UNIVERSITY *of* PENNSYLVANIA
JOURNAL *of* LAW & PUBLIC AFFAIRS

Vol. 6 March 2021 No. 3

THE LONG-TAIL LIABILITY REVOLUTION: CREATING THE NEW WORLD OF TORT AND INSURANCE LAW

Kenneth S. Abraham*

Very few developments have ever transformed either tort or insurance law. One development—as important in our time as the adoption of liability for negligence was in the 19th century or the rise of strict products liability was in the 20th century—transformed both. That is the rise of long-tail civil liability. A long-tail claim involves tortious or other liability-creating conduct that causes latent bodily injury or property damage that then manifests itself only many years after the harm-causing conduct occurred. Exposure to asbestos, and the storage of hazardous waste that slowly leaches into an aquifer, are paradigm examples. Beginning about fifty years ago, long-tail liability and claims against liability insurers for insurance coverage of long-tail liability have generated the vast majority of cutting-edge issues facing these two related fields. It is precisely the length of the tail on certain tort claims that is responsible for most of the fundamental developments in these fields over the past fifty years. Without long-tail liability, tort and insurance law, and many of the fundamental structural features of these fields, would look today much like they looked fifty years ago, and indeed, fifty years before that. But because of long-tail liability, features of both fields that simply did not exist fifty years ago are now central to these fields.

Almost all of this involved common law change. In an era dominated legally by federal legislation and the administrative state, the long-tail liability revolution was the exceptional instance in which judge-made, state-law rules governing tort law and insurance were central. The long-tail liability revolution took decades to occur, largely because it occurred through the common law process. It is also an example of what the legal

* David and Mary Harrison Distinguished Professor, University of Virginia School of Law. Thanks to Vincent Blasi, G. Edward White, Leslie Kendrick, Richard Schragger, and participants in a workshop at the University of Virginia School of Law for helpful comments.

system may face in the 21st century, if and when common law litigation over injury and loss caused by many new technologies that are coming onto the current scene begins to occur. This Article is an effort to understand how the long-tail liability revolution occurred, by analyzing the influence of this new form of liability on tort and insurance law, as well as the consequences that these changes in the law have produced.

INTRODUCTION

Very few developments have ever transformed either tort or insurance law, although there is a handful of them.[1] One development, and only one, has transformed *both* tort and insurance law. And that development has taken place with little recognition that it has played a central role in these transformations. This is the rise of long-tail civil liability.

A long-tail claim involves tortious or other liability-creating conduct that causes latent bodily injury or property damage that then manifests itself only many years, and sometimes decades, after the harm-causing conduct occurred.[2] Exposure to asbestos and the storage of hazardous waste that slowly leaches into an aquifer are paradigm examples. Beginning about fifty years ago, long-tail liability and claims against liability insurers for insurance

[1] The major such developments are as follows. First, beginning around 1850, accident law went from being a mix of strict liability and negligence liability to being based predominantly on negligence. The seminal case on the issue is Brown v. Kendall, 60 Mass. (6 Cush.) 292 (1850). Second, between 1910 and 1920, the adoption of workers' compensation removed employers' liability from tort and replaced it with an administrative compensation scheme. KENNETH S. ABRAHAM, THE LIABILITY CENTURY: INSURANCE AND TORT LAW FROM THE PROGRESSIVE ERA TO 9/11 52–57 (2008) (hereinafter THE LIABILITY CENTURY). Third, in the mid-1960s, the rise of strict products liability took the negligence standard out of the picture in this field, although (it turned out) not to the extent originally envisioned. *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 2 (AM. L. INST. 1997) (describing the rationale for the strict liability standard); Theodore Eisenberg & James A. Henderson, Jr., *Inside the Quiet Revolution in Products Liability*, 39 UCLA L. REV. 731, 733–34 (1992) (describing products liability developments); William L. Prosser, *The Fall of the Citadel (Strict Liability to the Consumer)*, 50 MINN. L. REV. 791, 791–802 (1966) (recounting the developments that led to the adoption of RESTATEMENT (SECOND) OF TORTS §402A). Finally, developments in the insurance markets led to the promulgation of a Comprehensive General Liability (CGL) insurance policy in 1940, fully standardizing business liability insurance for the first time. *See* THE LIABILITY CENTURY, *supra*, at 155 (describing the 1940 CGL as "the first modern business liability insurance policy"). It would be a struggle to find other plausible examples of transformations of this magnitude in either field.

[2] *See* THE LIABILITY CENTURY, *supra* note 1, at 152–57 (defining the "long-tail" problem as one that results from products and environmental torts causing "injury or damage that occurs gradually, out of sight, and away from the defendant.").

coverage of long-tail liability have generated the vast majority of the cutting-edge issues facing these two related fields of law.[3]

It would be difficult to exaggerate the impact of the rise of long-tail liability on the two fields. In tort, and in the allied field of environmental liability, long-tail liability generated the very phenomenon of the mass tort; produced statistically-based forms of settlement and the advent of the "settlement fund" that served as a model for the September 11 and Deepwater Horizon Oil Spill funds; caused the courts to develop radical new doctrines governing causation; and was the basis for the several hundred-billion dollar Superfund regime of retroactive, strict, and joint and several corporate liability for environmental cleanup costs.

At the same time, liability insurance for long-tail liability produced an insurance "crisis" of such significance that it made the cover of Time Magazine; an antitrust suit by nineteen states against the insurance industry, alleging a conspiracy involving insurance of long-tail liability, went all the way to the Supreme Court and yielded the seminal rule governing the insurance industry's cooperative preparation of standard-form insurance policies; and the courts created not only a whole new body of insurance law doctrines but also new concepts such as the "trigger" of coverage and the "allocation" of coverage responsibility among multiple triggered policies. The new insurance law doctrines came close to bankrupting Lloyd's of London and caused the introduction of two new forms of insurance coverage.

Nothing comparable to the number and magnitude of these developments has ever influenced tort and insurance law in such far-reaching ways. Yet, for all the analysis of *individual* developments in long-tail liability[4] and insurance coverage of such liability[5] that has been produced

---

[3] The one exception is the partial shift to strict liability for product defects that occurred around 1965. *See* RESTATEMENT (SECOND) OF TORTS § 402A (AM. L. INST. 1965).

[4] Some of the major works on individual issues associated with long-tail liability in tort include Glen O. Robinson, *Multiple Causation in Tort Law: Reflections on the* DES *Cases*, 68 VA. L. REV. 713 (1982); David Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 HARV. L. REV. 849 (1984); Mark J. Roe, *Bankruptcy and Mass Tort*, 84 COLUM. L. REV. 846 (1984); Steven Shavell, *Uncertainty over Causation and the Determination of Civil Liability*, 19 J.L. & ECON. 587 (1985); Peter Huber, *Safety and the Second Best: The Hazards of Public Risk Management in the Courts*, 85 COLUM. L. REV. 277 (1985); Joseph Sanders, *The Bendectin Litigation: A Case Study in the Life Cycle of Mass Torts*, 43 HASTINGS L.J. 301 (1992); Heidi Li Feldman, *Science and Uncertainty in Mass Exposure Litigation*, 74 TEX. L. REV. 1 (1995); Roger C. Cramton, *Individualized Justice, Mass Torts, and "Settlement Class Actions": An Introduction*, 80 CORNELL L. REV. 811 (1995); Nora Freeman Engstrom, *The Lessons of* Lone Pine, 129 YALE L.J. 2 (2019).

[5] Some of the major works on individual issues associated with long-tail liability insurance include Robert D. Chesler, Michael L. Rodburg & Cornelius C. Smith, Jr., *Patterns of Judicial Interpretation of Insurance Coverage for Hazardous Waste Site Liability*, 18

over the last several decades, there has been no effort to describe and assess the *overall* character and influence of long-tail liability on the law of torts and insurance, let alone the consequences of long-tail liability that extend far beyond legal doctrine. In my view, separate subject-matter silos—especially the stark divide between tort law and insurance law scholarship—have been a major obstacle to seeing the long-tail liability phenomenon as a whole.[6] This Article is an effort to bridge that divide and to engage in a combined analysis of many seemingly disparate developments in tort and insurance that are in fact closely related.

These developments were able to occur only because of the confluence of a number of factors. The industrial activity of the first half of the 20th century, along with the chemical and pharmaceutical revolutions of mid-century,[7] generated bodily injury, disease, and pollution-related property damage that involved long-latent harm. This led to long-tail liability, and to claims for insurance coverage of that liability. But long-tail liability would have been non-existent or stunted if science and medicine in the second half of the 20th century had not become capable, at least some of the time, of identifying the causes of that harm. These advances made litigation over liability feasible, for without scientific and medical evidence of causation, many, perhaps most, suits alleging long-tail liability would never have been brought. Ironically, then, both the causes of the harms at issue in long-tail liability actions, and the legal system's capacity to address them, were grounded in the technological and scientific advances of the time.

Yet all this took place in an institutional context heavily influenced and constrained by judicial federalism. The rise of the "administrative state,"

RUTGERS L.J. 9 (1986); E. Joshua Rosenkranz, Note, *The Pollution Exclusion Clause Through the Looking Glass*, 74 GEO. L.J. 1237 (1986); Kenneth S. Abraham, *Environmental Liability and the Limits of Insurance*, 88 COLUM. L. REV. 942 (1988); Jordan S. Stanzler & Charles A. Yuen, *Coverage for Environmental Cleanup Costs: History of the Word "Damages" in the Standard Form Comprehensive General Liability Policy*, 1990 COLUM. BUS. L. REV. 449; Michael G. Doherty, Comment, *Allocating Progressive Injury Liability Among Successive Insurance Policies*, 64 U. CHI. L. REV. 257 (1997); Kenneth S. Abraham, *The Maze of Mega-Coverage Litigation*, 97 COLUM. L. REV. 2102 (1997) [hereinafter Abraham, *Mega-Coverage Litigation*]; Jeffrey W. Stempel, *Assessing the Coverage Carnage: Asbestos Liability and Insurance After Three Decades of Dispute*, 12 CONN. INS. L.J. 349 (2006); Tom Baker, *Insuring Liability Risks*, 29 GENEVA PAPERS ON RISK & INS. 128 (2004); Jeffrey W. Stempel, *Reason and Pollution: Correctly Construing the "Absolute" Exclusion in Context and in Accord with Its Purpose and Party Expectations*, 34 TORT & INS. L.J. 1 (1998); Christopher C. French, *The "Non-Cumulation Clause": An "Other Insurance" Clause by Another Name*, 60 U. KAN. L. REV. 375 (2011).

[6] For discussion of this scholarly divide, see THE LIABILITY CENTURY, *supra* note 1, at 6–7.

[7] *See generally* ALFRED D. CHANDLER, JR., SHAPING THE INDUSTRIAL CENTURY: THE REMARKABLE STORY OF THE EVOLUTION OF THE MODERN CHEMICAL AND PHARMACEUTICAL INDUSTRIES (2005) (documenting developments in high-technology industries from the late nineteenth century to the late twentieth century).

and the centralization of regulatory authority in administrative agencies, mostly at the federal level, has been recognized in legal scholarship and public discourse for decades.[8] Significantly, however, the fields of tort and insurance law are almost entirely matters of state law, and of state common law at that. Neither federal legislation nor regulation stepped in to deal with long-tail harm or long-tail liability. They left the common law to deal with these problems.

The long-tail liability revolution is therefore a significant example of the way that the common law, operating inside the administrative state but outside of any actual administrative regulation, dealt with a new, major, system-wide challenge. The decentralized common law system developed ways of coping with long-tail injury, disease, and property damage. But a major aspect of the developments chronicled here is that it took a long time—half a century, really—for the common law to cope with these developments. This was partly a function of the complexity of the many issues that long-tail tort and insurance coverage litigation generated. Judicial decisions made issue-by-issue and case-by-case do not produce a fully-formed body of doctrine in a mere year or two. But the time it took all of this to develop was also a function of the fact that the sources of legal authority were a large number of separate and independent state courts, as well as federal courts applying state law. The bottom-up character of that kind of common law development, and the cross-state harmonization that was required for coherence eventually to evolve, inevitably meant that the process would take decades to reach maturity.

This Article is an effort to understand how all this occurred by analyzing the influence of long-tail liability on tort law and insurance law and the consequences that these changes in the law have produced. The Article argues that it is precisely the length of the tail on certain tort claims that is responsible for so many of the fundamental developments in these fields over the past fifty years. Without long-tail liability, tort and insurance law, and many of the fundamental structural features of these fields, would look today much like they looked fifty years ago, and indeed, fifty years before that. But

---

[8] *See, e.g.*, Peter L. Strauss, *The Place of Agencies in Government: Separation of Powers and the Fourth Branch*, 84 COLUM. L. REV. 573, 574 (1984) (describing the structure and increasing power of federal administrative agencies); Cass R. Sunstein, *Interpreting Statutes in the Regulatory State*, 103 HARV. L. REV. 405, 408–09 (1989) (detailing the demand for administrative agencies through the New Deal and social movements of the twentieth century); Elena Kagan, *Presidential Administration*, 114 HARV. L. REV. 2245, 2246 (2001) (recounting the history of presidential control over administrative agencies); J. Harvie Wilkinson III, *Assessing the Administrative State*, 32 J.L. & POL. 239, 243 (2017) (describing the complex regulatory landscape of administrative institutions); Gillian E. Metzger, *The Supreme Court, 2016 Term – Foreword: 1930s Redux: The Administrative State Under Siege*, 131 HARV. L. REV. 1, 3 (2017) (pointing to the Obama-era expansion of the regulatory state as the immediate trigger for the anti-regulatory actions of the Trump presidency).

because of long-tail liability, features of both fields that simply did not exist fifty years ago are now central to these fields.

Part I begins the analysis by recounting the rise of long-tail liability, and by examining the three characteristic and challenging features of long-tail liability: the sheer scale of the cases that results from the massive numbers of claimants that are often involved; the economically high stakes for both the claimants as a group and for the defendant; and the tendency of long-tail claims to pose vexing issues of causation, largely because of the length of time between the occurrence of tortious conduct and the manifestation of injury or damage allegedly resulting from that conduct. The rise of this form of liability produced changes in the way that tort litigation is handled and causation is proved. It also led to the enactment of the federal Superfund environmental cleanup program.

Next, Part II describes the revolution in insurance law generated by claims for coverage of long-tail liability. This revolution involved protracted litigation over the development of new doctrines governing coverage responsibility among dozens or even hundreds of liability insurers that issued liability insurance policies potentially covering a particular long-tail liability, as well as the highly divisive controversy over insurance against liability for environmental pollution that figured in this litigation.

Finally, Part III identifies a series of significant consequences of these events that are now structural features of tort law, insurance law, law practice in these fields, and the insurance markets: the century-long expansion of tort liability for accidental bodily injury and property damage experienced a sharp deceleration; the first tort reform statutes of general application ever enacted became law in nearly every state; Lloyd's of London's general liability insurance operation nearly collapsed and had to be restructured; a new form of liability insurance, the Bermuda policy, came into being; and major corporations came to rely more heavily on self-insurance then they ever had done before.

The long-tail liability revolution was a creature of the 20th century. But 21st century technologies that produce new kinds of physical, economic, or emotional harm – cyber-invasions of privacy, the coming use of gene therapy in medicine, malfunctioning facial recognition software, collisions of driverless cars,[9] artificial intelligence, and accidents involving any number of other now-manual functions that will become automated, for example – are starting to or will generate civil litigation and be subject to insurance. The lesson of decades of long-tail litigation is that the liability rules, and the insurance mechanisms that may cushion against these new forms of potential

---

[9] *See* Kenneth S. Abraham & Robert L. Rabin, *Automated Vehicles and Manufacturer Responsibility for Accidents: A New Legal Regime for a New Era*, 105 VA. L. REV. 127, 128 (2019) (providing an overview of legal questions raised by future use of automated vehicles).

and actual liability, are not necessarily going to be adequate to meet the challenges that the new technologies pose. Yet another major set of transformations may therefore be in the offing.

That process is likely to take place at least partly, and perhaps largely, through the same kind of common law development that characterized the long-tail liability revolution. The administrative state is unlikely to be heavily involved, if the past, and the current national political climate, are any guide. The developments I will recount show that common law tort and insurance transformations of major scope take decades to occur and may be fully visible only in retrospect. If and when tort and insurance transformations involving twenty-first century technologies proceed, we can therefore expect the transformations to last a lifetime before they are completed.

Whatever the future brings, one thing is clear: the changes that long-tail liability generated are now such regular features of the law and practice in these fields that they may appear always to have been in place, and always to have been influential. But in fact, the history of these fields over the last half-century demonstrates that, in a very real sense, long-tail liability changed everything. This Article tells the story of that change.

I. THE RISE OF LONG-TAIL LIABILITY

In the pre-long-tail world of liability for accidental bodily injury and property damage, there was essentially one kind of tort claim. This involved a sporadic accident that caused immediately discernable physical harm to an individual or small number of individuals, or to their property. Even the exceptions—explosions,[10] fires,[11] bursting dams,[12] airplane crashes[13]—were exceptional only because they involved injury to more than just a few people. They were abruptly-occurring mass disasters. In the case of these larger accidents, the same legal doctrines and practices that would have applied and been followed in a tort claim where only a single individual had been injured still applied to each individual's claim. Thus, the profile of all tort claims was essentially the same.[14]

---

[10] *See, e.g.*, Dalehite v. United States, 346 U.S. 15, 23 (1953) (involving the explosion of fertilizer on a ship that killed 581 people).

[11] *See, e.g.*, Jacobs v. Ringling Brothers-Barnum & Bailey Combined Shows, Inc., 103 A.2d 805, 805 (Conn. 1954) (involving a circus tent fire that killed 169 people).

[12] *See, e.g.*, GERALD M. STERN, THE BUFFALO CREEK DISASTER 3 (2d ed. 2008) (recounting the litigation involving the collapse of a dam that killed 118 people).

[13] *See, e.g.*, Friends for All Children, Inc. v. Lockheed Aircraft Corp., 497 F. Supp. 313, 315 (D.D.C. 1980) (involving the crash of a passenger airliner).

[14] In conventional product liability, there is a minor version of the long tail. Some time always passes between the sale of the product and the occurrence of injury. Whether a product defect or something else caused the injury in question is sometimes more open to question than in

A different form of claim began to arise, however, with harm caused by non-durable products such as drugs, and other substances such as chemicals and waste, that have the potential to cause disease or illness rather than violent injury. Individuals exposed to these drugs or chemicals can contract diseases without knowing it, sometimes without knowing it for a considerable period of time. Similarly, below-ground property damage caused by pollution can occur but go undiscovered for long periods after it begins. When disease or property damage has been latent for a long period, it may be difficult to prove what caused it and when it first occurred.

The first, comparatively contained, long-tail cases involving latent disease of this sort appeared in the 1960s.[15] Shortly thereafter, however, came the most massive long-tail tort cases ever brought— asbestos cases.[16] Exposure to asbestos may cause near-immediate lung injury, but such injury typically does not manifest in recognizable symptoms for several decades. The first asbestos plaintiffs had been exposed to this substance at least as early as the 1930s.[17] In the last five decades there have been more than

non-products cases. The longer the time between sale and the accident, the greater the probability that one of these other factors, and not a defect, was responsible. And unlike manufacturing defect cases, which tend to be highly sporadic and one-off, the same problem can recur in case after case involving design or warning liability. Nonetheless, this kind of causal uncertainty did not prompt, and seems never to have prompted, serious proposals for modifying the rules governing proof of causation in cases involving durable products. This is probably because the problem is always present in principle, but infrequently present in practice. Whether a defect or something else caused an accident or injury is usually susceptible to traditional methods of proof, including modern accident reconstruction techniques. And when such proof is not available, the doctrine of *res ipsa loquitur* often enables the plaintiff's case to go to the jury. *See* RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. §§ 3, 115 (AM. L. INST. 1997) (providing the requirements for drawing an inference of negligence under the *res ipsa loquitor* doctrine).

[15] The earliest prominent example involved MER/29, an anti-cholesterol drug that was shown to cause cataracts. *See* Roginsky v. Richardson-Merrell, Inc., 378 F.2d 832, 834 (2d Cir. 1967) (describing the MER/29 suits and the issues they posed); Paul D. Rheingold, *The MER/29 Story—An Instance of Successful Mass Disaster Litigation*, 56 CALIF. L. REV. 116, 116, 121–22 (1968) (describing the mass litigation of MER/29 cases in the 1960s). There were about 1500 federal and state suits involving this drug filed in different jurisdictions. *Id.* at 121. Plaintiffs' counsel cooperated in a variety of ways prior to the trials that were held, including on joint discovery, presaging the method in which much mass tort litigation would proceed in ensuing decades. *Id*. at 121–22, 125, 127.

[16] The earliest appellate decision involving the first wave of asbestos cases was *Borel v. Fibreboard Paper Prods. Corp.* 493 F.2d 1076, 1081 (5th Cir. 1973). Suit in the case was filed in 1969, and there was a jury verdict in 1971. Robert Q. Keith & Robert J. Robertson, *Borel v. Fibreboard Paper Products Corporation*, TEX. STATE HIST. ASS'N: HANDBOOK OF TEX., https://www.tshaonline.org/handbook/entries/borel-v-fibreboard-paper-products-corporation [https://perma.cc/KRR5-GLN5].

[17] *Borel*, 493 F.2d at 1083–84.

700,000 claims alleging bodily injury caused by exposure to asbestos.[18] Diagnosing asbestos-related lung disease (asbestosis), or a rare cancer variant (mesothelioma) does not pose difficult problems of proof. But as we will see below, issues of causation still often arise because many claimants have been exposed to asbestos from multiple sources.

In the years that followed, a series of other mass tort cases were brought and many continue to be brought. Many of these involved comparatively new drugs and useful chemicals—for example, DES,[19] the Dalkon Shield,[20] Agent Orange,[21] and Bendectin.[22] Others involved hazardous waste.[23] In each instance, there was a long-tail between exposure to the drug or substance and the manifestation of alleged disease or injury. The pharmaceutical and chemical revolutions of the twentieth century were responsible not only for the harms at issue, but also in many instances for the evidence that made it possible for mass tort cases to be instituted.[24] Only because twentieth century science and medicine were able to point to the drugs and chemicals at the heart of each case as being responsible, or potentially responsible, for the injuries and diseases for which the plaintiffs sought to hold the defendants liable could these mass tort cases have any chance of success.

---

[18] Daniel King, *Asbestos Manufacturers* (Mar. 1, 2021), ASBESTOS.COM, https://www.asbestos.com/companies/ [https://perma.cc/Z2AN-QGHY]. This was a 2002 estimate; the current number is probably close to one million claims.

[19] *See, e.g.*, Sindell v. Abbott Lab'ys, 607 P.2d 924, 925 (Cal. 1980) (explaining that diethylstilbesterol (DES) was administered to the plaintiffs' mothers for preventing miscarriage and was later linked to cancerous growths in daughters exposed in utero).

[20] *See., e.g.*, *In re* N. Dist. of Cal. "Dalkon Shield" IUD Prods. Liab. Litig., 521 F. Supp. 1188, 1190 (N.D. Cal. 1981) (involving a class action lawsuit raised by thousands of women who alleged they were injured by a defective intrauterine device).

[21] *See, e.g.*, *In re* "Agent Orange" Prod. Liab. Litig., 534 F. Supp. 1046, 1051–52 (E.D.N.Y. 1982) (reviewing liability for harm caused by Agent Orange, an herbicide used by the government in Southeast Asia).

[22] *See, e.g.*, *In re* Bendectin Prods. Liab. Litig., 749 F.2d 300, 301–02 (6th Cir. 1984) (presenting the claim that Bendectin, a prescription drug intended to alleviate morning sickness in pregnant women, caused birth defects).

[23] *See, e.g.*, Ayers v. Jackson Twp., 525 A.2d 287, 291 (N.J. 1987) (considering an appeal of judgment in favor of residents who sued township for damages from drinking contaminated well water).

[24] Another species of suit that sometime bears a resemblance to mass tort is the public nuisance action seeking damages for remedying a long-latent danger posed by such substances as lead paint. *See, e.g.*, Rhode Island v. Lead Indus. Ass'n, Inc., 951 A.2d 428, 434 (R.I. 2008) (hearing a lawsuit raised on behalf of the state of Rhode Island against manufacturers of lead paint and their trade association). Because many of the liability issues in such suits differ from those posed in tort actions, I set these aside, although it is worth noting that the liability insurance issues that such cases pose resemble those posed by mass tort liability insurance claims.

Then pollution liability came into the picture. In 1978, residents at a housing development at Love Canal, near Niagara Falls, New York, discovered that hazardous waste long buried under the area was leaking into their basements. A prolonged national controversy focused on this particular site, but subsequent investigation revealed that there were actually thousands of hazardous waste deposit sites around the country posing or with the potential to pose hazards to health and the environment.[25] These sites almost all involved long-tail harms, since it turned out that they often had been leaking pollutants, and contaminating groundwater and property, for decades.

In December 1980, the lame-duck Congress responded by adopting the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA").[26] Nicknamed the Superfund Act, the legislation was directed at cleanup, or "remediation," of sites where hazardous substances (most often waste) posed an environmental health risk. The scope of CERCLA liability for environmental cleanup was unprecedented. Any party who had been associated with a site as an owner, operator, or generator of waste deposited there was subject to a rigorous regime of retroactive, strict, and joint and several liability for the sometimes enormous cost of environmental cleanup.[27] Under CERCLA, a responsible corporate party could be held liable for tens or hundreds of millions of dollars in environmental cleanup costs, arising out of activities in which it and other corporations had engaged, sometimes as long ago as the late nineteenth century.[28]

The following sections discuss how cases involving long-tail injury, disease, property damage, and environmental pollution tend to share a number of other characteristics that have corresponding and similar consequences. First, the massive scale of these cases often is a product of the long-tail harms they involve, and this massive scale generates methods of litigation and settlement that are collective rather than individual. Their massiveness makes doing individual justice in such cases difficult. Second, the cases tend to involve very high stakes, because of the amount of money at risk. For this reason as well, the cases tend eventually to be settled rather than litigated to a judgment, because both private plaintiffs and private defendants are risk-averse. Third, long-tail claims often pose quintessentially difficult

---

[25] The story of the Love Canal as told from the standpoint of one of the participants can be found in LOIS MARIE GIBBS, LOVE CANAL AND THE BIRTH OF THE ENVIRONMENTAL HEALTH MOVEMENT 19–21 (2011).
[26] Codified primarily at 42 U.S.C. §§ 9601–9674.
[27] 42 U.S.C. §§ 9606–07; ROBERT L. GLICKSMAN, DAVID L. MARKELL, WILLIAM W. BUZBEE, DANIEL R. MANDELKER & DANIEL BODANSKY, ENVIRONMENTAL PROTECTION: LAW AND POLICY 875–77 (6th ed. 2011).
[28] CERCLA liability was challenged, in this respect and others, as being unconstitutionally retroactive, but the challenges were quickly rejected. *See, e.g.*, State *ex rel* Brown v. Georgeoff, 562 F. Supp. 1300, 1302, 1316 (N.D. Ohio 1983) (rejecting defendant's statutory interpretation argument that congressional intent weighs against retroactive application of CERCLA).

causation questions, largely because of the length of time between the defendant's allegedly tortious conduct and the manifestation of injury, disease, or damage that may have been caused by that conduct. All three characteristics combined to help change the nature of litigation over long-tail harm.

A. Massive Scale

Perhaps the single most significant characteristic of long-tail claims is that so many of them involve large numbers of claimants.[29] This is no surprise. The longer the tail, the more difficult it is likely to be to connect past conduct with present harm. If exposure to a particular substance causes a disease that manifests itself in only a few unrelated people twenty years later, it is extremely unlikely that anyone would ever be able to identify a causal connection between exposure of these few individuals to the substance and their contracting the same disease many years later. A pattern emerges only when there is a large number of parties suffering a particular kind of harm, and the characteristic these parties have in common is then recognized to be past exposure to a particular substance or form of conduct. The pattern and the causal connections the pattern reflects may be identified through rigorous epidemiology, as was the case with asbestos,[30] or through less formal investigation and recognition.[31]

A second reason that the large scale of many long-tail cases is no surprise is that the cost of bringing small-scale cases often would be prohibitive. The economies of scale that are available to plaintiffs' counsel when a large number of individuals is harmed make it more cost-effective to bring such cases, especially when identification and subsequent proof of

---

[29] One commentator has characterized mass torts generally as having the characteristics of large numbers of claimants, geographic and temporal diversity, and similar factual patterns: RICHARD A. NAGAREDA, MASS TORTS IN A WORLD OF SETTLEMENT xii–xxiii (2007). For Nagareda's purposes, this appears to include both short-tail and long-tail claims but to exclude abrupt disasters that injure large numbers of people at the same time and place.

[30] *See* Irving J. Selikoff, Jacob Churg & E. Cuyler Hammond, *Asbestos Exposure and Neoplasia*, 188 JAMA 142, 142 (1964) (studying the incidence of death due to lung cancer among workers in asbestos-producing industries).

[31] Joseph Sanders, *From Science to Evidence: The Testimony on Causation in the Bendectin Cases*, 46 STAN. L. REV. 1, 13–14 (1993) (identifying different methods of proving causation); Mark Geistfeld, *Scientific Uncertainty and Causation in Tort Law*, 54 VAND. L. REV. 1011, 1012 (2001) (discussing how to determine whether a substance is hazardous for the purpose of legal causation); David E. Bernstein, *Getting to Causation in Toxic Tort Cases*, 74 BROOK. L. REV. 51, 69 (2008) (asserting that modern rules of evidence limit the admissibility of expert testimony to prove causation unsupported by underlying studies).

causation are expensive because they depend on substantial scientific investigation.[32]

Massiveness also facilitates cooperation among counsel for different plaintiffs and various forms of consolidated procedure that reduce the per claim cost of litigation and thereby make it more feasible for plaintiffs' counsel to withstand defense efforts to raise the cost of litigation for plaintiffs. These include class action certification,[33] multi-district consolidation, jointly-conducted discovery, and the use of test cases for trial.[34] These devices were little used or unknown in tort cases before the advent of long-tail claims. The devices are now a routine feature of many tort suits involving large numbers of claims, including claims that do not involve long-tail liability.[35]

Finally, the massive scale of many long-tail cases makes it a virtual necessity to develop formal or informal facilities to process the settlement of cases that do not, and as a practical matter cannot, go to trial.[36] Claimants must be categorized, based mainly on the seriousness of their alleged injuries, but also sometimes based on other factors, so that their claims can be processed efficiently.[37] Although conventional tort cases rarely go to trial, refusing to settle and demanding one's day in court is still theoretically

---

[32] In the MER/29 cases, plaintiffs' counsel cooperated pre-trial in a variety of ways, including on joint discovery, presaging the method in which much mass tort litigation would proceed in ensuing decades. *See* Rheingold, *supra* note 15, at 121–30 (describing the importance of massive pre-trial discovery that came with consolidating the MER/29 cases).

[33] There are now substantial barriers to bringing mass tort suits as class actions, but these were only erected in the late 1990s. *See* Amchem Products, Inc. v. Windsor, 521 U.S. 591, 594, 622 (1997) (overturning lower court's finding that asbestos plaintiffs met predominance requirement for class certification); Ortiz v. Fibreboard Corp., 527 U.S. 815, 848 (1999) (rejecting class certification for failure to demonstrate limited fund treatment); Charles Silver, *"We're Scared to Death": Class Certification and Blackmail*, 78 N.Y.U. L. REV. 1357, 1420–21 (2003) (discussing the economy of class actions to mass torts).

[34] *See* Francis E. McGovern, *Resolving Mature Mass Tort Litigation*, 69 B.U. L. REV. 659, 667 (1989) (identifying early uses of test cases, multiple juries, collateral estoppel, and consolidation); Charles Silver, *Comparing Class Actions and Consolidations*, 10 REV. LITIG. 495, 499 (1991) (noting the important differences between consolidated suits and class actions).

[35] McGovern, *supra* note 34, at 688–94 (advocating for a "hybrid process" of case consolidation that could apply to all mass tort cases).

[36] *See* Ian Ayres, *Optimal Pooling in Claims Resolution Facilities*, 53 L. & CONTEMP. PROBS. 159, 161–65 (1990) (suggesting a possible model for settlement of claims); Francis E. McGovern, *The What and Why of Claims Resolution Facilities*, 57 STAN. L. REV. 1361, 1365 (2005) ("The tort paradigm, for example, is of one or more defendants being held liable to an individual . . . . In tort cases involving large numbers of plaintiffs, this model is generally a fiction . . . .").

[37] *McGovern*, supra note 36, at 1372 (identifying methods for assessing damages); Deborah R. Hensler & Mark A. Peterson, *Understanding Mass Personal Injury Litigation: A Socio-Legal Analysis*, 59 BROOK. L. REV. 961, 1048–52 (1993) (explaining the conflicting interests of opposing parties in mass litigation).

possible for plaintiffs in such cases. That is a virtual impossibility in cases with massive numbers of plaintiffs. They have access only to what amounts to court-supervised administrative compensation.

Devising and administering long-tail mass tort claim settlement facilities has become a sophisticated art. The individuals who serve as special masters or fund administrators have therefore been called upon to apply their skills to administer compensation funds in other settings that draw upon tort compensation funds as models for their operation. Kenneth Feinberg, for example, began by administering mass tort compensation funds, and then became a prominent public figure when he directed the 9/11 and Deepwater Horizon Oil Spill funds.[38]

B. High Stakes

The sheer number of plaintiffs—thousands or even tens of thousands—in many long-tail tort cases means that the cases pose the potential for hundreds of millions of dollars of liability, or more. Early in the history of asbestos litigation, Manville Corporation (formerly Johns Manville), one of the major historical makers of asbestos-containing insulation, was driven into bankruptcy in 1982 by the liabilities it faced.[39] A.H. Robbins, maker of the Dalkon Shield IUD, faced so many suits alleging it was liable for punitive damages that in 1985 it too sought bankruptcy protection.[40]

Superfund liability usually involves only federal or state governmental plaintiffs, although at multiparty sites such as landfills there may be hundreds of responsible parties who are defendants. But regardless of the number of parties, soon after CERCLA was enacted, the monetary stakes turned out to be enormous. Cleanup costs at a major site could easily exceed $100 million.[41] Within a few years, the projected cost of cleanup of

[38] *See* KENNETH R. FEINBERG, WHAT IS LIFE WORTH?: THE UNPRECEDENTED EFFORT TO COMPENSATE THE VICTIMS OF 9/11, at 28–54 (2006) (describing the author's experience as special master of the 9/11 fund); KENNETH R. FEINBERG, WHO GETS WHAT: FAIR COMPENSATION AFTER TRAGEDY AND FINANCIAL UPHEAVAL xiv–xviii (2012) (describing the importance of the author's work on the 9/11 fund as a factor in his later selection to administer the Deepwater Horizon fund).

[39] *In re* Johns-Manville Corp., 26 B.R. 420, 424–26 (Bankr. S.D.N.Y. 1983) (adjudicating the bankruptcy of the Manville Corporation largely attributed to asbestos health litigation).

[40] A.H. Robins Co. v. Piccinin, 788 F.2d 994, 996 (4th Cir. 1986) (adjudicating the bankruptcy of A.H. Robins Company, manufacturer of the Dalkon Shield, noting the millions of dollars spent in defense litigation related to harms caused by the IUD device.)

[41] As of 1989, the average cost to remedy hazardous conditions at a site was $30 million. Kenneth S. Abraham, *Cleaning Up the Environmental Liability Insurance Mess*, 27 VAL. U. L. REV. 601, 603 (1993) (citing U.S. GOV'T ACCOUNTABILITY OFF., GAO/RCED-90-22, SUPERFUND: A MORE VIGOROUS AND BETTER MANAGED ENFORCEMENT PROGRAM IS NEEDED 2 (1989)).

sites nationwide was several hundred billion dollars.[42] As of 2003, the EPA calculated that it had assessed risks at over 44,000 sites, that remediation had been conducted at 7399 sites, and that 11,000 sites remained active.[43]

The high cost of cleanup turned on a number of factors, but the most important factor was that the principal cost of cleanup often involved decontamination of groundwater—water in underground aquifers. Unlike contaminated soil, which can be excavated, groundwater typically is decontaminated by pumping the water out of the ground and treating it. Thirty years or more may be necessary to accomplish decontamination when groundwater underlying many square miles of property has been contaminated.[44]

Two consequences of the high stakes in long-tail cases should be emphasized. First, in many mass tort cases, neither plaintiffs nor defendants could afford to risk everything by trying cases, even setting aside the administrative infeasibility of doing so. The certainty provided by settlement, even for an enormous sum in the aggregate, was preferable to the risk posed by not settling.[45] As noted above, rather than litigate, A.H. Robins entered Chapter 11 and established a $2.8 billion fund to compensate women who were injured by its Dalkon Shield intrauterine device.[46] And in the Superfund context, there was almost always what amounted to settlement. Responsible parties' liability was so nearly certain that negotiations were over such

---

[42] *See* THE LIABILITY CENTURY, *supra* note 1, at 151 (referring to cleanup cost estimates of $500 billion). A more partisan but nonetheless representative estimate was that there were 36,000 sites requiring cleanup and that the cost of cleanups under Superfund and related programs would exceed $750 billion. HAZARDOUS WASTE CLEANUP PROJECT, STICKER SHOCK: RECOGNIZING THE FULL COST OF SUPERFUND CLEANUPS iii (1993), https://p2infohouse.org/ref/33/32340.pdf [https://perma.cc/M64W-BZ3L].

[43] MARK REISCH, CONG. RSCH. SERV., IB10114, BROWNFIELDS AND SUPERFUND ISSUES IN THE 108TH CONGRESS 6 (2004).

[44] *See* Linly Ferris & David Rees, *CERCLA Remedy Selection: Abandoning the Quick Fix Mentality*, 21 ECOLOGY L.Q. 785, 832 (1994) (citing estimates that it could take 100 to 1000 years to completely decontaminate an aquifer by the pump and treat method).

[45] Richard A. Nagareda, *Turning from Tort to Administration*, 94 MICH. L. REV. 899, 952–56 (1996) (discussing breast implant settlements); JOSEPH SANDERS, BENDECTIN ON TRIAL: A STUDY OF MASS TORT LITIGATION 89 (1998) ("[T]he substantial weight of the scientific evidence fails to support the conclusion that Bendectin causes birth defects . . . ."); MICHAEL D. GREEN, BENDECTIN AND BIRTH DEFECTS: THE CHALLENGES OF MASS TOXIC SUBSTANCES LITIGATION 207–11 (1996) (describing how uncertainty in toxic substance cases often impedes settlement until bankruptcy proceedings).

[46] *See* Kenneth R. Feinberg, *The Dalkon Shield Claimants Trust*, 53 L. & CONTEMP. PROBS. 79, 100–104 (1990) (describing the outcome of the Dalkon Shield cases, including the creation of an over $2 billion claimants trust); George Rutherglen, *Distributing Justice: The September 11th Victim Compensation Fund and the Legacy of the Dalkon Shield Claimants Trust*, 12 VA. J. SOC. POL'Y & L. 673, 674–75 (2005) (citing the Dalkon Shield Claimants Trust as a model for the 9/11 Fund).

matters as the choice of cleanup remedy and the relative responsibilities of multiple parties.[47] The plaintiff—usually the EPA—held all the cards.

Second, many defendants paid so much to settle their liabilities that it made sense for them to invest considerable sums to finance litigation of their claims for insurance coverage against their historic CGL insurers. The amount of money involved in long-tail civil liability therefore made it virtually inevitable that, after resolution of the underlying long-tail tort or CERCLA liabilities, there would follow high-stakes insurance coverage litigation between the defendant/policyholders and their many insurers.

C. Difficult Causation Issues

One of the more challenging features of many long-tail cases involves proving causation. The longer the tail, the greater the possibility that, rather than the defendant's having caused the plaintiffs' harm, some causal force operating subsequent to the time of the defendant's conduct is responsible for some or all of that harm.[48] Cases involving long-tail liability have produced most of the innovative doctrines governing proof of causation that are now part of the common law of torts.

Plaintiffs in long-tail cases face the challenge of proving both "general" and "specific" causation. That is, there must be proof both that the substance for which the defendant is the source *can* cause the disease in question (general causation), and that this substance *did* cause the disease in question in a particular plaintiff (specific causation).[49] This poses the problem of the "indeterminate plaintiff." Plaintiffs often also face the challenge of

---

[47] *See* ZYGMUNT J.B. PLATER, ROBERT H. ABRAMS, ROBERT L. GRAHAM, LISA HEINZERLING, DAVID A. WIRTH & NOAH D. HALL, ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY 724 (4th ed. 2010) ("For many lawyers representing PRPs, the problem is less one of environmental law than it is one of engaging in strategic behavior to minimize both the amount spent on cleanups and the share of the cleanup cost allocated to their clients.").

[48] In two important long-tail areas this problem has not arisen because the plaintiffs have suffered a "signature" disease. That is, the plaintiffs have diseases that are only caused by exposure to a particular substance. In the DES cases, this was vaginal adenocarcinoma. *See* KENNETH S. ABRAHAM, THE FORMS AND FUNCTIONS OF TORT LAW 144 (5th ed. 2017) (describing plaintiffs' argument that vaginal adenocarcinoma "could be caused *only* by exposure to DES" such that "if the plaintiff had that disease, then it was caused by DES"). There was also a strong and established connection between exposure to asbestos and lung disease. *See* Karjala v. Johns-Manville Prods. Corp., 523 F.2d 155, 160 (8th Cir. 1975) (detailing how prolonged exposure to asbestos and the subsequent manifestation of the lung disease, asbestosis, can be accurately understood as a continuing tort). There are few signature diseases, however, and these are the only long-tail signature diseases that have figured in litigation.

[49] RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 28 cmt. c (AM. L. INST. 2005).

identifying the particular defendant responsible for their particular injury or disease.[50] This is the problem of the "indeterminate defendant."

1. The indeterminate defendant

The area where the challenges posed by the causation element in long-tail claims has produced the most significant doctrinal innovations involves identifying which of a number of parties actually caused a particular plaintiff's injury or disease—the problem of the "indeterminate defendant."[51] That is, sometimes both general and specific "substance causation" are proved, but proving the identity of the party or parties responsible for the substance that caused harm to any particular plaintiff is a challenge.

For example, over a period of decades, many enterprises made or used asbestos-containing products; plaintiffs may have difficulty proving the particular source of their exposure, or may have been exposed to asbestos from more than one source. Similarly, more than one company marketed the anti-miscarriage drug, DES. Plaintiffs in the DES cases, who were the daughters of women who had taken DES while they were pregnant and given birth to babies who eventually developed cancer, were almost always unable to identify the company that had sold the DES taken years earlier by their mothers.[52]

Beginning with the *Borel* asbestos case in 1973,[53] the courts addressed the problem of the indeterminate defendant by relaxing the traditional requirement that the plaintiff prove the portion of his or her total injury caused by each negligent or otherwise-liable defendant.[54] All defendants responsible for a significant exposure of the plaintiff to asbestos were held jointly and severally liable for the plaintiff's disease.[55] The traditional requirement had already been supplanted in many conventional injury cases, with a rule that shifted the burden of apportionment to defendants and imposed joint and several liability only if they failed to satisfy

---

[50] *Id.*

[51] *See* LINDA S. MULLENIX, MASS TORT LITIGATION: CASES AND MATERIALS 1062–66 (2d ed. 2008) (providing an overview of the indeterminate defendant problem in mass torts).

[52] Sindell v. Abbott Lab'ys, 607 P.2d 924, 926–28 (Cal. 1980).

[53] Borel v. Fibreboard Paper Prods. Corp., 493 F.2d 1076 (5th Cir. 1973).

[54] *Id.* at 1103.

[55] For a discussion of the impact of this approach, see Jane Stapleton, *The Two Explosive Proof-of-Causation Doctrines Central to Asbestos Claims*, 74 BROOK. L. REV. 1011, 1013–17 (2009) (describing the tendency of the courts post-*Borel* to hold any defendant responsible for significant early asbestos exposure in a plaintiff jointly and severally liable for the plaintiff's total harm). Indeed, the logic of this doctrine leads to the conclusion that for practical purposes, what the plaintiff must prove is only that the defendant exposed the plaintiff to the risk of contracting asbestosis. *Id.* at 1029.

that burden.[56] But there was never any possibility of apportionment in most asbestos cases or in cases similar to it. The new approach imposed full liability on any defendant whose conduct had contributed to the plaintiff's harm. That approach now applies across the board to long-tail and non-long-tail cases alike.[57]

A second approach to the indeterminate defendant problem, adopted mainly in DES cases, was market-share liability.[58] Under this doctrine, defendants who had sold DES during the period of exposure during the pregnancy of the plaintiff's mother were held liable for the plaintiff's damages in proportion to their market shares.[59] Market-share liability has also been applied to a number of other substances.[60] In addition, market-share liability has been a catalyst for academic writing about various forms of proportional liability. The thinking in this writing continues to percolate in the field.[61]

---

[56] *See, e.g.*, Maddux v. Donaldson, 108 N.W.2d 33, 38 (Mich. 1961) (holding that the perceived injustice to the plaintiff victim outweighed the due process concerns of potentially holding two tortfeasors jointly and severally liable for an injury); Landers v. E. Tex. Salt Water Disposal Co., 248 S.W.2d 731, 734 (Tex. 1952) (holding that, where blame cannot be apportioned with reasonable certainty against defendant tortfeasors, the plaintiff is allowed to choose their method of recovery from one or more defendants under the doctrine of joint and several liability).

[57] *See* RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 28 cmt. m. (AM. L. INST. 2005) (stating that, where a plaintiff can prove that exposure to any defendant's product was a relevant contributing factor to the plaintiff's injury, all relevant defendants may be held liable for the injury).

[58] The seminal case is *Sindell v. Abbott Lab'ys*, 607 P.2d 924 (Cal. 1980).

[59] *See, e.g.*, *id.* at 937 ("Each defendant will be held liable for the proportion of the judgment represented by its share of that market unless it demonstrates that it could not have made the product which caused plaintiff's injuries.").

[60] *See, e.g.*, Thomas *ex rel.* Gramling v. Mallett, 701 N.W.2d 523, 562–63 (Wis. 2005) (applying a "risk-contribution" theory to lead paint); Smith v. Cutter Biological, Inc., 823 P.2d 717, 727 (Haw. 1991) (applying market-share liability to blood products).

[61] *See, e.g.*, Rosenberg, *supra* note 4, at 867 (advocating using market-share apportionment of liability in cases where it is unclear what firm in the market has caused a plaintiff's injury); Joseph H. King, Jr., *Causation, Valuation, and Chance in Personal Injury Torts Involving Preexisting Conditions and Future Consequences*, 90 YALE L.J. 1353, 1381 (1981) (criticizing market-share liability recovery as an unfair externalization of costs for enterprises under the modern tort system); Glen O. Robinson, *Probabilistic Causation and Compensation for Tortious Risk,* 14 J. LEGAL STUD. 779, 781 (1985) (discussing some academics' support for more probabilistic apportionment of causal responsibility in tort, in contrast to an all-or nothing apportionment strategy); Daniel A. Farber, *Toxic Causation*, 71 MINN. L. REV. 1219, 1221 (1987) (advocating for a new method of proportional recovery under a "most likely victim" approach, limiting recovery to only those plaintiffs who can establish a high causal likelihood between their injury and the defendant's product); Andrew R. Klein, *A Model for Enhanced Risk Recovery in Tort*, 56 WASH. & LEE L. REV. 1173, 1184–1210 (1999) (advocating the position that pre-symptom, post-exposure plaintiffs should only be allowed to recover damages if they can prove exposure has at least doubled their risk of

2. The indeterminate plaintiff

The law governing proof of specific causation in cases involving tortiously-caused disease has undergone considerable development as a result of long-tail cases. This is because of what has sometimes been called the problem of the indeterminate plaintiff.[62] If general causation is proved, but specific causation is uncertain because the cause of any particular plaintiff's disease or injury may have been either the tortious conduct of the defendant or something else, which individuals who have experienced the disease fall into which category? For example, a certain percentage of women suffer from endometriosis.[63] Women who used the Dalkon Shield IUD for birth control suffered from this condition at a higher rate than women in the general population. But some women who used the Dalkon Shield contracted endometriosis that the Dalkon Shield did not cause. Which women suffered from this condition because of the properties of that device, and which women did not? The longer the period between the time a defendant's tortious conduct occurred and the time that a plaintiff's injury or disease manifested itself, the greater the possibility that some other force, such as the conduct of another party, or the "natural" background occurrence of a disease such as endometriosis, is responsible for the plaintiff's condition.

As a result of cases involving long-tail injury, the use of epidemiological and statistical forms of proof to address specific causation has become more common than in the past. For example, this sort of proof was used in the Agent Orange and Bendectin cases, though it seems not to

---

disease); Claire Finkelstein, *Is Risk a Harm?*, 151 U. PENN. L. REV. 963, 980–81 (2003) (discussing the practical implications of requiring firms to compensate victims for their injuries using a probabilistic, market-share liability approach); Allen Rostron, *Beyond Market Share Liability: A Theory of Proportional Share Liability for Nonfungible Products*, 52 UCLA L. REV. 151, 153–54 (2004) (advocating for the abolition of the fungibility requirement of liability apportionment to recover under a theory of market-share liability).

[62] *See, e.g.*, MULLENIX, *supra* note 51, at 1049–61 (providing an overview of the indeterminate plaintiff problem in mass torts).

[63] Endometriosis is a condition in which the endometrial cells that line the uterus grow outside the uterus, such as in the ovaries or fallopian tubes. *Endometriosis*, MAYO CLINIC, https://www.mayoclinic.org/diseases-conditions/endometriosis/symptoms-causes/syc-20354656 [https://perma.cc/B3WE-H47K]. A major allegation in the Dalkon Shield IUD litigation was that infections caused by the design of this device resulted in endometriosis in many of the women who used it, with consequent conditions involving difficulty in ovulation and conception. *See, e.g.*, Setter v. A. H. Robins Co., 748 F.2d 1328, 1329 (8th Cir. 1984) (reviewing a negligence suit filed after plaintiff suffered injury from her use of the Dalkon Shield IUD); Gardiner v. A. H. Robins Co., 747 F.2d 1180, 1183 (8th Cir. 1984) (highlighting a separate lawsuit against A.H. Robbins filed after a plaintiff claimed to have suffered injury from use of the Dalkon Shield IUD).

have risen to a sufficient level.[64] This problem is even more severe in cases seeking compensation for disease caused by exposure to hazardous waste, because such waste is a mixture of numerous substances not a single, uniform chemical compound such as a drug or pesticide. The "substance" to which plaintiffs have been exposed therefore varies from waste site to waste site. Consequently, epidemiological proof is less likely to be available or sufficiently probative in such cases, because rates of disease are not necessarily comparable at different sites.

Nonetheless, disputes over the legitimacy of such forms of proof, and of the respectability of the experts who testify about it, characterized long-tail claims almost from the beginning. And they have given rise to important precedents. Two of the most significant decisions from the Supreme Court on the admissibility of expert testimony addressing causation – one of them the now-central and much discussed *Daubert* case—arose out of long-tail tort claims.[65] The standards articulated in these cases govern not only expert testimony in federal courts, but also at least by strong analogy in state courts that operate under rules of evidence highly similar to the federal rules. The standards for admissibility of expert testimony developed in these cases now govern generally in all cases, whether long-tail or conventional tort cases, and in all other civil cases as well. The problems of proving causation in long-tail liability cases gave birth to the standards.[66]

* * *

To sum up, over the last fifty years, long-tail injury and damage has given rise to a new kind of lawsuit, often involving massive numbers of claimants, high stakes, and difficult problems involving proof of causation. New practices and new legal doctrines have been generated as a result of this

---

[64] For a discussion of the implications of applying a statistical epidemiological threshold requirement for establishing causation, see GREEN, *supra* note 45, at 310–17.

[65] Daubert v. Merrell Dow Pharmaceuticals, 509 U.S. 579, 582–83 (1993) (involving birth defects allegedly caused by exposure *in utero* to the morning sickness drug Bendectin); Gen. Elec. Co. v. Joiner, 522 U.S. 136, 139–40 (1997) (involving small-cell lung cancer allegedly caused by exposure to PCBs and other chemicals in dielectric fluid).

[66] Logically, the problems of the indeterminate plaintiff and the indeterminate defendant do not have to arise only in long-tail cases. Individuals can contract disease or suffer injury shortly after exposure to substances or conduct that may or may not actually have caused the injury or disease; and a plaintiff clearly injured or suffering disease as a result of recent exposure to a product or substance (e.g., toxic-shock syndrome) may be unable to identify the party responsible. But long-tail injury and disease claims generated the early cases that developed approaches to these problems, and then served as sources of thinking and doctrinal development in later, short-tail cases. If the long-tail claims had not existed, the new forms of thinking and doctrinal development might well never have occurred.

litigation, many of which affect not only long-tail litigation but tort liability in general. The old world of sporadic injury and the tort liability that governed it are now accompanied by a new world of long-tail liability and the innovative legal doctrines and procedures that accompany it.

II. THE NEW WORLD OF INSURANCE LAW

Substantial as was the impact of long-tail claims on the development of tort law and tort litigation during the last fifty years, it cannot compare to the impact of this form of liability on insurance law and practice. Because of long-tail insurance coverage claims, the world of insurance law doctrine, practice, and the insurance markets moved from the sleepy backwater where they had long resided to a prominent place in the litigation universe.

Three developments, described in detail below, figure directly in the story. First, in 1966, the standard-form "CGL" insurance policy was revised to eliminate a long-running dispute about whether the standard policy covered liability for long-term hazardous exposure: it did. Within a few years, the new policy language left insurers highly vulnerable to claims for insurance coverage of bodily injury and property damage caused by pollution, at the very time when these kinds of claims were escalating. Second, within a few years, policyholders also began to make claims against their CGL insurers for coverage of the potentially enormous liabilities that they faced in the mass tort actions involving long-latent injury and disease resulting from drug and chemical exposures that were filed against them in the 1970s. Third, in 1980 CERCLA was enacted, and claims for coverage of liability for pollution *cleanup* under CERCLA—a wholly new form of liability—also were made.

The following Sections describe how, as a result of these developments, unprecedented levels of insurance litigation took place, involving billions of dollars of potential coverage responsibility, and the entire landscape of insurance law was transformed. Because insurance coverage law is state contract law, even when an underlying liability incurred by the policyholder is based on a federal cause of action (such as CERCLA), it was natural for divisions of authority on key questions to emerge. For many years there were many states without authoritative precedents governing key issues. As a result, decisions about where to bring suit, and the prediction of outcomes that was a predicate to such decisions, became crucial. Entire departments of major corporate law firms became dedicated to high-stakes insurance coverage litigation. Hundreds of judicial decisions around the country slowly yielded a series of new concepts and doctrines, addressing issues that had never before been envisioned, let alone resolved.[67]And eventually, as a consequence, new forms of liability insurance were introduced. The period from roughly 1980 to 2000 would be a watershed in the history of insurance law and practice, entirely remaking the field.

A. The Occurrence-Based Liability Insurance Policy and the "Trigger" of Coverage

Businesses in the U.S. had long protected themselves against tort and other forms of civil liability by purchasing "CGL" (first "Comprehensive General Liability" and now "Commercial General Liability") insurance. This form of insurance has been sold since 1941, and before that a policy that resembled it was sold.[68] From then until now, the standard CGL policy insured businesses against liability for damages incurred "because of bodily injury and property damage."[69] The key to determining whether a policy at least potentially provided coverage was when the bodily injury or property damage in question occurred. The policy provided coverage of liability incurred because of bodily injury or property damage that occurred "during the policy period," regardless of when the tortious conduct that caused injury or damage had occurred. This criterion would later be termed the "trigger" of coverage.[70]

Bodily injury or property damage could occur "during the policy period," yet remain latent for years to come. In such a case, bodily injury or property damage would trigger coverage under a CGL insurance policy issued years, perhaps decades, before the filing of a suit alleging that the policyholder was liable for damages incurred because of that injury or damage. A policyholder sued in tort in 1980, for example, could be covered against that liability under a policy issued in 1955, if that is when the injury or damage in question had occurred, even if it had not been discovered until 1980.[71]

There is no evidence, however, that from the 1940s until the late 1970s, insurers gave serious consideration to this possibility, or to its implications. That is why they waited so long to revise their policies, and why their failure to do so contributed to the rise of coverage claims against them in the decades to come. Although no one has ever explained this failure, I

---

[67] *See generally* Abraham, *Mega-Coverage Litigation*, *supra* note 5 (explaining that mass tort toxic liability emerged within a short window of time and that the body of doctrine could not develop quickly enough to meet policyholders' and insurers' need for a mature body of law).
[68] *See* KENNETH S. ABRAHAM & DANIEL SCHWARCZ, INSURANCE LAW & REGULATION 435 (6th ed. 2015) (discussing the structure of pre-1985 insurance policies that predate contemporary CGLs but closely resemble modern CGL policies in form and function).
[69] *Id.*
[70] *Id.* at 475.
[71] *See* THE LIABILITY CENTURY, *supra* note 1, at 155–57 (describing the evolution of case law recognizing a longer period of limitations).

think it occurred for a number of reasons.[72] First, during this period, insurers would justifiably have expected to be protected by the effects of statutes of limitations on the right to bring suit alleging liability for long-latent injury or damage. Because the applicable period of limitations typically began to run on the date that a plaintiff's injury or damage began to occur, even if that harm had not yet been discovered, long-latency claims would ordinarily fall outside the period statutorily permitted for bringing suit. Only as judicial and statutory exceptions to statutes of limitations for undiscovered injury or damage were increasingly created in the 1960s would insurers have felt this protection to be dissolving.[73] Second, prior to 1970, there had been few suits alleging any kind of long-tail liability. It probably appeared to insurers that, if policyholders were not being held liable for long-tail harm, then their liability insurers were not at risk of having coverage responsibility for long-tail liability, and these insurers did not need to develop insurance policy language detailing the effects on coverage of liability for different forms of long-latent harm.

Finally, from the time the first standard-form CGL insurance policies were marketed in 1941, insurers seem to have envisioned that the policy would only cover liability for harm caused by abrupt events that resulted in immediate or near-immediate injury or damage. This is because CGL policies covered liability imposed because of bodily injury or property damage caused by "accident."[74] Insurers' conception was that an accident was an abrupt event.[75] Although it is logically possible for an abrupt event, such as an explosion, to cause harm that would not manifest itself for some time after the explosion, that does not appear to have been part of the paradigm "accident" insurers had in mind. Most abrupt events cause injury or disease immediately and are known to have done so immediately, or at least within a short period of time. Few such events would be expected to cause injury or illness during the policy period – and therefore to trigger current coverage –

---

[72] There is some evidence in the drafting history from the 1960s that some consideration was given to the problem that might arise if multiple policies covered a liability because it involved harm that occurred over a period of years, but the drafters apparently decided not to address the issue. *See* RESTATEMENT OF THE LAW: LIAB. INS. § 41 cmt. f (AM. L. INST. 2019) (recognizing that the record seems to support the concept of stacking; that is, "multiple per-occurrence policy limits are available in the event of harm that takes place over multiple years").

[73] *S*ee *Developments in the Law: Statutes of Limitations*, 63 HARV. L. REV. 1177, 1204–05 (1950) (recommending the adoption of discovery exceptions but recognizing that they did not exist in most instances); WILLIAM L. PROSSER, HANDBOOK ON THE LAW OF TORTS § 30 (4th ed. 1971) (indicating that most jurisdictions had adopted the discovery rule).

[74] ABRAHAM & SCHWARCZ, *supra* note 68, at 436.

[75] For examples of courts finding that non-abrupt or imminent events were accidents, see cases cited in Nancer Ballard & Peter M. Manus, *Clearing Muddy Waters: Anatomy of the Comprehensive General Liability Pollution Exclusion*, 75 CORNELL L. REV. 609, 623 nn. 51–52 (1990).

without manifesting themselves at virtually the same time. Insurers therefore seem not to have envisioned the possibility that their policies could cover liability for bodily injury or property damage that occurred during the policy period, but was not actually discovered until many years later.

For all three reasons, as time went on, the insurance policy language introduced in 1941 would turn out to be incomplete and underdeveloped in ways that eventually would produce disputed claims and considerable litigation.

1. The shift to occurrence-based coverage

In the 1950s a new species of tort suit started to test insurers' conception, just described, of what their CGL insurance policies did and did not cover. Some policyholders began to make claims for coverage of liability for harm that was not caused by an abrupt event, but by continuous or long-term exposure to hazardous conditions. For the reasons I have just indicated, CGL insurers took the position that the harm resulting from slow or continuously occurring exposure to a hazardous substance or condition was not caused by "accident," because it did not occur abruptly. Therefore, they contended, their policies did not cover liability for that kind of harm.

The few cases that ruled on the issue produced a division of authority.[76] But the possibility that their policies would cover liability for continuous or long-term exposure to hazardous conditions had begun to occur to CGL insurers. Further, it seems likely that at least some of these insurers began to contemplate the corresponding possibility that it would be a policy issued years or decades earlier that provided this coverage, because the trigger of coverage under their policies was bodily injury or property damage during the policy period. Although this kind of liability was not yet being referred to as "long-tail" liability, the possibility that CGL insurers had in the past issued policies that *already* covered some of these liabilities was about to be brought into sharp relief.

The question whether accident-based policies did cover what would later be called long-tail liability, however, was never definitively answered. In my experience, the reason is that, in order to increase their share of the U.S. CGL insurance market, London-based insurers (led by Lloyd's) began to offer an "occurrence" endorsement (effectively, a supplement) to U.S. policyholders that rendered the issue moot. The endorsement added coverage of liability caused not only by accident, but also by an "occurrence," and defined that term as an "accident, including injurious exposure to

[76] *See, e.g.*, Beryllium Corp. v. Amer. Mut. Liab. Ins. Co., 223 F.2d 71, 74 (3d Cir. 1955) (holding that the term "accident" was ambiguous and construing the policy in favor of coverage); Canadian Radium & Uranium Corp. v. Indem. Ins. Co. of N. Am., 104 N.E.2d 250, 254–56 (Ill. 1952) (same).

conditions."[77] It is difficult to see this addition to coverage as anything other than a recognition that the policy was to cover liability for harm caused by pollution and other similar, slowly-occurring processes. Whether the insurers recognized that some such processes would cause harm during the policy period that was not discovered until much later is not clear. Regardless, as we will see later, although the Lloyd's shift to occurrence-based coverage probably did increase its share of the U.S. market for CGL insurance, eventually the long-tail chickens would come home to roost: by the 1990s, Lloyd's faced financial disaster and had to restructure itself precisely because of the extent of liability it faced under the occurrence policies it had sold to U.S. policyholders in the previous decades.[78]

CGL insurers in the United States, in order to compete with Lloyd's, then exposed themselves to the same vulnerability. To meet the challenge posed by the London policies' extension of coverage, in the late 1950s and early 1960s, U.S. insurers began to issue policies containing similar occurrence-based coverage, through amendments that provided coverage in an "endorsement" added to the policy.[79] In 1966, when the U.S. standard-form CGL policy underwent its next major revision, the new policy form recognized this development, by shifting from accident-based to occurrence-based coverage in the body of the policy itself rather than by endorsement.[80]

In contrast to harm caused by abruptly occurring "accidents," continuous, long-term exposure to harmful conditions is much more likely to cause bodily injury or property damage that does not manifest itself for a considerable period of time. This is because such exposure is more likely to cause insidious disease than are abrupt events, which tend to be violent and therefore to cause easily recognized injury. Thus, whether the change in policy language merely clarified what had already been the case, or actually added coverage that the CGL policy had not provided to that point, for policies issued thereafter this issue became moot. As of 1966, the standard CGL policy, which already contained the potential to cover long-tail liability, now did so in clear terms. Yet this was the very point at which environmental consciousness, and the potential for increased environmental liability, placed insurers at greater risk.

2. Insurers get cold feet: the partial pollution exclusion

CGL insurers' timing in ensuring that their policies covered liability for harm caused by continuous, hazardous exposure could not have been

---

[77] THE LIABILITY CENTURY, *supra* note 1, at 157.
[78] *See infra* discussion accompanying notes 199–203.
[79] THE LIABILITY CENTURY, *supra* note 1, at 157.
[80] *Id*.

worse. The 1966 occurrence-based CGL policy was promulgated at what turned out to be a pivotal point in the history of environmental law. The half-dozen years from late 1960s to the early 1970s saw important social and legal change in this field. The Torrey Canyon shipwreck polluted miles of the French and English coastlines in 1967, with worldwide publicity.[81] A major oil spill off the coast of California in 1969 polluted the ocean and the beaches near Santa Barbara.[82] On June 22, 1969, pollutants on the surface of the Cuyahoga River in Cleveland caught fire.[83] The first "Earth Day" was held in April 1970.[84] In the wake of and in response to these events, the U.S. Congress enacted a series of measures that brought federal environmental regulation into the modern era, such as the National Environmental Policy Act in 1969;[85] the Clean Air Act in 1970;[86] and the Clean Water Act in 1972.[87] Environmental consciousness and the prospect of increased environmental liability were on the rise.

All this of course happened just a few years after adoption of the new occurrence-based CGL insurance policy, which much more clearly covered liability for pollution, including long-tail harm caused by pollution, than the accident-based policy that it replaced. Just a few years after promulgating the new policy form, insurers began to recognize the rising potential for their policyholders to incur liability for pollution. As a result, they got cold feet. Beginning by endorsement (around 1970) and then by revision in the body of the standard-form CGL insurance policy in 1973, insurers added what came to be called a "qualified" pollution exclusion.[88]

What made the pollution exclusion "qualified" was that it was a partial exclusion only. This was accomplished by excluding coverage of liability for bodily injury or property damage arising out of the discharge of pollutants but making an exception for discharges that were "sudden and

---

[81] Bethan Bell & Mario Cacciottolo, *Torrey Canyon Oil Spill: The Day the Sea Turned Black*, BBC NEWS, (Mar. 17, 2017), https://www.bbc.com/news/uk-england-39223308 [https://perma.cc/BZM2-WWZU].
[82] *See* Union Oil Co. v. Oppen, 501 F.2d 558, 570 (9th Cir. 1974) (holding that the party responsible for the 1969 spill could be liable to commercial fishermen if their profits were reduced by harm to the area fish).
[83] Julie Grant, *How a Burning River Helped Create the Clean Water Act*, ALLEGHENY FRONT (April 21, 2017), https://www.alleghenyfront.org/how-a-burning-river-helped-create-the-clean-water-act/ [https://perma.cc/Y3RD-7FXZ].
[84] *EPA History: Earth Day*, U.S. ENV'T PROT. AGENCY, https://www.epa.gov/history/epa-history-earth-day [https://perma.cc/YRA5-TJQZ].
[85] National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (1970).
[86] Clean Air Amendments of 1970, Pub. L. No. 91-606, 84 Stat. 1676.
[87] Federal Water Pollution Control Act Amendments of 1972, Pub. L. No. 92-500, 86 Stat. 816.
[88] *See* KENNETH S. ABRAHAM, ENVIRONMENTAL LIABILITY INSURANCE LAW 145–63 (1991) (explaining the origins and evolution of the pollution exclusion); THE LIABILITY CENTURY, *supra* note 1, at 160 (same); Am. States Ins. Co. v. Koloms, 687 N.E.2d 72, 79–81 (Ill. 1997) (providing the history of the pollution exclusion).

accidental."[89] It is likely that, from the insurers' standpoint, this change reinstated, for pollution liability, the requirement that harm be caused by an abrupt event. Since much, perhaps most, pollution takes place over the long term, this could have been seen as a quiet, but substantial, reduction in the scope of this expanded coverage. But the insurers did not portray it that way at the time. On the contrary, they downplayed the significance of the new exclusion in a manner that approached misrepresentation.[90]

For much of the 1970s, what the pollution exclusion actually accomplished remained uncertain. Most of the legal action on the pollution front until the late 1970s involved the legislation (and subsequent administrative environmental regulation) described above, not tort liability for pollution damage or for the costs of pollution remediation. Consequently, there also was little litigation relating to insurance of liability for pollution during that period, and therefore little occasion for the courts to interpret the meaning and scope of the pollution exclusion.

But the issue was a time bomb, and the bomb eventually exploded. In 1982, a New Jersey appellate court, affirming a 1979 trial court decision that had garnered considerable attention, held that the term "sudden" in the "sudden and accidental" exception to the pollution exclusion in a CGL policy was ambiguous.[91] That term, the court ruled, could mean either abrupt or unexpected. Since the provision was drafted by insurers, the court invoked the doctrine *contra proferentem* and interpreted the exception to the exclusion against the drafter and in favor of coverage.[92] This meant that, for courts that would adopt the same approach, the pollution exclusion did not preclude coverage of liability for harm caused by gradual, unexpected, and accidental pollution—exactly the kind of pollution that was most frequently the subject of massive amounts of liability under CERCLA.

Within a few years, that would turn out to be the kind of pollution that resulted in potential liability, and subsequent insurance coverage claims, associated with thousands of hazardous waste deposit sites. As with the other common law issues already discussed, the meaning of the pollution exclusion was a question of state contract that would take several decades for the courts

[89] ABRAHAM, *supra* note 88, at 146; *Am. States Ins. Co.*, 687 N.E.2d at 81.

[90] Through their drafting organization, the Insurance Services Office (ISO), the insurers sought approval from state insurance commissioners to incorporate the exclusion in CGL policies. A letter that often accompanied requests for approval typically indicated that "[c]overage for pollution or contamination is not provided in most cases under present policies . . . . The above exclusion clarifies this situation." ABRAHAM, *supra* note 88, at 156 (quoting Insurance Rating Board, Submission to Insurance Commissioner of West Virginia, May 18, 1970); *see also* Morton Int'l, Inc. v. Gen. Accident Ins. Co. of Am., 629 A.2d 831, 855 (N.J. 1993) (discussing the legal significance of the representations contained in the letter).

[91] Jackson Twp. Mun. Utils. Auth. v. Hartford Accident & Indem. Co., 451 A.2d 990, 995 (N.J. Super. Ct. Law Div. 1982).

[92] *Id.*

in various states to resolve. In the meantime, high stakes litigation over insurance coverage proceeded.

B. Claims for Coverage of Mass Tort Liability

Although pollution liability and the insurance issues that would accompany it did not materialize in much litigation until the 1980s, the mass tort cases filed in the 1970s spawned highly significant insurance litigation late in the decade. Asbestos bodily injury cases are a prime, but no means exclusive, example. The occurrence-based policies that many corporate policyholders had purchased beginning in the late 1950s were highly vulnerable to claims for coverage of liability for bodily injury and property damage caused by asbestos. And the prior accident policies, though perhaps not quite so clearly vulnerable, were targets as well.

The typical plaintiff in an asbestos tort action had been exposed to asbestos for a number of years. A typical policyholder was the defendant in suits brought by thousands of individuals. The defendants in these cases turned to their CGL insurers for coverage of their liabilities. Medical testimony in these cases often showed that not only did breathing air containing asbestos fibers cause immediate lung damage, but also that, even after an individual ceased breathing asbestos fibers in the air, the continued presence of the fibers in the lungs aggravated already-existing injury.[93] Policyholders therefore argued that all the policies in force during the period running from first exposure to manifestation of a plaintiff's asbestos-related lung disease were triggered.[94]

These corporate policyholders had purchased their CGL coverage in layers, with a single insurer issuing a primary policy and other insurers supplying successive layers of excess liability insurance. A policyholder might therefore have had CGL insurance policies issued by dozens, or even hundreds, of insurers over a period of decades. A suit for coverage of asbestos-related liability would therefore be brought against all of the dozens or hundreds of insurers whose policies were "on the risk" during the relevant multi-year period. Perhaps the most vivid example of the size and complexity of the mass tort insurance coverage litigation came in a consolidated set of asbestos insurance coverage cases, in which there were so many parties that the trial had to be held in a school auditorium big enough to fit all the lawyers.[95]

The principal legal issues these suits posed were whether these policies were triggered, and if so, how coverage responsibility was to be

---

[93] The seminal case on the issue was *Keene Corp. v. Ins. Co. of N. Am.* 667 F.2d 1034 (D.C. Cir. 1981).
[94] *Id.* at 1039.
[95] *In re* Asbestos Ins. Coverage Cases: Judicial Council Coordination Proceeding No. 1072, CJC90001072 (Cal. Super. Ct., S.F. 1989).

allocated among triggered policies. But there were other legal issues as well. And in many of the mass tort insurance coverage cases, there was also a major factual issue: whether the policyholder had "expected or intended" harm to result from exposure to asbestos, since there was no coverage under any policy that was on the risk when the policyholder expected harm.[96] Insurers made strenuous efforts to obtain evidence that the policyholder had expected harm at some point, and at what point that was. This issue complicated coverage cases exponentially, because it often involved extensive document discovery, and the location and subsequent depositions of former or retired employees who may have been in a position to know the dangers posed by the product or substance in question at some point in the distant past.[97]

C. CERCLA Pours Gasoline on the Fire

The enactment of CERCLA in 1980 added a host of significant new features to the insurance law challenges that the mass tort cases were already beginning to pose. Most of the mass tort cases that had by then resulted in insurance coverage litigation did not involve conventional environmental pollution; most did not involve what could be called pollution at all. A whole series of pollution coverage issues were posed by claims for insurance of CERCLA liabilities that simply did not arise in claims for coverage of mass tort liabilities.

It was not only the range of new insurance coverage issues that CERCLA liability introduced, however, that made its influence so great. It was also the sheer amount of coverage litigation that CERCLA liability spawned. At that point there were comparatively few major mass tort cases. Although there were dozens of actual and potential defendants in asbestos cases, there was only a single defendant or just a few defendants in the other mass tort cases. Consequently, there were actually comparatively few insurance coverage cases being pursued at that point.

In contrast, there were many hundreds and quite possibly thousands of entities who were potentially responsible for cleanup under CERCLA. By 1992, the National Priority List of just the major sites that the EPA had

---

[96] *See, e.g.*, Stonewall Ins. Co. v. Asbestos Claims Mgmt. Corp., 73 F.3d 1178, 1204–05 (2d Cir. 1995) (discussing the dimensions of the expected or intended harm issue in a coverage policy long-tail setting).

[97] In the case of Johns-Manville, this sort of discovery eventually uncovered an arguably smoking-gun letter written in 1935 by the company president to one of the company's attorneys, acknowledging that exposure to asbestos posed risks that it would be better to keep the public from knowing ("the less said about asbestos, the better off we are"). PAUL BRODEUR, OUTRAGEOUS MISCONDUCT: THE ASBESTOS INDUSTRY ON TRIAL 116–17 (1985) (quoting a letter from Sumner Simpson to Vandiver Brown).

identified listed 1207 such sites.[98] The EPA projected an ultimate total of 4500 NPL sites,[99] and had an inventory listing over 34,000 sites,[100] many of which involved multiple potentially responsible parties.[101] All of these parties became potential, and often actual, plaintiffs in insurance coverage suits. This meant that long-tail liability insurance coverage litigation went from being an identifiable and growing feature of insurance law to being a massive and widespread phenomenon, with tens, and perhaps hundreds, of billions of dollars at stake for the insurance industry. This litigation overshadowed everything else going on in insurance law and practice at the time.

D. A Generation of New Insurance Law

Litigation over coverage of long-tail liabilities arising out of mass tort and environmental cleanup liability was particularly intense in the 1980s and 1990s, as courts in different states resolved numerous issues of first impression.[102] A whole new body of insurance law doctrine emerged. Resolution of the legal issues generated by long-tail insurance coverage continues to this day; entire treatises are now devoted to it. I discuss the most important doctrines and concepts in this Section, identifying and explaining first the doctrines that pertain directly to long-tail coverage, and then those that arose out of long-tail coverage disputes but have broader application.

Many, though by no means all, of the decisions and doctrines that I discuss below tended to afford policyholders either full or partial coverage of their mass tort and CERCLA liabilities, for several reasons. First, in some instances the policy language at issue clearly provided coverage. Second, in other cases the policy language was ambiguous, and there was no extrinsic evidence (such as trade custom, the parties' course of dealing, representations made in negotiations for the purchase of coverage, or industry-wide policy drafting history) sufficient to clarify what was intended. Consequently, the courts applied the doctrine *contra proferentem* and construed the ambiguous policy language against its drafter (the insurer), in favor of coverage.

Finally, insurance coverage law was not and is not bifurcated—the same rules governing the meaning and application of CGL insurance policies

---

[98] U.S. GOV'T ACCOUNTABILITY OFF., RCED-92-138, SUPERFUND: PROBLEMS WITH THE COMPLETENESS AND CONSISTENCY OF SITE CLEANUP PLANS 11 (1992).
[99] U.S. CONG. BUDGET OFF., THE TOTAL COSTS OF CLEANING UP NONFEDERAL SUPERFUND SITES x (1994).
[100] ORIN KRAMER & RICHARD BRIFFAULT, CLEANING UP HAZARDOUS WASTE: IS THERE A BETTER WAY? 23 (1993).
[101] *See, e.g.*, *id.* at 87 (describing the Lone Pine landfill site in New Jersey, where there were 156 potentially responsible parties).
[102] By 1991, there were enough decisions and new doctrines to fill an entire treatise. *See generally* ABRAHAM, *supra* note 88 .

apply both to sophisticated multinational corporations and small businesses covered by these policies. For example, a decision denying coverage of CERCLA liability to a major corporation such as DuPont or Exxon, on the ground that cleanup costs are not "damages" covered by the policy (see below), would also apply to a local dry cleaning business covered by a CGL insurance policy facing potentially bankrupting liability for cleanup of a municipal site where its waste products had been deposited. For all these reasons, the overall tendency of the body of new doctrines was coverage-favoring rather than coverage-denying.

The following subsections address insurance law doctrines that are complex, intricate, and sometimes difficult to follow for those who are not already immersed in the field. But that is part of the point. It is worth working through the details of these doctrines, both to understand the many ways in which they expanded the scope of insurance coverage of long-tail liability under policies that insurers had already sold and also to appreciate why it took the courts so long to work through the issues that eventually led to adoption of these doctrines. Nothing about the insurance litigation of the 1980s and 1990s was easy for the courts, and that is why the common law process of applying past policies to the new forms of liability took so long.

1. Long-tail coverage doctrines

a. Trigger

The starting point in any long-tail insurance claim is the trigger-of-coverage question. I noted earlier that what activated, or triggered, CGL insurance policies was the occurrence of bodily injury or property damage "during the policy period."[103] The first question, therefore, was what counts as bodily injury or property damage for purposes of determining what happened "during the policy period." The pivotal trigger question was not so much when harm first occurred, although that could sometimes pose a difficult factual question, sometimes with legal ramifications when harm was, for example, sub-cellar. Rather, the most significant issue was whether coverage provided in successive years also was triggered when harm that had begun to occur during a prior policy year continued to occur in subsequent years.

There was medical testimony in asbestos bodily injury cases, for example, that harm to lungs from exposure to asbestos continued to occur even after airborne exposure ceased. This was termed "exposure-in-

---

[103] *See, e.g.*, Am. Home Prod. Corp. v. Liberty Mut. Ins. Co., 565 F. Supp. 1485, 1489, 1513 (S.D.N.Y 1983) (concluding that coverage is only trigged by "exposure or manifestation" when those events are in and of themselves "an injury, sickness or disease for which an insured may be held liable"); *see also* THE LIABILITY CENTURY, supra note 1, at 155 (describing the "trigger" of coverage concept, which exposes insurers to long-tail liability).

residence." In the earliest prominent case on the trigger issue in this context, *Keene Co. v. Insurance Co. of North America*, the D.C. Circuit ruled that bodily injury had occurred during every policy year from the year of first exposure to the year when lung damage first manifested itself. This was termed the "continuous trigger."[104] Other courts in analogous circumstances held that, depending on the evidence, a somewhat similar "injury in fact" trigger approach could yield the conclusion that multiple policy years had been triggered by injury suffered by a single individual over time.[105]

In cleanup coverage cases there were analogous rulings based on the notion that waste slowly migrating through groundwater caused new harm to previously uncontaminated water and that, therefore, there was property damage during the policy period in multiple years as a result of contamination at a single site.[106] As compared to a single-year of coverage being triggered, the multi-year-trigger holdings meant that sometimes twenty or thirty times as many insurance policies, and insurers, were vulnerable to claims for coverage of the policyholder's liability. And this meant that twenty or thirty times more money was at stake for the policyholder and the insurers as a group. Obviously, it is worth investing a lot more in a case that may yield an insurance recovery of $200 to $600 million than in a case that can yield, at most, $10 to $20 million. The complexity and intensity of coverage battles therefore escalated accordingly.

b. Allocation

The fairly routine triggering of multiple policy years in long-tail insurance claims was only the first step in the process that produced exponential aggravation of mega-coverage litigation. Once the courts held that multiple policy years could be triggered, the crucial issue became whether and to what extent the coverage provided in each year could be stacked together, so that the policyholder had access to all of the triggered coverage. This question thus concerned the allocation of coverage responsibility among multiple triggered policy years. Since many large companies facing long-tail liabilities had been purchasing CGL insurance—

---

[104] *See* Keene Corp. v. Ins. Co. of N. Am., 667 F.2d 1034, 1047 (D.C. Cir. 1981) (holding that "any part of the single injurious process" could trigger coverage).

[105] *See* Am. Home Prod. Corp., 565 F. Supp. at 1508 (holding that the policy language was consistent with the expectation that coverage would include injuries that occurred under previous policies).

[106] *See, e.g.*, N. States Power v. Fid. & Cas. Co. of N.Y., 523 N.W.2d 657, 664 (Minn. 1994) (stating that courts had previously concluded the contamination of groundwater was a continuous process resulting in damage); Montrose Chem. Corp. of Cal. v. Admiral Ins. Co., 913 P.2d 878, 904 (Cal. 1995) ("We therefore conclude that the continuous injury trigger of coverage should be applied to the underlying third party claims of continuous or progressively deteriorating damage or injury . . . .").

sometimes hundreds of millions of dollars-worth of it—for decades, whether all this coverage was available, or only some of it, could mean as much as half a billion dollars to each individual company facing liability, and to its liability insurers as a group.

In theory the policies covering any particular triggered policy year would cover only liability for the damages imposed because of the bodily injury or property damage that occurred during that year. But for practical purposes there usually was no way to apportion such liability or damages. An asbestos plaintiff had only one lung disease, not a set of partial diseases or injury that had occurred in a particular year. At a hazardous waste site, the waste deposited in each year typically had leached out of the site and combined. Consequently, ordinarily the damage to a plaintiff or to property at a site was indivisible by year.[107]

Most courts addressing the allocation issue held in such instances that, in order to recover, the policyholder did not have to apportion damage by year when the damage was theoretically or practically indivisible. Rather, each policy could be held liable for damage that occurred partly during its policy year and partly during other years.[108] The policyholder was thus entitled to call upon all triggered years for coverage. That is, in cases involving damage that was not divisible by year, "stacking," or adding together the coverage applying to different triggered years, was permitted.

But the method under which coverage could be stacked mattered as well. There were two general approaches, though each had nuances. The first approach held that the policies (primary and excess) that were in force during all triggered policy years were subject to what amounted to joint-and-several liability for their coverage responsibilities. A policyholder could select a triggered year, access the coverage provided by the policies applicable to that year until they were exhausted, and, if these did not fully cover a judgment, select another year until the amount of the covered judgment was fully reimbursed.[109] This could easily mean that policies providing $100 million or

---

[107] *In re* Silicon Implant Ins. Coverage Litig., 667 N.W.2d 405, 418 (Minn. 2003) (citing ABRAHAM, *supra* note 88, at 120).

[108] *See* ABRAHAM & SCHWARCZ, *supra* note 68, at 475 (describing courts' adoption of multiyear injury-in-fact triggers).

[109] *See, e.g.*, State v. Continental Ins. Co., 281 P.3d 1000, 1008 (Cal. 2012) (applying stacking to allow the insured immediate access to the purchased insurance); Plastics Eng'g Co. v. Liberty Mut. Ins. Co., 759 N.W.2d 613, 625 (Wis. 2009) (holding that the insurer was responsible up to the policy limit once the policy was triggered); Goodyear Tire & Rubber Co. v. Aetna Cas. & Sur. Co., 769 N.E.2d 835, 840 (Ohio 2002) (adopting the stacking approach to seek full coverage from an individual policy out of any of the triggered policies); Allstate Ins. Co. v. Dana Corp., 759 N.E.2d 1049, 1060 (Ind. 2001) ("[O]nce an occurrence takes place, Allstate is obligated to indemnify Dana for all sums related to that occurrence up to the policy limits."); J.H. France Refractories Co. v. Allstate Ins. Co., 626 A.2d 502,

more in any given year, over a period of twenty or more triggered years, could all be held to have covered a judgment against the policyholder.

The alternative was pro-rata allocation.[110] Under this approach, coverage responsibility is pro-rated by year among triggered policy years. If a $200 million liability triggered twenty policy years, then each policy year would be potentially responsible for its pro-rata share of $10 million. If the policyholder had not purchased $10 million or more of coverage during any of those years, then it could recover at most the amount of coverage it had purchased. The result is that the pro-rata approach can never be more advantageous than the joint-and-several approach for a policyholder, and often will be less advantageous.

Complicated as these trigger and allocation issues are, I have vastly oversimplified them. They generated many subsidiary issues, such as how to handle cases in which some insurers whose policies were triggered had settled with the policyholder and some had not;[111] how to determine how many occurrences had caused harm, when policies provided coverage on a per occurrence basis and applied deductibles on the same basis;[112] and what

---

507–08 (Pa. 1993) (using the language of the policies themselves to justify the stacking approach). This whole approach is sometimes termed "vertical" allocation. *See* Viking Pump v. TIG Ins. Co., 52 N.E.3d 1144, 1156 (N.Y. 2016) (discussing vertical exhaustion as being consistent with stacked allocation). This is because, for any selected policy year, insurers are liable in the order in which they provide coverage, from primary, to first-layer excess, and so on up the layers of coverage.

[110] *See, e.g.*, Bos. Gas Co. v. Century Indem. Co., 910 N.E.2d 290, 303 (Mass. 2009) (detailing how the pro-rata approach aims for equity across a time period and often requires policyholder participation); Towns v. N. Sec. Ins. Co., 964 A.2d 1150, 1165–67 (Vt. 2008) (utilizing pro-rata allocation of indemnity costs between the parties); Consol. Edison Co. of N.Y., Inc. v. Allstate Ins. Co., 774 N.E.2d 687, 695 (N.Y. 2002) (holding that pro-rata allocation was consistent with "the amount of time the policy was in effect in comparison to the overall duration of the damage"); Mayor of Balt. v. Utica Mut. Ins. Co., 802 A.2d 1070, 1103–04 (Md. Ct. Spec. App. 2002) (holding that the facts allowed for pro-rata allocation, which was more consistent with the continuous trigger at issue).

[111] *See, e.g.*, Olin Corp. v. One Beacon Am. Ins. Co., 864 F.3d 130, 150–51 (2d Cir. 2017) (determining that the effect of prior settlement should be considered in allocation); Koppers Co. v. Aetna Cas. & Sur. Co., 98 F.3d 1440, 1449–56 (3d Cir. 1996) (evaluating the impact of settlement on judgment and determining that the lower court erred by not accounting for previous settlements); Dresser Ind. v. Underwriters at Lloyd's of London, 106 S.W.3d 767, 771 (Tex. 2003) (holding that not all prior judgments preclude further litigation).

[112] *See, e.g.*, Stonewall Ins. Co. v. Asbestos Claims Mgmt. Corp., 73 F.3d 1178, 1191 (2d Cir. 1995) ("[E]ach installation of NGC's products constituted a separate occurrence, requiring the application of another deductible."); London Mkt. Ins. v. Superior Ct., 53 Cal. Rptr. 3d 154, 171 (Cal. Ct. App. 2007) (considering the implication of aggregating deductibles: that some claims could be aggregated); Metro. Life Ins. Co. v. Aetna Cas. & Sur. Co., 765 A.2d 891, 896–909 (Conn. 2001) (summarizing relevant case law relating to per occurrence policies and deductibles); Plastics Eng'g Co. v. Liberty Mut. Ins. Co., 759 N.W.2d 613, 623 (Wis. 2009) (concluding that "continued and repeated" exposure constituted a single occurrence in this case).

to do when some triggered policies were issued by now-insolvent insurers.[113]

In addition, a current issue that is still hot after all these years is how to treat years when insurance against the liability in question was not available. Is the insured to be treated as a self-insurer for these years, or is coverage responsibility pro-rated only to years when insurance could have been purchased? For example, once the qualified and absolute pollution exclusions became standard provisions in CGL policies, arguably insurance against cleanup liability was not "available," at least under the pollution exclusion law of some states. If years when these exclusions were incorporated into a policy were nonetheless responsible for coverage, then the policyholder could be a self-insurer for those years when insurance against pollution was unavailable. Tens or hundreds of millions of dollars could turn on the answer to this question in each individual case. And the answers are still coming in.

c. The qualified and absolute pollution exclusions

Although the pollution exclusions do not apply exclusively to long-tail liability, these policy provisions have been so centrally involved in long-tail litigation that I consider them here. I have already indicated that, beginning in the late 1970s, the courts split over the meaning of the exception to the qualified exclusion for bodily injury or property damage caused by a "sudden and accidental" discharge of pollutants.[114] Many courts held that the term "sudden" had a temporal component and meant "abrupt,"[115] but other courts held that the term was ambiguous, and that the exclusion therefore did not preclude coverage of liability for harm caused by discharges that occurred gradually.[116]

---

[113] *See, e.g.*, Olin Corp. v. Ins. Co. of N. Am., 221 F.3d 307, 323 (2d Cir. 2000) (describing a New York rule that requires the insured to bear the pro-rata share of the insolvent insurer's indemnity); Liberty Mut. Ins. Co. v. Fairbanks Co., 170 F. Supp. 3d 634, 647 (S.D.N.Y. 2016) (discussing conflicts between Georgia and New York insurance insolvency laws).

[114] *See supra* notes 89–91.

[115] *See, e.g.*, Buell Indus. v. Greater N.Y. Mut. Ins. Co., 791 A.2d 489, 499 (Conn. 2002) (defining sudden as occurring "abruptly or within a short amount of time"); Dimmitt Chevrolet, Inc. v. Southeastern Fid. Ins. Corp., 636 So. 2d 700, 704 (Fla. 1993) ("As expressed in the pollution exclusion clause, the word sudden means abrupt and unexpected."); Northville Indus. Corp. v. Nat'l Union Fire Ins. Co. of Pittsburgh, 679 N.E.2d 1044, 1047 (N.Y. 1997) (finding that excluding a temporal element from the definition of "sudden" would render the sudden exception redundant).

[116] *See, e.g.*, Hecla Mining Co. v. N.H. Ins. Co., 811 P.2d 1083, 1092 (Colo. 1991) (refusing to accept a purely temporal connotation of "sudden"); Claussen v. Aetna Cas. & Sur. Co., 380 S.E.2d 686, 690 (Ga. 1989) (concluding that the ambiguity should be construed in favor of the insured to mean "unexpected and unintended"); Outboard Marine Corp. v. Liberty Mut. Ins. Co., 607 N.E.2d 1204, 1218 (Ill. 1992) (resolving ambiguity in favor of the insured, especially when the ambiguity is found in an exclusionary clause).

Such interpretations made it possible for policyholders to secure coverage of liability for billions of dollars of CERCLA liability. Along with decisions on trigger and allocation, this interpretation led to the 1986 revision of the standard-form CGL insurance policy, most prominently to the incorporation of an "absolute" pollution exclusion in that policy.

But there is now a division of authority about the meaning of that exclusion. The definition of a "pollutant" in the standard CGL policy is extraordinarily broad: "any solid, liquid, gaseous or thermal irritant or contaminant . . . ."[117] Under this definition, spicy mustard splashed into an individual's eye could be considered a "pollutant." Given the breadth, and arguable overbreadth, of this definition, courts struggle with the appropriate scope of the exclusion. Some courts hold that the exclusion must be interpreted in light of its purpose, which was and is to preclude coverage of liability for harm caused by what they sometimes call "traditional environmental pollution,"[118] a phrase that itself is not self-defining. Under this interpretation, the exclusion does not apply to harm caused by carbon monoxide fumes inside a building[119] or water that backs up from a sewer system.[120]

Other courts, however, interpret the exclusion "as written," and apply it to liability for harm that would not be considered "environmental" in the traditional sense, such as ammonia fumes emitted from a blueprint machine[121] and lead paint in a hospital.[122] Thus, nearly fifty years after a pollution exclusion was first included in CGL policies, the courts are continuing to grapple with the difficulty of distinguishing between covered and excluded liability for harm that, in a non-technical sense, many observers would conclude was caused by pollution.

2. New, generally applicable doctrines

A number of other issues that could have been raised even before long-tail insurance coverage litigation arose, but rarely were raised, have experienced significant doctrinal development as a result of long-tail insurance litigation. In the Section, I briefly canvas the major doctrines that burgeoned and became much more significant as a result of long-tail litigation, despite the fact that they then applied across the board.

---

[117] ABRAHAM & SCHWARCZ, *supra* note 68, at 453.
[118] *See e.g.*, Amer. States Ins. v. Koloms, 687 N.E. 2d 72, 82 (Ill. 1997) (excepting carbon monoxide from a broken furnace as not being contemplated by the exclusion clause).
[119] *Id.*
[120] Minerva Enters. v. Bituminous Cas. Corp., 851 S.W.2d 403, 405–06 (Ark. 1993).
[121] Deni Assocs. of Fla. v. State Farm Fire & Cas. Ins. Co., 711 So. 2d 1135, 1141 (Fla. 1998).
[122] Bituminous Cas. Corp. v. Cowen Constr., Inc., 55 P.3d 1030, 1034–35 (Okla. 2002).

a. The meaning of "damages"

CGL policies cover only liability payable "as damages." Early on in the development of long-tail insurance coverage litigation, a hotly-litigated question was whether CERCLA liability, especially when created by an administrative order or injunction directing a responsible party to undertake cleanup, constituted "damages." Prior to the enactment of CERCLA, only a handful of cases had addressed whether the costs of complying with certain forms of injunctive relief constituted "damages" under liability insurance policies, each holding that these costs were not damages.[123] The issue barely existed.

This then became a key question, because CERCLA liability rarely is imposed by virtue of governmentally-financed cleanup and a subsequent cost-recovery suit against responsible parties. Rather, whenever a responsible party is available and solvent, an administrative or injunctive cleanup order is the EPA's first choice. After some fits and starts applying the traditional rule,[124] most courts eventually held that both forms of CERCLA liability are payable "as damages."[125] If this had not been the case, little of the vast body

---

[123] *See, e.g.*, Aetna Cas. & Sur. Co. v. Hanna, 224 F.2d 499, 503 (5th Cir. 1955) (reasoning that the term "damages . . . has an accepted meaning in law" that does not include the costs of complying with an injunctive decree ordering the removal of rocks and the building of a bulkhead); Garden Sanctuary, Inc. v. Ins. Co. of N. Am., 292 So. 2d 75, 76 (Fla. Dist. Ct. App. 1974) (distinguishing injunctive relief from damages on the ground that the latter are "remedial rather than preventive" and noting that "[t]he expense of restoring plaintiff's property" in compliance with an injunctive decree was not remedial); Desrochers v. N.Y. Cas. Co., 106 A.2d 196, 198 (N.H. 1954) (observing that if a plaintiff's injuries are "permanent and irrevocable" plaintiff would be entitled to damages that may trigger an insurer's obligation).

[124] *See, e.g.*, Md. Cas. Co. v. Armco, 822 F.2d 1348, 1354 (4th Cir. 1987) (following *Hanna* to find that costs of CERCLA compliance are not damages and so are not covered by Armco's insurance policy); Mraz v. Canadian Univ. Ins. Co., 804 F.2d 1325, 1329 (4th Cir. 1986) (finding that plain language of CERCLA's relevant provisions indicates that "[r]esponse costs [of waste cleanup] are not themselves property damages.").

[125] *See, e.g.*, A.Y. McDonald Indus., Inc. v. Ins. Co. of N. Am., 475 N.W.2d 607, 620 (Iowa 1991) (giving damages the meaning "the ordinary reasonable person would believe the term to mean" and finding that this meaning encompassed CERCLA response costs); Aetna Cas. & Sur. v. Kentucky, 179 S.W.3d 830, 838–39 (Ky. 2005) (agreeing with the "majority of state appellate courts" that the "ordinary" meaning of damages encompasses response and cleanup costs mandated under CERCLA for the purposes of remedying ongoing injury); Patrons Oxford Mut. Ins. Co. v. Marois, 573 A.2d 16, 19 (Me. 1990) (mentioning, but declining to follow, courts that found coverage for government-mandated cleanup costs by reasoning that ordinary people cannot understand the narrower legal meaning of "damages," which does not include such costs); Johnson Controls, Inc. v. Emps. Ins. of Wausau, 665 N.W.2d 257, 280–81 (Wis. 2003) (rejecting a "too-confining, overly technical definition of 'damages'" and arguing that a broader definition which includes CERCLA response costs does not render the term "damages" mere surplusage because CGL policies do not cover the costs of complying with general regulations or prospective conduct).

of insurance law doctrine that subsequently emerged would have been necessary, because insurers would have been able to avoid covering most CERCLA liabilities.

b. The meaning of "expected"

A principal exclusion in CGL and other liability insurance policies precludes coverage of liability for harm that is "expected or intended from the standpoint of the insured." Some insurers argued (based partly on the phrase "from the standpoint of the insured") that the test for what was expected was fully or semi-objective, and that the exclusion applied if a party in the insured's position should have expected harm.[126] In its most extreme version, this argument would have inserted a negligence exclusion into insurance policies designed mainly to cover liability for negligence. Most courts therefore rejected this argument, confirming that the test is subjective.[127] There remained, however, questions regarding whose expectation counted, and what had to be expected, under the exclusion. For example, was bodily injury or property damage excluded when a single low-level employee expected it, or was some level of management complicity required? Similarly, was coverage of liability for mesothelioma precluded if the maker of insulation containing asbestos expected some minor lung damage to result from exposure to airborne asbestos, but had no reason to expect that it would result in lung cancer? Was coverage of liability for groundwater cleanup precluded if damage to topsoil from the deposit of waste was expected, but no harm to groundwater was envisioned? To this day, the case law on these sub-issue "expected or intended" questions is sparse.[128] We can expect that it will be still more decades before definitive doctrines govern this issue.

c. The scope of the owned-property exclusion

CGL policies have long excluded coverage of liability for harm to property owned, rented, or occupied by the insured. The idea behind the exclusion is that the risk that one's property will be damaged is the province

---

[126] *See, e.g.*, Stonewall Ins. Co. v. Asbestos Claims Mgmt. Corp., 73 F.3d 1178, 1205 (". . . [T]he Insurers contended that coverage of the underlying asbestos-related bodily injury claims should be precluded because NGC 'expected' or "intended" the injuries within the meaning of the 'occurrence' definition.").

[127] ABRAHAM & SCHWARCZ, *supra* note 68, at 500.

[128] *See, e.g.*, Am. Fam. Ins. Co. v. Walser, 628 N.W.2d 605, 611–12 (Minn. 2001) (holding that once some harm is expected or intended, the type of harm that occurs is irrelevant to application of the exclusion); Farmers Mut. Ins. Co. v. Kment, 658 N.W.2d 662 (Neb. 2003) (same); SL Indus. v. Am. Motorists Ins. Co., 607 A.2d 1266, 1274–75 (N.J. 1992) (holding that a different type of harm than was expected is not excluded); United Servs. Auto. Ass'n v. Elitzky, 517 A.2d 982, 991 (Pa. Super. Ct. 1986) (same).

of first-party property insurance, not liability insurance.[129] Many CERCLA cleanups took place on property owned by the insured. Frequently, however, pollutants escaped beyond the boundaries of property owned by the insured and contaminated non-owned property. Because the source of contamination is on the insured's property, sometimes cleanup of the owned property is necessary to remedy or prevent further contamination of non-owned property. The question is whether and to what extent the exclusion applies to cleanup of owned property.

A few of the first cases to apply the owned-property exclusion when there was no offsite damage held that the cost of cleanup of owned property was not excluded as long as harm to non-owned property was "imminent."[130] These early decisions proved to be outliers, however, as most courts held that the exclusion applied unless there had already been actual damage to non-owned property.[131] Further, when that was the case, there would have to be apportionment of the cost of cleanup of owned property, as between costs benefiting owned property (to which the exclusion applied) and costs benefitting non-owned property (to which the exclusion did not apply).[132] This doctrine now applies generally; if damage to owned property must be repaired in order to prevent further damage to non-owned property, then the entire cost of repair is not automatically excluded by the owned-property exclusion.[133]

But it is mostly in connection with environmental cleanup that the owned-property exclusion applies. The rub in this setting turned out to be that, as I noted earlier, a major portion of CERCLA cleanup costs is attributable to the cost of decontaminating underground aquifers, or

---

[129] *See* ABRAHAM, *supra* note 88, at 163 ("The 'owned-property' exclusion['s] . . . general function is to prevent the insured from using a liability insurance policy as if it provided property insurance.").

[130] *See id.* (noting that the owned-property exclusion functions whether the contamination took place on insured's property or others' property); Savoy Med. Supply Co. v. F & H Mfg. Corp. 776 F. Supp. 703, 706–09 (E.D.N.Y. 1991) (finding damage was "outside the confines of the owned property exclusion" even without evidence that contaminants spread to adjacent lands or groundwater because the damage posed a threat to the public).

[131] *See, e.g.*, Hakim v. Mass. Insurers' Insolvency Fund, 675 N.E.2d 1161, 1165–66 (Mass. 1997) (holding that insurer was not liable for costs of cleaning insured's property because the "sole purpose" of such cleanup was to remediate insured's property); State v. Signo Trading Int'l, 612 A.2d 932, 939 (N.J. 1992) (emphasizing "plain language" of CGL policy that excluded the cost of future damage from coverage and lack of evidence of injury to third-party property).

[132] *See generally* Kirby T. Griffis, Note, *Apportionment of Environmental Cleanup Costs Under the Owned-Property Exclusion in CGL Insurance Policies*, 80 VA. L. REV. 1351 (1994) (comparing methods of apportioning costs for environmental cleanup under the owned-property exclusion and arguing that clear apportionment rules would have significant benefits).

[133] *See, e.g.*, Aetna Ins. Co. v. Aaron, 685 A.2d 858, 870 (Md. Ct. Spec. App. 1996) (finding that owned-property exclusion does not preclude coverage of cost of altering a glass enclosure in a condominium unit that caused water damage to neighboring property).

"groundwater."[134] By clever advocacy, policyholder lawyers demonstrated that, under the law of some states, groundwater is not "owned," or not "owned" exclusively, by the owner of the land under which the groundwater is located. Rather, the waters of these states are held in trust by the state for the people. Therefore, courts held, the owned-property exclusion did not apply at all to the costs of decontaminating groundwater under the insured's property.[135] This has been an enormous financial coup for policyholders in these states, and a blow to their insurers. It has enabled policyholders' access to coverage for the cost of cleaning up what everyone had always thought was their own property.

d. The duty to defend a "suit"

CGL insurance policies embody both a duty to indemnify and a duty to defend a "suit" that alleges liability falling within the terms of coverage. Insureds receiving communications from the EPA regarding potential CERCLA liabilities typically sought defense under their insurance policies, on the ground that an EPA "PRP Letter" was the functional equivalent of a "suit." The courts split on the issue, and this division of authority seems stable.[136]

---

[134] *See* Ferris & Rees, *supra* note 44, at 833 (citing estimates that it could take 100 to 1000 years to completely decontaminate an aquifer by the pump and treat method).

[135] *See, e.g.*, United Coop. v. Frontier FS Coop., 738 N.W.2d 578, 585 (Wis. Ct. App. 2007) (noting that insurers conceded that groundwater was not insured's property); Schnitzer Inc. v. Certain Underwriters at Lloyd's of London, 137 P.3d 1282, 1284 (Or. 2006) (rejecting insured's argument that insurer was obligated to indemnify insured for future groundwater decontamination but accepting that the owned-property exclusion does not encompass groundwater); Norfolk S. Corp. v. Cal. Union Ins. Co., 859 So. 2d 167, 193 (La. Ct. App. 2003) (agreeing with earlier Louisiana decision that treated groundwater as a "fugitive subsurface mineral" not owned by insured).

[136] Land O' Lakes, Inc. v. Emps. Ins. Co. of Wausau, 728 F.3d 822, 829 (8th Cir. 2013) (holding that the insured's PRP letter from the EPA was "a suit for arguably-covered damages" as contemplated under the pertinent policies, which triggered their duty to defend); SCSC Corp. v. Allied Mut. Ins. Co., 536 N.W.2d 305, 315 (Minn. 1995) (holding that the Minnesota Pollution Control Agency's Request for Information letter constituted a "suit"); A.Y. McDonald Indus. v. Ins. Co. of N. Am., 475 N.W.2d 607, 629 (Iowa 1991) (holding that the EPA's PRP letter and subsequent actions constituted a "suit" under a CGL policy); Aetna Cas. & Sur. Co. v. Pintlar Corp., 948 F.2d 1507, 1517 (9th Cir. 1991) (holding that a PRP letter issued by the EPA constitutes a "suit" because an "ordinary person" would perceive such a letter as notice of the "effective commencement of a 'suit' necessitating a legal defense."); Idaho v. Bunker Hill Co., 647 F. Supp. 1064, 1068 (D. Idaho 1986) ("The duty to defend arises upon the filing of a complaint whose allegations, in whole or in part, read broadly, reveal a *potential* for liability that would be covered by the insured's policy."); Simon Wrecking Co. v. AIU Ins. Co., 350 F. Supp. 2d 624, 637 (E.D. Pa. 2004) (holding that PRP letters constitute claims, rather than suits).

* * *

To sum up, litigation over the issues that long-tail liability generated was protracted, complex, and expensive. Today, whether an issue arises only in connection with long-tail coverage or more generally, discussion of these issues, and the dozens of legal doctrines that pertain to them, now fill treatises and casebooks. All of these legal issues occupy insurance coverage lawyers in the kinds of coverage disputes that simply did not exist fifty years ago. In that space of time, long-tail liability produced a revolution in insurance law.

III. THE FAR-REACHING CONSEQUENCES OF THE CHANGES IN TORT AND INSURANCE LAW DOCTRINE

Long-tail liability not only had separate, far-reaching impacts on the common law of tort and the common law of liability insurance. In addition, the interaction between these two domains as a result of long-tail liability, and the consequences of this interaction, influenced the two fields in a number of other fundamental ways. It is no exaggeration to say that the combined effect of these developments transformed the world of tort law and insurance.

The individual developments discussed below involved the occurrence of a "crisis" in tort and liability insurance in the mid-1980s; an antitrust suit brought by nineteen states against the property/casualty insurance industry; the end of the century-long era of tort liability expansion; the entry of legislatures into the tort liability arena for the first time; the rise of a new form of insurance coverage as alternative to the CGL occurrence policy; the most radical restructuring of Lloyd's of London in centuries; the advent of insurance policies, issued in Bermuda to U.S. corporations, that require arbitration of insurance coverage disputes; and the increased tendency of major corporations to self-insure non-catastrophic levels of liability instead of relying on liability insurance. Each of these developments not only figured in the history of tort and insurance, but influenced their contemporary character.

A. The Liability Insurance "Crisis"

As the long-tail tort and liability insurance litigation that began in the late 1970s continued, a shock hit the insurance markets. In late 1985 and 1986, premiums for CGL and medical malpractice insurance suddenly skyrocketed, sometimes doubling or tripling at the time of renewal. Further, some policyholders in some states, mainly municipalities and obstetricians, could not get coverage at any reasonable price.[137] The March 24, 1986 cover of *Time Magazine* carried the headline, "Sorry, America, Your Insurance Has Been Canceled."[138]

Consumer groups blamed the crisis on an alleged insurance industry conspiracy to raise premiums, and called for repeal of the special protection that enabled intra-industry cooperation: the McCarran-Ferguson Act's[139] longstanding exemption of the insurance industry from the reach of the U.S. antitrust laws.[140] In contrast, the insurance industry—allied with business and medical interests—and the U.S. Justice Department blamed the crisis on the expansions of tort and environmental liability, as well as the courts' interpretation of CGL insurance policies which have been chronicled above. These interests descended on legislatures to demand tort reform.[141]

In actuality, the causes of the crisis were more complicated than either side recognized. Property-casualty insurance is subject to periodic cycles in which premiums are comparatively flat for a time and then rise steeply. The crisis occurred during one of these points in the cycle; it was simply more severe than past cycles had been. Explanations for this severity probably lie partly in the rise of mass tort and environmental cleanup liability, but also in the fact that insurers anticipated losing important advantages under the Tax

---

[137] *See* Richard N. Clarke, Frederick Warren-Boulton, David D. Smith & Marilyn J. Simon, *Sources of the Crisis in Liability Insurance: An Economic Analysis*, 5 YALE J. ON REG. 367, 367 (1988) (listing large property-casualty insurance rate increases for various types of policyholders, including fifty to one hundred percent increases for obstetricians); THE LIABILITY CENTURY, *supra* note 1, at 164 (noting that, during the insurance crisis, "[f]or some policyholders for a limited time, CGL coverage was not available at any price").

[138] TIME MAGAZINE (Mar. 24, 1986), http://content.time.com/time/covers/0,16641,1986 0324,00.html [https://perma.cc/D9NY-3LJZ].

[139] 15 U.S.C. §§ 1011-1015.

[140] *See, e.g.*, NAT'L INS. CONSUMER ORG., THE LIABILITY CRISIS IN INSURANCE 6–7 (1986) (proposing changes to the McCarran-Ferguson Act's exemption for the insurance industry in order to prevent insurers from fixing prices); Jay Angoff, *Insurance Against Competition: How the McCarran-Ferguson Act Raises Prices and Profits in the Property-Casualty Insurance Industry*, 5 YALE J. ON REG. 397, 402–07, 414 (1988) (arguing that the McCarran-Ferguson Act was a "major cause" of the insurance industry's recurring crises, in part because of its authors' failure to account for evidence of collusive conduct among insurers).

[141] *See, e.g.*, INS. INFO. INST., THE LAWSUIT CRISIS 4 (1986) (attributing the insurance crisis to the costs of increased liability); THE BUS. ROUNDTABLE, TORT LAW REFORM POLICY STATEMENT 5, 118–24 (1986) (supporting bill allowing for individual treble damage liability in antitrust suits on the ground that the bill would prevent antitrust plaintiffs from making use of "whipsawing" settlement techniques); Clarke et al., *supra* note 137, at 377 (discussing common insurers' argument that changes in tort law which expanded damages and liability for policyholders made liability insurance scarce and more costly); American International Group, "There's a Price to be Paid for Excessive Liability Awards in Our Courts," WASH. POST, Dec. 17, 1985 at A16 (promising to "continue to speak out for corrective legislation" to address "enormous" damage awards that "will be paid by all of us who participate in the economic system.").

Reform Act of 1986, and accordingly had made accounting adjustments that resulted in short-term restrictions of available capital—the raw material of insurance—that automatically produced premium increases.[142]

Those explanations, however, took some time to emerge, and in any event probably would have been too complex to influence the dramatic headlines and heated controversy over what or whom to blame for the crisis. There were subsequent studies and reports analyzing the crisis at both the federal and state levels, and proposals for insurance and tort law reform by both government and interest groups.[143] Nor were all the bedfellows entirely comfortable with each other. Many businesses had made claims against or had been litigating with their insurers over toxic tort, products, and cleanup liability coverage in the years leading up to the crisis, and then found that they faced steep premium increases. Although they supported tort reform, these policyholders had no particular trust in their insurers, especially when they found, as we will see next, that the industry was also in the process of cutting back on the coverage it was willing to provide them. Although eventually the crisis subsided, it has had a lasting impact on those who lived through it. Insurers felt wrongly accused of conspiracy, and policyholders felt that their long-time insurers had deserted them. They have dealt with each other much more clearly at arms-length ever since.[144]

B. Revision of the CGL Insurance Policy and the States' Antitrust Suit

By the late 1970s, largely in reaction to the advent of claims for coverage of the new long-tail liabilities, the Insurance Services Office ("ISO")—the policy-drafting and loss-data collecting arm of the property-casualty insurance industry—began the process of revising the standard-form CGL insurance policy.[145] By 1983 and 1984, some insurers were pressing ISO to do away with coverage of long-tail liability altogether, substituting a

[142] For analytical studies of the causes of the crisis, see Kenneth S. Abraham, *Making Sense of the Liability Insurance Crisis*, 48 OHIO STATE L.J. 399 (1987); George L. Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 Yale L.J. 1521 (1987); Symposium, *Perspectives on the Insurance Crisis*, 5 YALE J. ON REG. 367 (1988); Ralph A. Winter, *The Liability Crisis and the Dynamics of Competitive Insurance Markets*, 5 YALE. J. ON REG. 455 (1988); Kyle D. Logue, *Toward a Tax-Based Explanation of the Liability Insurance Crisis*, 82 VA. L. REV. 895 (1996).

[143] *See generally* U.S. DEP'T OF JUSTICE, TORT POLICY WORKING GROUP AN UPDATE ON THE LIABILITY CRISIS (1987); GOVERNOR'S ADVISORY COMM'N ON LIAB. INS., STATE OF N.Y., INSURING OUR FUTURE (1986); INS. SERVS. OFF., INSURER PROFITABILITY: THE FACTS (1986).

[144] Kenneth S. Abraham, *The Rise and Fall of Commercial Liability Insurance*, 87 VA. L. REV. 85, 102–03 (2001).

[145] THE LIABILITY CENTURY, *supra* note 1, at 163.

new form of liability insurance—claims-made coverage—for the form of CGL coverage they had been providing for the past 40 years.[146]

By this point, insurers had seen that many courts were interpreting CGL insurance policies in ways that, in the insurers' view, unduly favored coverage of long-tail liabilities. Decisions that permitted stacking coverage provided during multiple years, and holding that the term "sudden" in the exception to the pollution exclusion did not automatically have a temporal component, were prime examples.[147] In addition, the willingness of the courts to hold that policy language that insurers had considered clear was in fact ambiguous, and then to interpret the ambiguous language against the drafter and in favor of coverage, undermined insurers' confidence that standard occurrence-based CGL insurance policies would be interpreted as written.[148]

Some insurers therefore wanted to circumvent these problems by fashioning a new form of coverage. "Claims-made" coverage effectively eliminates the difficulty of setting premiums for coverage of long-tail liability, by covering many fewer long-tail liabilities. The trigger of coverage under a claims-made policy is a claim made (usually a lawsuit) against the policyholder during the policy period, regardless of how long ago the bodily injury or property damage alleged in the claim occurred.[149] A claims-made insurer whose policyholder begins to experience long-tail liability claims during the policy year can anticipate the severity of claims that will continue to be made in subsequent policy years, and either raise premiums accordingly or exclude coverage of that particular type of suit altogether. An occurrence insurer cannot do that because its past policies already cover such liability. In contrast to occurrence coverage, then, claims-made policies shift part of the risk of an uncertain liability-and-coverage future to the policyholder, who then bears more of the risk of long-tail liability than before.

The insurers pressing ISO to revise the CGL policy in the mid-1980s also favored completely eliminating pollution liability insurance from the CGL policy by substituting an "absolute" pollution exclusion for the "qualified" pollution exclusion that had been in the policy since 1973.[150] Reinsurers, including those in Lloyd's of London, seem to have favored revision, and at the urging of some insurers, indicated to ISO that they would

---

[146] *Id.*
[147] *See supra* text accompanying note 114–16.
[148] *See* 1 REPORTERS' STUDY, ENTERPRISE RESPONSIBILITY FOR PERSONAL INJURY 55, 92 (AM. L. INST. 1991) ("[J]udicial interpretations of policy language that some insurers…had regarded as fixed, clear, and limiting, have expanded the scope of coverage against both conventional and newer forms of liability.").
[149] ABRAHAM & SCHWARCZ, *supra* note 68, at 534–35.
[150] Am. States Ins. Co. v. Koloms, 687 N.E.2d 72, 74–75 (Ill. 1997).

decline to reinsure CGL insurance policies that were not amended to restrict or eliminate long-tail coverage.[151]

As a practical matter, the insurers pressing ISO to revise the standard-form CGL policy could not have revised their own policies to conform to their preferences and then sold these revised policies. At that point in its history, ISO collected industry-wide claim and loss data and promulgated advisory premium rates for its existing policies, and recommended rates for new policies. It would have been economically risky for an individual insurer to venture to price a new policy on its own. More importantly, however, a policy with more restrictive coverage than the standard form CGL policy then in force would have been received unfavorably in the market. Policyholders would not have bought it in sufficient numbers when a more attractive policy was available, even if it carried a lower price.[152] Rather, in order to obtain a revised, more restrictive CGL policy that the market would have to accept because all insurers offered it alone, the insurers pressed ISO to amend that policy and discontinue the policy it would replace.

In the end, ISO did not eliminate the occurrence policy, but it did promulgate a standard-form claims-made CGL policy that insurers could use if they preferred to do so. The only recommendation that ISO squarely adopted was to insert an absolute pollution exclusion into ISO's revised 1986 standard-form policy.[153] That eliminated a considerable portion of the coverage of long-tail liability that CGL policies have provided ever since. But because of the trigger of coverage under pre-1986 policies, long-tail pollution-coverage issues under those policies continue to arise and be litigated.[154]

Just as the controversy over the crisis of 1985–86 was dying down and the insurance market was stabilizing, however, another striking development occurred. In 1988, nineteen states brought suit against ISO, the CGL insurers that had importuned ISO to eliminate long-tail coverage from the CGL policy, and a number of reinsurance entities,[155] alleging that these

---

[151] Other demands were that the claims-made policy be subject to a retroactive date and that the costs of defense erode policy limits. *See* Hartford Fire Ins. Co. v. California, 509 U.S. 764, 771 (1993) ("[T]he defendants wanted the 'claims-made' policy to have a 'retroactive date' provision, which would further restrict coverage to claims based on incidents that occurred after a certain date.").

[152] The dynamics of this process are discussed in ABRAHAM & SCHWARCZ, *supra* note 68, at 36–38 and 167–68.

[153] THE LIABILITY CENTURY, supra note 1, at 164.

[154] *See, e.g.*, Olin Corp. v. OneBeacon Am. Ins. Co., 864 F.3d 130, 138, 154 (2d Cir. 2017) (remanding for further proceedings a case involving claims for coverage of asbestos liabilities under CGL policies issued from the 1950s through 1970).

[155] *In re* Ins. Antitrust Litig. 723 F. Supp. 464 (N.D. Cal. 1989), *rev'd and remanded*, 938 F.2d 919 (9th Cir. 1991), *aff'd in part, rev'd in part sub nom.* Hartford Fire Ins. Co. v. California, 509 U.S. 764 (1993); *see also* Lawrence M. Fisher, *States and Industry Battling*

defendants' threats and conduct in the process of revising the CGL policy amounted to a conspiracy in violation of the one feature of the Sherman Act from which the McCarran-Ferguson Act did not exempt them, the prohibitions against boycott and agreements to boycott.[156]

Eventually, in *Hartford Fire Insurance Co. v. California*, the Supreme Court of the United States ruled that the alleged core activities of the defendants in attempting to have ISO modify its standard-form CGL policy were not boycotts.[157] The case was remanded and settled because, for practical purposes, the plaintiffs had lost.[158] The ruling confirmed that the process by which ISO prepared standard-form policies, including CGL policies, was not unlawful.

In doctrinal terms, therefore, the case is a landmark clarification of the meaning of the term "boycott" as applied to the insurance policy drafting process, though only that. But in practical terms the decision left the insurance industry free to act collectively in the preparation of standard-form policies. It enabled the industry to continue to present a unified front in dealing with the corporations that buy CGL insurance. It left the new worlds of tort and insurance law in place.

There was another important non-doctrinal subtext in the case, moreover, that never found its way into a judicial opinion at any of the three levels where it was adjudicated. The case was brought in the aftermath of the liability insurance crisis, soon after introduction of the revised CGL insurance policy that cut back on a significant component of long-tail coverage through the new, absolute pollution exclusion. The implication of the suit, at least for some observers, was that the behind-the-scenes maneuvering and threats that were alleged in *Hartford Fire* to have led to revision of the CGL policy also had led to the liability insurance crisis itself.[159] The implication of the suit, that is, was that the steep increases in premiums and the coverage shortages that produced the crisis were a product of the same kind of conspiratorial conduct that had led to revisions of the CGL insurance policy that eliminated coverage of liability for pollution. The suit thus reinforced the climate of distrust that was already present in the relationship between the corporate policyholders and their insurers.

---

on Liability Coverage, N.Y. TIMES, Mar. 23, 1988, at A1 ("The suits contend that four major insurance companies conspired with Lloyd's of London, Insurance Services Office Inc. and others . . . to reduce sharply all liability coverage available to public agencies, businesses and non-profit organizations.").

[156] McCarran-Ferguson Act, ch. 20, § 3, 15 U.S.C. § 1013.

[157] 509 U.S. 764, 806 (1993).

[158] ABRAHAM & SCHWARCZ, *supra* note 68, at 167.

[159] *See, e.g.*, Angoff, *supra* note 140, at 403 ("[The Texas Attorney General] alleged that during the insurance crisis, Aetna and other major insurance companies had agreed not to write certain types of 'politically sensitive' insurance in order to pressure state legislators to enact tort reform.").

In the years that followed, the intensity of that distrust may have waned, but the rising-tide-raises-all-ships mentality that had resulted for decades in steady renewals of their CGL policies by policyholders, and willing payment of small and moderate claims by insurers, never returned.[160] Ever since, policyholders have been more willing to consider suing their insurers, viewing the possibility of suit in the same risk-reward terms that they employ in assessing other investments. And insurers have taken positions adverse to their policyholders—such as seeking recoupment of defense costs[161] and sometimes even recoupment of settlements[162]—that would have been unheard of before the events of the mid-1980s.

The introduction of claims-made CGL insurance was a natural consequence of all this. Claims-made policies cut out much of the long-tail coverage that occurrence policies provide. Under claims-made policies the policyholder is effectively a self-insurer of claims that come in waves, since the insurer is always free to laser-exclude coverage of a particular form of liability in subsequent policies. By 2018, roughly 36 percent of all CGL coverage was written on a claims-made basis,[163] and in all probability this was the only form of coverage that policyholders that pose of substantial risk of incurring long-tail liability, like drug and chemical manufacturers, could obtain at tolerable cost.

C. The Deceleration of a Century of Tort Liability Expansion

From the very time it came into being as a recognizable, distinct category of liability around 1870, the scope of tort liability for accidentally-caused bodily injury and property damages steadily and continually expanded.[164] Much of that expansion involved the progressive breakdown of

---

[160] *See* Abraham, *supra* note 144, at 100–01 ("[I]nstead of bringing policyholders and insurers back together in the joint enterprise of managing liability risk, the enactment of tort reform tended to drive them apart.").

[161] *See, e.g.*, Buss v. Superior Ct., 939 P.2d 766, 770 (Cal. 1997) ("[The insurer] reserved all its rights, including . . . '[w]ith respect to defense costs incurred or to be incurred in the future, . . . to be reimbursed . . . .'"); Shoshone First Bank v. Pac. Emps. Ins. Co., 2 P.3d 510, 514 (Wyo. 2000) ("[The insurer] contends that it is entitled to allocate the defense costs between the claim for invasion of privacy and all the other claims involved and seek compensation from Shoshone for the costs of defending the other claims.").

[162] *See, e.g.*, Blue Ridge Ins. Co. v. Jacobsen, 22 P.3d 313, 314 (Cal. 2001) ("[W]e conclude an insurer may be reimbursed for a reasonable settlement payment made over the objection of the insureds."); Excess Underwriters at Lloyd's, London v. Frank's Casing Crew & Rental Tools, Inc., 246 S.W.3d 42, 43 (Tex. 2008) ("In Texas, an insurer that settles a claim against its insured when coverage is disputed may seek reimbursement from the insured should coverage later be determined not to exist . . . .").

[163] A.M. BEST COMPANY, BEST'S AGGREGATES AND AVERAGES 382 (2017).

[164] The story of this expansion is told in G. EDWARD WHITE, TORT LAW IN AMERICA: AN INTELLECTUAL HISTORY (expanded ed. 2003).

a series of no-duty and limited-duty limitations on liability for negligence.[165] Workers' compensation, nominally a restriction of tort liability in that it immunized employers from liability in tort, adopted an administrative system of near-absolute employer liability for workplace injury.[166] Though literally it did not involve tort liability expansion, workers' compensation added credibility to arguments for moving from negligence to strict liability in tort itself,[167] and served as a reference point in debates about strict liability in tort.

Then, beginning in the early 1960s, the adoption of strict liability for product defects in state after state took this approach, and to many observers seemed to signal that the move from negligence to strict liability would spread. If asked to predict around 1975 whether there would be more strict liability adopted in the coming decades, I am pretty certain that most tort scholars would have answered in the affirmative. Some would have supported such a development and others would have opposed it.

Make no mistake about it: there had been enormous doctrinal expansion, much of it chronicled in the preceding pages. Expansion decelerated after 1985 or so, but of course the cat was already out of the bag. There were few major doctrinal expansions in the scope of common law liability for accidentally caused physical harm, and there were even a few retrenchments.[168] More than a century of doctrinal expansion of tort liability slowly came to an end in the next decades. Products liability, which was the most prominent field in which liability appeared to have moved from negligence to strict liability, moved back from that stance, and was soon recognized to be a predominately a form of negligence, and not strict, liability.[169] Market-share liability, which in the early 80s seemed to be the latest step in the progression of liability expansion, never gained momentum.[170] Liability for negligently-inflicted emotional distress was

---

[165] *See* Robert L. Rabin, *The Historical Development of the Fault Principle: A Reinterpretation*, 15 GA. L. REV. 925, 937–938 (1981) (discussing the development of exceptions to the restricting doctrine of privity, eventually resulting in liability based on fault).

[166] *See* THE LIABILITY CENTURY, *supra* note 1, at 52–57 (tracing the evolution of liability for worker injury).

[167] This was recognized soon after workers compensation came into the picture. *See, e.g.*, Jeremiah Smith, *Sequel to Workmen's Compensation Acts*, 27 HARV. L. REV. 235, 235 (1914) (suggesting that the principle underlying workers compensation applied to tort as a whole).

[168] *See generally* Gary T. Schwartz, *The Beginning and the Possible End of the Rise of Modern American Tort Law*, 26 GA. L. REV. 601 (1992) (tracing the end of modern tort law's expansion to the period between 1981 and 1992).

[169] RESTATEMENT (THIRD) OF TORTS: PRODS. LIAB. § 2 (AM. L. INST. 1997).

[170] *See, e.g.*, Sutowski v. Eli Lilly & Co., 696 N.E.2d 187, 192–93 (Ohio 1998) (rejecting application to DES); Spencer v. Baxter Int'l, Inc. 163 F. Supp. 2d 74, 81 (rejecting application to blood products); Shackil v. Lederle Labs., 561 A.2d 511, 529 (N.J. 1989) (rejecting application to DPT vaccine); Hamilton v. Beretta U.S.A. Corp., 750 N.E.2d 1055, 1068 (N.Y. 2001) (rejecting application to handguns); Black v. Abex Corp., 603 N.W.2d

limited to a narrow set of situations.[171] The century-long era of tort liability expansion that these developments ended coincided exactly with the advent of the liability insurance crisis of 1985-86.

Even without psychoanalyzing the judges who sat on state courts of last resort at that time, it seems clear beyond dispute that the liability and insurance crisis of the mid-1980s served as a shot across the bow of the judiciary. For decades, the courts had assumed that where tort liability went, liability insurance would follow.[172] The crisis, however, seemed to show the judiciary that this was not necessarily true. In addition to the steep increases in premiums for CGL insurance purchased by corporations, other entities and individuals whose difficulties were more likely to influence the courts suffered during the crisis. For example, nurse midwives, municipalities whose swimming pools had diving boards, and obstetrician-gynecologists who delivered babies sometimes found for a time that they could not obtain liability insurance at any price.[173]

Judges did not have to be convinced that the courts' expansion of tort liability was the exclusive cause of these features of the crisis to wonder whether they had at least contributed to it. This would have been a sobering concern for judges at all levels. There soon followed work by legal scholars criticizing the expansion of tort liability and opposing further expansion that gave judges objective reason for concern. A bit of anecdotal evidence is my experience, witnessing Stanley Mosk, a Justice of the Supreme Court of California and a leading proponent of that state's expansions of tort liability, at a conference on civil liability at the Yale Law School in 1985. He sat in the audience as George Priest[174] and Richard Epstein[175] presented papers showing what they considered to be flaws in the modern expansions of tort liability. I suspect that Justice Mosk was surprised to hear his positions impliedly criticized by scholars from elite law schools, since the elite scholars of Mosk's generation (people like William Prosser and Fleming James) had

---

182, 189 (N.D. 1999) (declining to expand application to asbestos where the record was otherwise sufficient for summary judgment in favor of the defendants); Skipworth v. Lead Indus. Ass'n, 690 A.2d 169, 173 (Pa. 1997) (rejecting application to lead pigment in house paint).

[171] Thing v. La Chusa, 771 P.2d 814, 829–30 (Cal. 1989).

[172] For the classic statement of this position, see Escola v. Coca Cola Bottling Co. of Fresno, 150 P.2d 436, 441 (Cal. 1944) (Traynor, J., concurring) ("The cost of an injury and the loss of time or health may be an overwhelming misfortune to the person injured, and a needless one, for the risk of injury can be insured by the manufacturer and distributed among the public as a cost of doing business.").

[173] *See* Abraham, *supra* note 142, at 402 ("Liability insurance for certain risks—directors and officers, nurse-midwives, day-care centers, bars and restaurants, obstetricians practicing in certain settings—was unavailable at any price for months at a time in some states during 1986.").

[174] George L. Priest, *The Invention of Enterprise Liability: A Critical History of the Intellectual Foundations of Modern Tort Law*, 14 J. LEGAL STUD. 461 (1985).

[175] Richard A. Epstein, *Products Liability as an Insurance Market*, 14 J. LEGAL STUD. 645 (1985).

been all in favor of those expansions.[176] Within a few years, Mosk was joining majorities on his Court in declining to expand tort liability any further.[177]

There undoubtedly were other forces at work in halting the expansion of tort liability. Much of the tort expansion "agenda" had been achieved already.[178] And the conservative revolution that began with the election of President Ronald Reagan in 1980 then spread to the states, where it resulted in the election or appointment of judges who, at the least, did not favor any further expansion of liability.[179] The long-tail liabilities that had materialized in the decade prior to these lawyers' ascension to the bench had to have been a major reason for these new judges' stance. In any event, whatever combined set of factors halted the expansion of tort liability, the liability and insurance crisis of 1986–86 almost certainly explains why the expansion of tort liability halted exactly *when* it did. For more than three decades since then, there has been no important expansion in tort liability doctrine.

In light of this altered judicial attitude toward the expansion of tort liability, the courts' continued willingness to make coverage-favoring decisions in insurance disputes for the next couple decades may seem to call out for explanation. In fact, the explanation is pretty clear and there was no inconstancy in this willingness. The courts in most of these subsequent coverage cases were interpreting and applying CGL insurance policies that had been sold in the past, and sometimes the distant past. There was nothing inconsistent about interpreting an older insurance policy in favor of coverage of a liability that the courts were now declining to expand, if the liability had in fact been imposed on a policyholder, just as the courts were continuing to impose tort liabilities they had already created. Courts were merely declining to expand liability any further. Similarly, the courts could continue to interpret CGL policies issued prior to 1986 in accordance with the then-developing case law governing these policies, but also interpret the new occurrence policies containing absolute pollution exclusions and new claims-made policies in accordance with their new, coverage-restricting provisions. There was no inconstancy in this stance.

---

[176] *See* Priest, *supra* note 174, at 470–83, 512–18 (discussing Fleming James's and William Prosser's approaches to tort liability expansion).

[177] *See, e.g.*, Murphy v. E.R. Squibb & Sons, Inc., 710 P.2d 247, 254–56 (Cal. 1985) (limiting the scope of market-share liability); Brown v. Superior Court, 751 P.2d 470, 477 (Cal. 1988) (holding that negligence, not strict liability, governs prescription drug cases); Anderson v. Owens-Corning Fiberglas Corp., 810 P.2d 549, 561–63 (Cal. 1991) (Mosk, J., concurring in part and dissenting in part) (concurring in an opinion rejecting hindsight analysis in failure-to-warn cases).

[178] *See* Schwartz, *supra* note 168, at 683–84 (offering an agenda-completion explanation).

[179] *See id.* at 686–87 (discussing the impact of Governor Reagan's judicial appointments on the apparent shift in direction of California's tort policy).

D. The First Legislated Tort Law

Before there was long-tail liability, tort law governing liability for accidental bodily injury and property damage was almost entirely common law.[180] Tort doctrine was the province of the courts. But because of long-tail liability and its impact on liability insurance, tort reform statutes modifying the common law were enacted, and tort law became the joint province of the courts and legislatures. The centuries-long allocation of exclusive tort law-making responsibility to the courts became a thing of the past.

1. Medical malpractice reform

The first moves in that direction came in the mid-1970s, when there was a medical malpractice liability insurance "crisis" that foreshadowed the broader crisis that came ten years later. Medical malpractice sometimes involves long-tail liability, because harm caused by malpractice may occur during one year without manifesting itself until years later. In addition, statutes of limitation traditionally did not begin to run until an injured child reached the age of majority. Even if an injury to a child had been discovered around the time it occurred, it could be many years before a suit alleging liability for that injury was brought and resolved.[181]

Because medical malpractice coverage was occurrence-based, long-tail claims posed the same problems for malpractice insurers that they later posed for CGL insurers. In the late 1960s and early 1970s, rates of suit increased, and with that came in increase in long-tail claims.[182] Premiums for medical malpractice accordingly increased steeply, at just the point in the insurance cycle that premium rates probably would have markedly increased anyway (though probably to a lesser extent). Medical malpractice liability insurers then proposed shifting from occurrence to claims-made coverage, a

---

[180] There are only two exceptions of any significance, and these *expanded* liability rather than *restricting* it, as did all the tort reform statutes of the late twentieth century. The first exception was the adoption of the Employers Liability Act in the late nineteenth century, which limited the scope of employers' defenses in negligence actions brought by their employees. Richard D. Epstein, *The Historical Origin and Economic Structure of Workers' Compensation Law*, 16 GA. L. REV. 775, 778–79, 779 n.10 (1982). The second exception was the widespread adoption of comparative negligence by statute in the 1970s. VICTOR E. SCHWARTZ & EVELYN F. ROWE, COMPARATIVE NEGLIGENCE app. A, at 517–22 (5th ed. 2010).

[181] *See* Kenneth S. Abraham, *Medical Malpractice Reform: A Preliminary Analysis*, 36 MD. L. REV. 489, 502 (1977) (noting that the statute of limitations applicable to minors and people with disabilities may not begin to run at the time of initial injury).

[182] *See* Abraham, supra note 142, at 490 n.3 (noting an increase in the frequency of medical malpractice claims against St. Paul physicians between 1968 and 1974).

move that alarmed physicians.[183] Some insurance commissioners refused to approve the proposed shift, and some insurers withdrew altogether from selling malpractice insurance in these states. Physicians faced the prospect of having no malpractice insurance at all.[184]

Physicians' concerns naturally spilled over into public controversy in many states. A "crisis" was declared to be in process, and both physicians' representatives and medical malpractice insurers descended on state legislatures seeking relief. Legislatures enacted a number of significant insurance reforms, including authorizing the establishment of physician-owned mutual liability insurance companies to substitute for or compete with commercial malpractice insurers.[185] Most of these "bedpan mutuals" are still operating in many states. Ironically, most sell claims-made coverage.[186]

More significantly, state legislatures enacted reforms of tort liability that broke the historical pattern of leaving control of tort law doctrine to the courts. The principal and most frequently adopted reform was to adopt a cap or ceiling on the amount of pain and suffering damages that could be awarded in a medical malpractice case. California's MICRA statute, which applied a $250,000 ceiling that was not indexed to inflation, is one of the most discussed such measures.[187] But there were others, including reversing or limiting the collateral source rule and limiting the amount of attorneys' contingent fees.[188] Some of the statutory ceilings on pain and suffering damages eventually were held to violate state constitutional provisions, but most survive to this day.[189]

---

[183] *See* James R. Posner, *Trends in Medical Malpractice Insurance, 1970-1985*, 49 L. & CONTEMP. PROBS. 37, 44–45 (1986) (discussing physicians' initial apprehensions regarding claims-made insurance).

[184] *See* PATRICIA M. DANZON, MEDICAL MALPRACTICE: THEORY, EVIDENCE, AND PUBLIC POLICY 108 (1985) (discussing how the denial of proposed rate increases and disapproval of the claims-made form led to insurers withdrawing from the market).

[185] *See id.* at 109–10 (noting that there has been "spectacular growth" in physician-owned mutuals and reciprocals since 1975); Posner, *supra* note 183, at 39–40 (discussing the relative success of physician and medical society sponsored malpractice insurers in the 1970s and 80s).

[186] Susan Dentzer & Doug Tsuruoka, *Malpractice Insurers Are Ill*, NEWSWEEK, Apr. 29, 1985, at 58.

[187] CAL. CIV. CODE § 3333.2 (West 2021).

[188] *See* Prentiss E. Fagles, Betsy I. Carter, James A. Davids, Neal E. Tackabery & Clay B. Tousey, Jr., *An Analysis of State Legislative Responses to the Medical Malpractice Crisis*, 1975 DUKE L.J. 1417, 1446–50 (describing legislative reforms which have made "evidence of collateral payments admissible at trial or require a reduction in damages by the amount of such payments" and reforms which have limited the portion of recovery to which attorneys are entitled).

[189] *See, e.g.*, Yates v. Pollock, 239 Cal. Rptr. 383, 386 (Cal. Ct. App. 1987) (upholding the constitutionality of California's cap on damages); Atlanta Oculoplastic Surgery, P.C. v. Nestlehutt, 691 S.E.2d 218, 222–23 (Ga. 2010) (holding Georgia's cap unconstitutional).

Medical malpractice insurance is now predominantly written on a claims-made basis. Physicians bear much more of the risk of a long-term change in the liability climate than they did under occurrence policies, and must buy malpractice liability insurance even after they retire, because their prior claims-made policies will not cover claims made after the expiration of the policy. Notably, physicians refer to this as "buying the tail," and typically do so by obtaining a single claims-made policy for a sizable sum.[190] One of the costs of retirement, or of ceasing to practice medicine, is the cost of buying the tail – something that would have been completely unnecessary in the old world of occurrence-based coverage.

2. Generally-applicable tort reform

When the crisis of the mid-1980s struck, the medical malpractice reforms of the prior decade were a ready template for more broadly-applicable reforms. Though from the present standpoint the enactment of tort reform legislation seems unremarkable, at that point it was historically unprecedented. Legislatures in nearly every state enacted the first tort-reform statutes of general application they had ever adopted.[191] Tort law became, for the first time, a mix of common law and legislation.

The most common generally-applicable reforms, as they had been a decade earlier in connection with medical malpractice alone, were to place ceilings on pain and suffering damages and to modify the collateral source rule.[192] Another significant measure was limitation of joint and several liability, often to preclude full liability on the part of one co-defendant.[193] This was designed at least in part to protect municipalities, which argued that they were sometimes joined as defendants in serious-injury auto accident cases in which a driver-defendant was largely responsible for an accident but

---

[190] *See, e.g.*, Daniel M. Bernick, *How Physician Practices Should Handle Malpractice Tail*, PHYSICIANS NEWS DIG., https://physiciansnews.com/2013/04/08/how-physician-practices-should-handle-malpractice-tail/ [https://perma.cc/8HEU-6GXW] (last visited Jan. 27, 2021) (describing the process of "buying the tail" and the potentially "huge" cost).

[191] For a catalogue and analysis of the reforms, see Joseph Sanders & Craig Joyce, *"Off to the Races": The 1980s Tort Crisis and the Law Reform Process*, 27 HOUS. L. REV. 207, 210 (1990) ("Texas thereby joined the great majority of states, which enacted tort reform legislation between 1985 and 1988."). For analyses of the impact of the various reforms, see Joanna M. Shepherd, *Tort Reforms' Winners and Losers: The Competing Effects of Care and Activity Levels*, 55 UCLA L. REV. 905, 917 (2008) (analyzing the effects of tort reform and specifically those relating to medical malpractice tort reforms).

[192] Sanders & Joyce, *supra* note 191, at 222–24.

[193] *Id.*

had purchased only the mandatory minimum amount of liability insurance, which was inadequate to cover the full amount of the plaintiff's losses.[194]

Three points are noteworthy about these legislated tort reforms. First, for the most part, the reforms did not address whether or when a defendant is liable in tort. They left the standard of care and rules governing causation untouched. Rather, directly or indirectly, the reforms all addressed the amount of damages an otherwise-liable defendant was obligated to pay. [195] The main reason for the focus on damages, I think, is that political realities made damages reform more feasible than liability reform. In modifying the law of damages, there would be no headlines that an injured person's right to bring a lawsuit was being eliminated. Lawyers may understand that $250,000 or $500,000 is not a lot of money to award a seriously injured individual for pain and suffering, but headlines do not capture that understanding.

In addition, restricting damages may have an indirect effect on the incidence of liability itself, by depressing the number of long-shot lawsuits that are brought. It may make sense for a plaintiff's attorney to take a case that has no ceiling on what may be recovered, even if the odds of getting any recovery are small. Some long-shot cases, however, are not worth bringing at all if they are going to be subject to a statutory ceiling on the amount of pain and suffering damages that can be recovered in the case. Finally, for liability insurers, the incidence of liability is far more predictable than the severity of loss. And what matters for insurers is predictability. Various sorts of limits on damages rendered liability insurers' severity of exposure more predictable, and that is what mattered for them.

A second noteworthy point is that, for the most part, the particular reforms that were enacted were not responsive to and did not address the underlying factors that made reform attractive. Long-tail liability had rendered the insurance markets unstable, but none of the major reforms addressed long-tail liability. A few minor reforms, such as the enactment of statutes of repose applicable to medical malpractice and products liability, did just that.[196] These imposed absolute periods of limitation on the length of

---

[194] *See* 2 REPORTERS' STUDY, ENTERPRISE RESPONSIBILITY FOR PERSONAL INJURY 136–38 (AM. L. INST. 1991) ("Then the deep-pocket defendants ultimately pay a large percentage of any substantial judgement entered in favor of the plaintiff, regardless of relative fault among the injurers.").

[195] *See* MARC A. FRANKLIN, ROBERT L. RABIN, MICHAEL D. GREEN & MARK A. GEISTFELD, TORT LAW AND ALTERNATIVES: CASES AND MATERIALS 824 (10th ed. 2016) (discussing changes in damages and insurance rates); ABRAHAM, *supra* note 48, at 284 (describing reforms which addressed–and sometimes limited–damages that could be recovered).

[196] *See, e.g.*, General Aviation Revitalization Act of 1994, Pub. L. No. 103-298, § 3(3), 108 Stat. 1552 (codified at 49 U.S.C. § 40101) (adopting an eighteen-year limitation period for general aviation aircraft); MASS. GEN. LAWS ANN. ch. 260, § 4 (West 2021) (prescribing both a three-year statute of limitations and a seven-year statute of repose for medical

time after medical treatment was delivered or a product was sold available to bring suit. But reforms such as ceilings on pain and suffering damages, although they applied in both short-tail and long-tail cases, did not address the problems that are distinctive to long-tail cases.

Part of the explanation for this disconnect is that the reforms were enacted in the heat of the moment, before there had been time to analyze what was really going on. The other part of the explanation, however, is simply that the insurance industry and defense-oriented interest groups used the sense of urgency that the liability and insurance crisis created in order to obtain tort reforms that favored their interests, regardless of the reforms' connection to the causes of the crisis. Third, and in historical terms most importantly, the entry of the legislatures into the tort reform arena in the late 1980s not only changed the character of the common law of torts. From then on, that genie was out of the bottle. Additional legislated tort reform became an ever-present possibility, occupying the energies of interest groups, the time of legislatures, figuring in judicial elections, and even in the 2004 election for President of the United States.[197] The mixture of common law and legislation that the law of torts became beginning in the late 1980s could at any point in the future easily become even more legislated and even less judge-made. That is also the legacy of long-tail liability.

E. The Long Reach of the Long Tail: Ripples Effects Overseas

Like any significant sector of our economy, the U.S. insurance markets are globally connected in many ways. As long-tail litigation proceeded over time, the interaction of tort law and insurance naturally had effects that reached beyond the border. Two of the most important such effects involved the changes at Lloyd's of London generated by U.S. long-tail liabilities, and the establishment of two Bermuda-based liability insurers to serve as an alternative to the standard U.S. CGL insurance market.

1. The troubles at Lloyd's

As we saw earlier, Lloyd's began marketing occurrence-based CGL insurance in the U.S. in the 1950s. Even before then, Lloyd's had sold accident-based CGL policies to U.S. policyholders. In my experience, a substantial percentage of Lloyd's policies provided excess coverage, beginning with the first layer above a primary policy or a significant self-

malpractice torts, regardless of the age at which the harm was incurred); 42 U.S.C. § 300aa–16(a)(2) (adopting a thirty-six-month statute of limitations beginning at onset of the symptom caused by the faulty vaccine, regardless of the age of the patient).

[197] THE LIABILITY CENTURY, supra note 1, at 104.

insured retention—a layer of self-insurance that functioned much like a deductible. By the 1980s, in many significant claims for coverage of long-tail bodily injury or environmental cleanup coverage, Lloyd's was likely to have provided at least as much coverage to the policyholder as any other insurer.

Lloyd's operated under a unique, and it turned out, antiquated, financial structure. Lloyd's itself was, and is, simply an insurance exchange. "Syndicates" within Lloyd's actually issued policies, and the syndicates were not corporations with limited liability. Rather, the bearers of risk under policies issued by Lloyd's "syndicates" were individuals, or "Names," whose entire wealth (by virtue of their arrangement with a syndicate) stood behind any syndicate in which they invested and were therefore potentially at risk.[198] Three years after a policy was issued, any remaining liability covered by a policy was reinsured within Lloyd's itself by other syndicates that also had the entire wealth of individual Names standing behind them. This was referred to as "reinsurance-to-close," that is, reinsurance effective until the policies were ultimately closed.[199]

In theory, individual Names could be called upon to supply additional capital to syndicates in which they had invested, up to the point at which the Names themselves had no remaining assets.[200] But until the 1980s, this rarely occurred because the syndicates were profitable. With the coming of long-tail insurance coverage litigation, however, Lloyd's syndicates saw massive amounts of capital being paid, and at risk of being paid, to U.S. policyholders.[201] Over the twenty-five year period ending in 1987, Lloyd's profits were approximately £4 billion. Over the next five years, losses were £8 billion.[202] The personal assets of thousands of Lloyd's Names—many of them prominent people in the United Kingdom—were in jeopardy.

Lloyd's then saved itself from ruin. It established and funded a separate entity, named "Equitas," to be the repository of its syndicates' liability under CGL policies issued prior to 1992.[203] Establishing such an entity, of course, could not unilaterally limit or foreclose a policyholder's rights against a syndicate that had sold them coverage. But in 2006, Warren Buffett's

---

[198] Theodore A. Boundas et al., *Lloyd's and the London Market: Overview and Recent Developments*, *in* UNDERSTANDING LLOYD'S AND THE LONDON INSURANCE MARKET: HOW RECENT DEVELOPMENTS AFFECT YOUR CLIENTS 9 (Practicing Law Institute, 1996).

[199] *Id.* at 10; Richard E. Stewart & Steven E. Sigalow, *How Lloyd's Saved Itself*, 37 INS. F. 9, 12–13 (2010).

[200] Boundas et al., *supra* note 198 at 10.

[201] The story, up to 1993, is told in ADAM RAPHAEL, ULTIMATE RISK: THE INSIDE STORY OF THE LLOYD'S CATASTROPHE 99–203 (1994).

[202] Robert M. Hall, *Lloyd's of London: Reconstruction and Renewal, Credit for Reinsurance and Equitas*, *in* UNDERSTANDING LLOYD'S AND THE LONDON INSURANCE MARKET: HOW RECENT DEVELOPMENTS AFFECT YOUR CLIENTS 202 (Practicing Law Institute, 1996).

[203] *See* Boundas et al., *supra* note 198, at 18–19; Stewart & Sigalow, *supra* note 199, at 12–13.

company, Berkshire Hathaway, Inc., reinsured all of Equitas's liabilities, and the Names were effectively insulated from any personal liability.[204]

At the same time, Lloyd's modified its centuries-old financial structure. Going forward, syndicates were to be corporate entities with limited liability, and there would be no Names. Individuals could buy stock in syndicates, but their liability would be limited in same manner as any shareholder's liability.

One of the ways that Equitas remained solvent was by engaging in a prolonged and hard-nosed program of commuting its liabilities. After this program took effect, policyholders negotiating with Lloyd's over their long-tail coverage claims encountered two obstacles. First, in order to preserve its funds over the long period over which it would be exposed to liability, Equitas "reserved" a certain amount of money for any given claim or set of claims by a particular policyholder, and was usually able to credibly assert that this (undisclosed) reserve was the maximum sum that Equitas could pay to settle a claim. Policyholders understood that, because Equitas had no capital coming in from the sale of new policies, and because of the internal bureaucratic difficulty of reversing a reserving decision, for practical purposes the undisclosed reserve, whatever it was, served as a ceiling on the amount that Equitas could pay to settle a claim. Negotiations took place in the shadow of this constraint, in my experience, to some extent to the disadvantage of policyholders.

Second, Equitas's strongly held negotiating position was that it would not enter into settlements that preserved any coverage in place. Equitas was determined to close out its liabilities, and not to pay a policyholder a large sum now but still to be on the hook in the future for other, as-yet unmade long-tail coverage claims under existing Lloyd's policies. Consequently, settlements had to involve full releases of all of the policyholder's rights under its Lloyd's policies. These were referred to as full "buybacks" or "global settlements" of coverage.[205]

Many, perhaps most, policyholders whose long-tail coverage claims had not yet been resolved by 1996 settled with Equitas on this basis.[206] But the full buybacks that Equitas effectively required, and which were often then demanded not only by Equitas but also by other settling insurers, created an important new issue down the line. When a policyholder had settled with an insurer using a full buyback, the significance of that settlement for the policyholders' other, non-settling insurers created a complex question: If the policyholder later tried a coverage case against a non-settling insurer over a

---

[204] Stewart & Sigalow, *supra* note 199, at 15.
[205] *Id.*
[206] *See, e.g.*, Olin Corp. v. OneBeacon Am. Ins. Co., 864 F.3d 130, 150–151 (2d Cir. 2017) (assessing the impact of plaintiff's settlements with prior insurers).

discrete liability or set of liabilities, as was often the case, to what extent was that insurer entitled to an offset on account of the fact that the full buyback settlement with Lloyd's had paid the policyholder something, but not everything, for that discrete liability?[207] The policyholder's current judgment against the insurer in question was for apples (a discrete liability or set of liabilities), whereas the settlement with Lloyd's was for fruit salad that included, but was not limited to, apples. More than thirty years after the advent of long-tail insurance coverage litigation, that and related issues are still being addressed, often through the making of new law.[208]

2. Bermuda insurance

In the midst of the crisis of 1985 and 1986, major policyholders had concerns about obtaining sufficient excess liability insurance, because of the reduced capacity of the U.S. and Lloyd's markets. Large entities can effectively self-insure against a steady stream of comparatively small liabilities. A predictable number of judgments or settlements in excess of a million dollars, with a larger number in smaller amounts, can easily be handled without the need for liability insurance, and certainly without excess liability insurance. What the companies needed from liability insurance was protection against major or catastrophic liability, whether from a single incident or from an unexpectedly severe series of individual incidents.[209]

After some development, the largest U.S. insurance broker, Marsh & McLennan, with the assistance of the J.P. Morgan Guaranty Bank, devised a plan to establish in Bermuda a high-level excess insurance company to provide Marsh's corporate clients a stable source of such coverage. The new insurance company established in late 1985 to provide such coverage was ACE Insurance Company Ltd.[210] Six months later a second company that would provide lower-level excess coverage, XL Insurance Ltd., was also established in Bermuda.[211] The founders of this approach wanted to ensure that the coverage offered by ACE and XL both would be stable, and not subject to what they knew insurers considered to be the extreme pro-policyholder stance that many U.S. courts were taking in long-tail coverage cases.

---

[207] *See generally* Kenneth S. Abraham, *Allocation of Settlements in Multi-Insurer Coverage Disputes*, 48 FED'N INS. & CORP. COUNS. Q. 427 (1998) (discussing problems arising when a policyholder brings claims against many liability insurers but does not settle with all of them).
[208] *See, e.g.*, Olin Corp., 864 F.3d at 154 (remanding case to ascertain the effect of Olin's previous settlement with London Market Insurers, but providing "guiding principles" on the issue, including on Condition C and the prior insurance provision).
[209] *See* THE LIABILITY CENTURY, *supra* note 1, at 233–35 (analyzing rationales for the ways that large corporations purchase liability insurance).
[210] CATHERINE R. DUFFY, HELD CAPTIVE: A HISTORY OF INTERNATIONAL INSURANCE IN BERMUDA 183–87 (2004).
[211] *Id.* at 208.

The whole point was to develop a policy that was not exposed to these vulnerabilities, but that would nonetheless be attractive to major U.S. policyholders seeking excess liability insurance. To achieve this purpose, the Bermuda insurers included four new features of their policies that distinguished them from the conventional U.S. CGL insurance policies that were vulnerable to long-tail liability in the ways that had been revealed in the preceding years.

a. An occurrence-reported trigger and a batch clause

The trigger of coverage under Bermuda policies is an occurrence that is reported during the policy period and took place after any earlier retroactive date specified in the policy.[212] These policies contain a standard exclusion for expected or intended harm, but contain an exception to the exclusion for harm that is "different in kind or greater in order of magnitude" than was expected and intended. And the policies permit the policyholder to give notice of an occurrence that may give rise in the future to a batch of claims or suits.[213]

This hybrid of occurrence and claims-made policies was designed to suit the needs of the corporate policyholders for whom Bermuda policies originally were offered. Auto makers and drug companies often encounter a series of separate claims arising out of the same alleged designed defect in an auto model, or the same failure to warn of a side effect associated with a particular drug.[214] If injuries associated with these situations start to be reported to such companies, then they often expect such injuries to continue to occur in the future, and thus during subsequent policy periods. Yet under conventional CGL occurrence policies, these future injuries could be considered expected and therefore excluded. And under conventional claims-made policies, the insurer could simply include a targeted exclusion in future policies and therefore avoid covering them.

The combined effect of the Bermuda provisions, in contrast, is that once a policyholder experiences, or expects to experience, a spike in claims or suits arising out of the same general cause, it can declare a batch-occurrence, and secure coverage of liability for claims or suits falling into

---

212 RICHARD JACOBS, LORELIE S. MASTERS & PAUL STANLEY, LIABILITY INSURANCE IN INTERNATIONAL ARBITRATION: THE BERMUDA FORM 19–21 (2d ed. 2011); DAVID SCOREY, RICHARD GEDDES & CHRIS HARRIS, THE BERMUDA FORM: INTERPRETATION AND DISPUTE RESOLUTION OF EXCESS LIABILITY INSURANCE 166–92 (2d ed. 2018).

213 JACOBS ET AL., *supra* note 212, at 122.

214 *See, e.g.*, Payton v. Abbott Labs, 83 F.R.D. 382, 386, 392 (D. Mass. 1979) (certifying a plaintiff class in a putative action involving, among other things, the failure to warn about dangers posed by the drug DES); Orna Rabinovich-Einy, *Balancing the Scales: The Ford-Firestone Case, the Internet, and the Future Dispute Resolution Landscape*, 6 YALE J.L. & TECH. 1, 4–7 (2003–2004) (describing suits against Ford Motor Co. for rollover accidents involving SUVs).

that category even if they involve bodily injury or property damage that has not yet occurred, and even if claims or suits alleging such liability have not yet been made or brought.[215] For insurers, the occurrence-reported feature of Bermuda policies has one of the advantages of claims-made coverage: it prevents the stacking, or the cumulation of coverage under multiple policies. Only one year of coverage is ever available for liability arising out of a given batch occurrence. The advantage for policyholders, on the other hand, is that they can choose which single policy year on which to rely for coverage and be assured that future claims falling into a batch declared that year will be covered.

b. An arbitration requirement

The policies require that disputes be arbitrated in London under the rules of the English Arbitration Act of 1996.[216] Bermuda policy arbitrations are confidential. As a consequence, decisions by one tribunal have no precedential effect in any other matter.[217] And the arbitrations are designed to be streamlined proceedings. Direct testimony usually is presented in written form. Hearings involve cross-examination plus extended closing statements by counsel—sometimes (in my experience) lasting a full day or more.[218] Finally, for the Bermuda insurers, arbitration has the great advantage of not being subject to decision by U.S. judges and juries, and the perceived vicissitudes of the U.S. litigation environment.

c. New York law applies

Bermuda policies provide that disputes under the policy are governed by New York law.[219] The great advantage of this choice of law was that arbitrators could look to the law of a single state for guidance and would not have to contend with conflicting choice of law arguments made by the parties. At the time the first Bermuda policies were drafted, New York, while not ultraconservative or decidedly insurer-oriented, had not been the source of any of the insurance policy interpretations that insurers regarded as being highly result-oriented and policyholder-favoring. New York had been more nearly neutral on that scale, and pro-insurer in regard to the meaning of the

---

[215] Some versions of the Bermuda policy refer to this as an "integrated" occurrence. DAVID SCOREY ET AL., *supra* note 213, at 110–18.
[216] *Id*. at 24.
[217] *See* RICHARD JACOBS ET AL., *supra* note 213, at 290 (describing confidentiality requirements in Bermuda Form arbitration). The linkage of arbitration with confidentiality means that there is no precedent-setting through arbitral decisions. Kenneth S. Abraham & J.W. Montgomery, III, *The Lawlessness of Arbitration*, 9 CONN. INS. L.J. 355, 360 (2003).
[218] RICHARD JACOBS ET AL., *supra* note 213, at 293.
[219] *Id*. at 26.

qualified pollution exclusion.[220] So the Bermuda insurers predicted (accurately, as it turned out) that as law governing other issues developed, the New York courts would maintain that pattern.

d. No *contra proferentem* or extrinsic evidence

In another reaction to the pro-coverage judicial decisions of the early 1980s, Bermuda policies provide that they are to be construed "in an evenhanded fashion," and even where policy language is ambiguous, without any "presumption or arbitrary interpretation in favor of either the Insured or the Insurer," "without regard to authorship of the language," and "without reference to parol or other reference extrinsic evidence." Rather, construction is to occur "in the manner most consistent with the relevant provisions" of the policy.[221] This left Bermuda policyholders without a major advantage that they had under U.S. CGL policies—the ability to make use of the doctrine that ambiguous policy language is construed against the drafter, and therefore in favor of coverage, by virtue of the *contra proferentem* ("against the drafter") principle.

This set-up had obvious advantages for the Bermuda insurers, but it also rendered arbitrations more challenging in one way. One of the great advantages of *contra proferentem* is that it is a tie-breaker when extrinsic evidence does not dictate the meaning of an ambiguous policy provision and there is therefore no single correct interpretation of the language.[222] With this tie-breaker removed, arbitrators sometimes are left to struggle without much internal guidance from the complex policy language regarding how to resolve the particular dispute at hand.[223]

Bermuda policies have come to be important tools for major corporations seeking insurance coverage of liabilities of major magnitude. Other offshore insurers now sometimes sell coverage on the Bermuda form, and the two original Bermuda insurers have gone on to have great success. ACE branched into the U.S. market for conventional insurance, first by purchasing CIGNA, and then recently by acquiring Chubb, a major player in

---

[220] *Id.* at 27.

[221] *Id.* at 44.

[222] *See* RESTATEMENT OF THE LAW: LIAB. INS. § 4 (AM. L. INST. 2019) (describing how courts interpret ambiguous policy terms).

[223] Partly in reaction to this challenge, I think, a practice has grown up in which, although evidence of the intentions of the parties to the policy is understood to be foreclosed by the above-quoted construction clause, evidence of what English lawyers call the "factual matrix" is sometimes admitted. DAVID SCOREY ET AL., *supra* note 213, at 76. The factual matrix may include evidence of the business purpose of policy provisions, prior now-modified provisions from earlier versions of the Bermuda policy, and sometimes even circulars issued generally to the Bermuda policy market describing the purpose of redrafted policy provisions. The result is something of a hybrid approach to the interpretation of ambiguous policy provisions.

both commercial and personal lines insurance in the U.S.[224] XL is about to be acquired by AXA, a European insurer, and when that is accomplished, AXA will become the one of the world's largest insurance companies.[225]

All this came about because of the development of a liability insurance policy whose terms would appear utterly bizarre to anyone not familiar with the reasons the policy came into being: the policies are issued in Bermuda to U.S. policyholders, but require the specific application of New York law; disputes about New York law nevertheless must be resolved in arbitration, not in New York or even in the United States, but in London; and the policies set aside the first rule of insurance law: that ambiguous insurance policy language is to be interpreted in favor of coverage. The Bermuda policies are a graphic example of the tortuous path that long-tail liability has caused liability insurance to travel.

F. Increased Corporate Self-Insurance

There has been a decided increase in the percentage of civil liability costs that are self-insured by commercial entities since the 1970s.[226] Although data on the practice is scant, one study found that the percentage of commercial lines tort costs that are self-insured went from 6% in 1973, to 25.5% in 1985, to 44.4% in 2010.[227] Most of this self-insurance is likely to be at low levels of liability and to function as a self-insured retention, or SIR, which is the economic equivalent of a deductible.

This trend toward self-insurance signifies that corporate entities have chosen to bear an increasing percentage of small liability risk themselves rather than insuring against this risk. For sizable corporations, CGL insurance has become increasingly important as a tool used mainly to protect against large, potentially catastrophic liabilities. Long-tail liability has to be considered at least partly responsible for this increase in self-insuring because long-tail liability so influenced modification of liability insurance policies to

---

[224] ACE Ltd., *ACE Completes Acquisition of Chubb; Adopts Chubb Name and Launches New Chubb Brand*, CISION PR NEWSWIRE (January 14, 2016, 6:03 ET), https://www.prnewswire.com/news-releases/ace-completes-acquisition-of-chubb-adopts-chubb-name-and-launches-new-chubb-brand-300204936.html [https://perma.cc/M64U-8S9P].

[225] Matthew Dalton & Ben Dummett, *AXA to Buy Insurer XL Group for $15.3 Billion*, WALL ST. J. (March 5, 2018, 4:19 PM), https://www.wsj.com/articles/axa-to-buy-xl-group-for-15-3-billion-1520236823 [https://perma.cc/4H3C-79AX].

[226] Priest, *supra* note 142, at 1550.

[227] Robert P. Hartwig, President & Economist, CPCU, Presentation Entitled Adapting to an Ever-Changing and Risky World of Tort Liability at the American Bar Association Magna Carta 800 Conference 13 (June 12, 2015) (presentation can be downloaded from https://www.iii.org/presentation/adapting-to-an-ever-changing-and-risky-world-of-tort-liability-061015 [https://perma.cc/FAC8-QR9R]).

the point at which they have become a less and less attractive means of insuring against routine liability.

Self-insuring against routine liabilities had always made more economic sense than corporate policyholders seemed to have recognized. This is because the larger the entity, the more predictable its stream of comparatively small liabilities, and the more sense it makes for the entity to serve, in effect, as its own insurer of these highly predictable liabilities. Nonetheless, less such self-insuring than might have been expected seems to have occurred. Once litigation over long-tail coverage claims became commonplace, however, policyholders may have realized that they might well face more litigation over coverage of even routine liabilities than they had in the past. The perceived balance between the costs and benefits of self-insuring may then have shifted, given that recovering coverage of low-level liabilities could no longer be seen as essentially costless.

In fact, it is not at all clear why the largest corporations purchase any liability insurance at all, given that (in my experience) they purchase and have always purchased less than $1 billion per year of CGL insurance coverage. Just to take an example, General Electric Company had approximately $120 billion in revenue in 2017.[228] An extraordinary liability of as much as $500 million would constitute less than one-half of one percent of that revenue. Why insure any of this potential liability? It may be that the cost of purchasing insurance against such a liability, and the cost of litigating with dozens of insurers over coverage of it, is worth the smoothing of GE's balance sheet that having insurance against such a liability provides.[229] Otherwise GE could have to post on its balance sheet a $500 million liability that would affect its earnings in a particular quarter of its fiscal year. The securities markets might overreact; the availability of insurance cushions against that reaction. In addition, as Tom Baker and Sean Griffith have suggested, corporate managers probably have concentrated investments in the company for which they work, and therefore stand to benefit more from the risk-spreading accomplished by insurance than the company's shareholders, whose investment are likely to be more diversified.[230] Perhaps that also explains the purchase of liability insurance by major U.S. corporations, since the managers influence what insurance is purchased.

---

[228] *General Electric Co. Annual Income Statement*, MARKETWATCH, https://www.marketwatch.com/ investing/stock/ge/financials [https://perma.cc/68YT-6HAK].

[229] *See, e.g.*, THE LIABILITY CENTURY, *supra* note 1, at 233–34 (describing large corporations' expertise in managing risk and shareholders' perceptions of it).

[230] TOM BAKER & SEAN J. GRIFFITH, ENSURING CORPORATE MISCONDUCT: HOW LIABILITY INSURANCE UNDERMINES SHAREHOLDER LITIGATION 57–76 (2010); *see also* Victor P. Goldberg, T*he Devil Made Me Do It: The Corporate Purchase of Insurance*, 5 REV. L. & ECON., 541, 543 (2009) (arguing that insurers supply valuable risk management services).

Confirmation of the notion that the purchase of liability insurance by these entities is not necessarily economically rational came in 2010, after the Deepwater Horizon blowout and oil spill in the Gulf of Mexico. BP, which leased the rig and bore the lion's share of financial responsibility for the damage caused by the spill, apparently had made a considered decision not to carry any insurance against liability arising out of its drilling activities.[231] Yet, after paying upwards of $20 billion for that damage, BP continued as a going, and arguably financially healthy, concern.[232] It seems highly likely that part of BPs decision can be ascribed to the economic considerations I have just described. BP is just an extreme example of the increased amount of self-insuring in which large corporate entities began to engage after long-tail liability came to have such a far-reaching influence on the nature and availability of general liability insurance.

CONCLUSION

During the last fifty years, long-tail liability has produced far-reaching and, in many respects, fundamental changes in tort and insurance law. The consequences of those legal changes were felt in many ways, as law practice, the insurance markets, and insurance institutions adjusted to deal with the changes. To a large extent, long-tail liabilities were the legacy of industrial activity that occurred during the first half of the twentieth century, and of the major chemical and pharmaceutical advances of the middle of that century. Both developments caused latent bodily injury, property damage, and environmental pollution that eventually led to new forms of liability, new insurance law, and new forms of liability insurance. It took half a century for this to occur because it took place through common law litigation in which each state has its own law.

But has long-tail liability seen its heyday? It is the very nature of long-tail liability not to herald its arrival. Rather, when long-latent harm appears, it tells us that we have until now failed to recognize that harms that were caused in the distant past and are only now manifesting themselves. The harms may be physical, but they may also be emotional or economic.

---

[231] *See* STEPHEN LOWE, JOSEPH LEBENS & MICHAEL PUMMELL, TOWERS WATSON, DEEPWATER HORIZON DISASTER: INSURANCE INDUSTRY IMPLICATIONS 2 (2010), http://docplayer.net/12320459-Deepwater-horizon-disaster.html [https://perma.cc/44D2-RZ7R] ("[A]lthough named as a defendant in more than 300 lawsuits stemming from the incident, BP itself has no commercial liability insurance coverage for the event.").

[232] *See* Steve Olenski, *Nearly Four Years After Deepwater Horizon, Has BP's Brand Image Recovered?*, FORBES (Jan. 24, 2014, 12:54 PM), https://www.forbes.com/sites/steveolenski/2014/01/24/nearly-four-years-after-deepwater-horizon-has-bps-brand-image-recovered/#114429dc61f6 [https://perma.cc/H83U-QQ9L] ("[T]he company remains an economic behemoth and a major player in a commodity the world hopelessly depends on.").

Whether harms are now occurring out of sight that will only be recognized decades from now is impossible to say. And, if long-tail harms do eventually materialize, it is impossible to say for certain whether the new legal doctrines that were created to deal with twentieth-century long-tail harms will be adequate for dealing with the kinds of harms that occur as a result of twenty-first century activities.

For example, gene therapy and the use of biologics are rapidly becoming a substitute for the use of chemotherapy to treat various forms of cancer. Although pre-clinical testing is designed to detect the adverse side effects of such new therapies, it is in the nature of long-tail harm that short-term testing often cannot detect the risk that it will occur. We cannot very well spend twenty or thirty years waiting around to see whether a new therapy or drug that promises to save life may lead in the long run to the occurrence of harm in a small fraction of those who would benefit from the new therapy or drug. Short-term animal studies sometimes are directed at predicting long-term human effects, but they cannot be completely successful in doing so. As the use of new gene and other molecular-level therapies accelerates, whether long-tail harm will accompany them remains an open question. I am not at all sure that current tort law is adequate to the task of dealing with potential liability for such harm, when and if it occurs. To give just one example, doctrines that could be applied to potential liability in situations in which a therapy saves a life but causes long-term, unexpected harm are underdeveloped. What the long-tail liability revolution has definitely taught us, however, is that creating new common law to deal with a fundamentally new problem is unlikely to take place quickly.

Similarly, it is unclear whether there will be an epidemic of long-tail cyber-harm – economic, dignitary, emotional, or physical -- that materializes in the future. There are weekly news reports that major companies have recently discovered that their digital records were hacked at some point in the past, with potential credit, privacy, and identity-theft harms resulting. We do not know how much harm hacking that has already occurred, or will occur in the future, has already caused or will cause in the future. Hacking not only harms those whose privacy is compromised but may also cause other effects such as enabling interference with elections, utility grids, self-driving cars, and any number of further functions that become automated in ways that are both beneficial and risky. And cyber-insurance, a growing phenomenon in the insurance market, will be called upon for coverage.

Yet current doctrines governing long-term cyber-related harm, and insurance against liability for such harm, also are underdeveloped. The courts will have to work out the contours of liability for the new forms of liability and of insurance coverage for that liability. The decentralized system that produces the common law of civil liability and insurance is likely to be at least one source of the law governing these new issues. Certainly, the current national political climate gives us no reason to think that the legislation, or regulation so characteristic of the administrative state will be able to take over handling these new liability and compensation problems. Yet, as we have seen, although the common law system may be capable of coping with these issues, it is likely to take a long time to do so.

In short, the rise of long-tail liability was the most significant influence on the changes that have taken place in tort and insurance law in the last fifty years. This form of liability is of singular importance for that reason alone. But it may be important as time goes on as well. Only the future will tell us whether this form of liability will exert the same kind of influence on legal development when new forms of long-tail harm arise and pose challenges for the doctrinal current structure of tort and insurance law.