 (8th ed. 2006).

77. I assume that plaintiff's contributory negligence is based on failing to protect himself from defendants' asbestos rather than in exposing himself to some independent and non-tortious source of asbestos. If that were the case, the plaintiff's negligence would play no role, as the risk due to the non-tortious source of asbestos would already be borne by the plaintiff under a risk contribution scheme.

contribution to the risk without apportionment to the plaintiff. Only those who contributed during the last period of employment would have their liability reduced.

By contrast, in a causal system, such as currently exists in the United States, we would first be confronted with the question of whether the plaintiff's negligent conduct was also a cause of the harm, along with defendants'. It could be, of course, that by the time plaintiff failed to take precautions his disease was already determined, and his failure, therefore, played no causal role.[78] Assuming that plaintiff's negligent conduct occurred before it was too late to have an effect, we might still require defendants to prove that the conduct was a necessary condition for the plaintiff's disease. But to do that would be to put defendants in the same predicament in which asbestos victims were before U.S. courts eased their burden and accepted non-trivial exposures as causal. If we are to treat plaintiff conduct the same as defendant conduct for purposes of apportionment, as counseled by the Third Restatement of Torts,[79] then the plaintiff's negligence in failing to minimize exposure to asbestos that contributes to the risk of asbestotic disease should also be treated as a cause.

If the risk contribution that can be attributed to plaintiff's conduct can be readily determined—based on time and proportion of exposure during the period when exposure could have been avoided—then we could use risk as the basis for apportioning among plaintiff and defendants. To employ the example above, we would have defendants responsible for 100 percent of the risk to whom 100/109 of the damages would be apportioned, while the plaintiff would bear 9/109 of the damages. Alternatively, comparative responsibility between plaintiff and defendants collectively could be employed. While asking the jury to make a comparison of the culpability of defendants and plaintiff would return us to the quagmire I am trying to avoid, the Third Restatement has a suggestion, developed for a different situation, that might make apportionment based on plaintiff's fault workable.[80] Instead of asking the fact finder to compare the culpability of all the parties, the jury would be asked to assign a percentage of responsibility to the plaintiff for his fault, with the understanding that the

78. Recognition that the plaintiff's conduct did not play a role because the disease die was already cast would also require recognition that some defendants also did not play a causal role for their exposures of plaintiff after the disease determination time, a matter that seems to have been overlooked in *Borel*, perhaps because of the lack of scientific understanding of when that point occurs in the pathogenesis of asbestotic disease. *See Green*, *supra* note 20, at 320.

79. *See* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 3 (2000).

80. *Id.*

remainder would be left to the defendants to bear—again apportioning among them on the basis of risk contribution.[81]

Before I conclude, I would like to set out a few strands I was able to locate that suggest that there is already at least some risk contribution being employed for apportionment purposes in current asbestos litigation, a matter that I neglected to explore in my prior work. Several conversations in the time since I first wrote on this subject led me to believe that there is apportionment based on risk contribution being employed in this country, contrary to what I wrote previously and the Apportionment Restatement's process, a matter I had not previously appreciated.[82]

On the suggestion of Pennsylvania trial judges, I found the relevant Pennsylvania Suggested Standard Civil Jury Instruction, which explains to the jury that it should assign a percentage of "causal negligence" to each defendant that has been found to be a cause of the plaintiff's harm.[83] Further research reveals that Pennsylvania appellate courts understand that

81. *Id.* § 8, cmt. a.

82. In a conversation with several Pennsylvania trial judges who regularly try asbestos cases (Robert Colville et al., Oct. 18, 2007), they suggested that when they try asbestos cases, the jury is instructed in a way that provides for a one-step apportionment among defendants and leaves the jury considerable discretion on what to employ as the basis for apportionment. I also had a conversation with Sharon Armstrong (May 23, 2006), a Superior Court judge in Seattle, Washington, who presides over the asbestos docket in her court, in which she identified risk contribution as the basis for apportionment in those cases.

A recent telephone conversation with Brent Rosenthal (Jan. 16, 2008), an experienced asbestos lawyer at Baron & Budd, a leading national asbestos firm, is consistent with the impression conveyed in the conversation set forth above, albeit on a more general basis and in a more national context. Rosenthal explained that the recent trend has been toward apportionment among defendants based on "percentage of responsibility," consisting of what evidence is available about time of exposure, asbestos content of defendant's product, and proximity to the product – all risk rather than culpability factors. Notably, he is using "responsibility" to mean risk contribution, contrary to its usage in the Third Restatement to mean culpability. I suspect that is because of the Texas comparative responsibility statute, which uses the term comparative responsibility but specifies that the jury should compare what each party "cause[d] or contribute[d] to cause in any way," TEX. PRAC. & REM. CODE § 33.011(4) (1997), rather than the term "comparative causation." Rosenthal added that if a non-settling defendant is particularly culpable, a plaintiff may make an effort to bring that into the apportionment calculus.

On the other hand, I fear that at least one court, relying on the Apportionment Restatement, is employing the comparative culpability of asbestos defendants for purposes of apportionment. *See In re* Kelvin Manbodh Asbestos Litig. Series, 2006 WL 1084317, at *10 (D.V.I. March 6, 2006); *see also* Ingram v. ACandS, Inc., 977 F.2d 1332, 1340-41, 1342 (9th Cir. 1992) (rejecting apportionment based on causation but upholding comparative responsibility apportionment among asbestos defendants as well as between defendants and plaintiff who smoked); Owens Corning Fiberglas Corp. v. Parrish, 58 S.W.3d 467, 481 (Ky. 2001) (specifying fault as the basis for apportionment among asbestos defendant and settling defendants); Garlock Sealing Techs., LLC v. Little, 620 S.E.2d 773, 777 (Va. 2005) (employing fault as basis for apportionment among asbestos defendant and bankrupt asbestos entities).

83. Pa. SSJI (Civ) 3.20.

the appropriate basis for "causal negligence" apportionment is something like risk contribution based on intensity and time of exposure as a proxy for contribution to the risk.[84] Texas has an apportionment statute, pursuant to which liability is apportioned based on what each party "cause[d] or contribute[d] to cause in any way."[85] I am also delighted to report that one court in an admiralty asbestos case appreciated the extraordinary administrative cost of employing comparative responsibility as the basis for apportionment and concluded that a comparative share credit for settling defendants (the applicable law in admiralty) would present intractable problems of trial management, and instead used a dollar-for-dollar credit.[86]

I find myself returning to the late Gerry Boston's article from 1995 in which he advocated apportionment of liability on the basis of risk contribution rather than comparative responsibility.[87] I resisted his premise when he wrote that article because tort law operates on the basis of causation not contribution to the risk, and I was at the time working on restating the law of apportionment of liability. An individual may create substantial risk to others but not be liable for anything because of the fortuity that the individual's conduct harmed no one.[88] A defendant who,

84. *See* Ball v. Johns-Manville Corp., 625 A.2d 650, 659 (Pa. Super. Ct. 1993). The court in *Ball* affirmed the trial judge's refusal to instruct the jury to apportion liability among defendant and several settling and bankrupt parties on the ground that there was insufficient evidence of the quantity of each parties' asbestos inhaled by plaintiff. *See also* Gross v. Johns-Manville Corp., 600 A.2d 558, 566 (Pa. Super. Ct. 1991) (affirming trial court's decision not to instruct on apportionment because of the absence of evidence about plaintiff's relative exposure to defendants' asbestos products). If comparative responsibility is the basis for apportionment, there is no burden of proof (recall that evidence sufficient for liability to be imposed is a prerequisite for any apportionment) and, hence, no need for a ruling on the sufficiency of the evidence for apportionment. *See* RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 4 cmt. a & rptrs. note (2000).

85. The law in Texas appears to stem from Duncan v. Cessna Aircraft Co., 665 S.W.2d 414, 427-29 (Tex. 1984), in which the Court, to avoid the conceptual difficulty of engaging in a comparative assessment of strictly liable parties with parties who were negligent, adopted "comparative causation" as the basis for apportioning liability. The Texas legislature subsequently adopted the apportionment statute quoted in the text, but employed the term comparative responsibility rather than comparative causation.

86. Lewin v. Am. Exp. Lines, Inc., 224 F.R.D. 389, 395 (N.D. Ohio 2004).

87. Gerald W. Boston, *Toxic Apportionment: A Causation and Risk Contribution Model*, 25 ENVTL. L. 549, 549 (1995).

88. Because of our commitment to causation as a condition for liability and because causation depends not only on the tortious conduct of the defendant but on others' conduct or natural conditions, the liability of a defendant may not be proportional to the culpability of that individual. Correlatively, defendants who are equally culpable may be subject to liability in vastly different magnitudes. There is substantial fortuity in tort law, and some are unlucky. *See* Christopher H. Schroeder, *Causation, Compensation and Moral Responsibility*, *in* PHILOSOPHICAL FOUNDATIONS OF TORT LAW 347, 360-61 (David G. Owen ed., 1995) (discussing the concept of fortuity of causation and what remedies are available for a

along with others, causes harm to another is subject to liability for the entirety of the harm caused. Defendants may not have liability apportioned to a person who is a cause of the harm without breaching a tort duty.[89] If liability is to be apportioned among multiple defendants as well as to the plaintiff, it should be on the basis of their relative responsibility not based on an assessment of their contribution to the risk. Causation ends as an apportionment tool once we know what the defendant has caused. We were working out the scheme for apportionment of liability for the Third Restatement of Torts when Gerry published his article, and I recall resisting his proposal because it ignored basic principles of apportionment.

Yet, I return to Gerry's article, because in asbestos litigation, we do not know what harm the defendant has caused. Especially with the most devastating asbestotic diseases, mesothelioma and lung cancer, we just do not have the scientific tools to determine which defendant(s) caused the plaintiff's disease. We could have, I suppose, turned those victims away. Indeed we might have if Judge Wisdom had not employed his sleight of hand in *Borel*, permitting all defendants to whose asbestos the plaintiff was exposed to be held liable. Even if we permit exposure to a defendant's asbestos to serve as a proxy for causation, which has been the predominant United States approach, rather than adopting a scheme that substitutes risk contribution for causation as the British have done, we must rethink traditional methods of apportionment. There is a good reason, as I hope I have persuaded the reader, for apportioning among defendants on the basis of their contribution to the risk of having caused harm. Apportioning liability on the basis of risk contribution is a more efficient method for apportioning than attempting to assess the comparative culpability of those defendants.

I failed to appreciate the importance of administrative costs for asbestos litigation in my previous work on apportionment. Yet asbestos litigation is a poster child for greater litigative efficiency: Both the proportional costs (an estimated 58 cents of every dollar expended by defendants) and the overall costs (on the order of $40 billion through

transgression); Jeremy Waldron, *Moments of Carelessness and Massive Loss*, *in* PHILOSOPHICAL FOUNDATIONS OF TORT LAW 387 (David G. Owen ed., 1995); Michael J. Zimmerman, *Luck and Moral Responsibility*, 91 ETHICS 374, 374 (1987); Basil A. Umari, Note, *Is Tort Law Indifferent to Moral Luck*?, 78 TEX. L. REV. 467, 467 (1999). For a strong defense of the requirement of causation in tort law, despite its effect on equal and proportional treatment, see Ernest J. Weinrib, *Causation and Wrongdoing*, 63 CHI.-KENT L. REV. 407, 412 (1987).

89. This principle is reflected in the rule that a defendant's tortious conduct merely need be *a* cause of harm not *the* cause and non-tortious conduct that combines with the defendant's tortious conduct to cause harm does not affect the defendant's liability nor afford an opportunity for a contribution claim.

2002),[90] any mechanism for reducing those costs requires attentive, careful examination. I recognize that employing risk contribution instead of culpability will have a modest impact on the costs of asbestos litigation, but a more enduring reform—federal legislation establishing a compensation scheme—has long eluded us and appears currently moribund.

I am grateful for the opportunity provided by this Symposium to rethink my prior work, if not for prompting me to conclude that I was wrong to think that asbestos litigation should be fitted to the same template as other tort litigation. I can only plead as mitigation that, in my prior work, I advocated that in a country in which asbestos litigation is newly emergent, the most sensible way to address apportionment would be by enacting an administrative compensation scheme that would render apportionment moot.[91] That recommendation was based on recognition of the tremendous toll of litigation in this massest of mass torts. If we are going to continue the unfortunate path of litigating asbestos cases, let's recognize the ways in which it is different and make necessary adjustments.

90. *See* CARROLL ET AL., *supra* note 7, at 88.

91. I can not resist pleading one more mitigating matter. The Apportionment Restatement recognizes that, in some complicated cases, employing the causation first, culpability second model for apportionment may not be worthwhile. RESTATEMENT (THIRD) OF TORTS: APPORTIONMENT OF LIABILITY § 26 cmt. j (2000). While that exception was based on the concern about jury confusion, it does recognize that there may be concerns that override the basic apportionment structure. The circumstances of asbestos litigation, I am now convinced, justify another exception.