

1 **Mass Tort Litigation: Asbestos**

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5 **Definition**

6 Mass Tort: A mass tort involves numerous plaintiffs filing civil lawsuits against one or a few
7 corporate defendants in state or federal court. The plaintiffs allege that they were harmed by
8 exposure to products produced by the defendants. Lawsuits may or may not be grouped in a class
9 action. Law firms representing plaintiffs in mass torts often use advertising to locate and recruit
10 plaintiffs.

11 Asbestos litigation is the largest mass tort in US history. As of 2002, 730,000 people had filed
12 lawsuits against more than 8,400 defendants, and the cost of resolving claims was estimated at \$70
13 billion. The number of claims increased fourfold in the 1990s, and, in 2000 alone, 12 large
14 companies reported that 520,000 new claims were filed against them. Because individual plaintiffs
15 typically sue many defendants, estimates of the total number of asbestos claims range as high as
16 10 million. As of 2003, 73 corporations had gone bankrupt due to asbestos liabilities (Carroll
17 et al. 2005). Asbestos litigation has been extremely profitable for lawyers, since 57 % of spending
18 goes to lawyers' fees (Carroll et al. 2003). Two studies in 2001 predicted that asbestos litigation in
19 the USA would eventually cost \$200 billion (Angelina and Biggs 2001; Bhagavatula et al. 2001).

20 Asbestos was once considered to be a "miracle mineral" for its effectiveness as insulation and in
21 preventing the spread of fires. It was used in ships, buildings, and consumer products, including
22 wallboard, roofing, flooring, pipes, automotive brakes, hair dryers, children's toys, clothing, paper,
23 and gardening products. Asbestos was used to coat the steel girders of skyscrapers such as the World
24 Trade Center in New York, to insulate furnaces, and to make theater curtains fire resistant so that
25 backstage fires would not spread to the seating area. Because asbestos had so many uses, estimates of
Q2 26 the number of people who were exposed to it range from 27 to 100 million (Biggs et al. 2001).

27 But asbestos crumbles into microscopic fibers that become airborne and embed themselves in the
28 lungs, causing a variety of diseases. Mesothelioma is cancer of the pleural lining around the chest
29 and abdomen and is quickly fatal. Asbestosis is scarring of the lungs that reduces breathing capacity;
30 it can range from non-disabling to fatal. These two are "signature diseases" that are uniquely
31 associated with asbestos exposure. Other asbestos diseases include lung cancer, gastrointestinal
32 cancer, and pleural plaque, which is non-disabling thickening of the pleural lining. These latter
33 conditions can be caused either by asbestos exposure or by other factors, such as smoking. Most
34 asbestos diseases have a long latency period, so that they do not develop until 20–40 years after
35 exposure. Individuals' likelihood of developing asbestos disease is low, but increases as the length
36 and intensity of exposure rise (Carroll et al. 2003).

37 Asbestos exposure was recognized to be harmful as early as the 1920s and safe substitutes for
38 many of its uses were developed in the 1930s. But it nonetheless became widely used – US
39 consumption of asbestos grew from 100,000 metric tons in 1932 to 750,000 in 1994 (Castleman

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40 1996, p. 788). Since then, asbestos use has fallen nearly to zero, but new cases of asbestos disease
41 continue to occur because of the long latency period.

42 One question concerning asbestos is why government regulation did not prevent it from becoming
43 so widely used. The British government began in the early 1930s to regulate workplace safety in the
44 asbestos industry and provide workers' compensation to those disabled by asbestos exposure. In the
45 USA, many states set up workers' compensation programs around the same time. However workers'
46 compensation programs were oriented toward providing compensation for immediate workplace
47 injuries, while asbestos exposure caused diseases that developed many years later and were not
48 initially connected with asbestos exposure. Because statutes of limitation were short, most workers
49 no longer qualified for compensation at the time they developed asbestos disease.

50 Workers' compensation systems also protected asbestos producers from liability for harm to their
51 workers, since these systems were workers' exclusive remedy against their employers for
52 workplace-related harm. Thus injured asbestos workers did not qualify for workers' compensation
53 and also were barred from suing their employers for damage. And because employers were not liable
54 for asbestos-related harm to their workers, they had little incentive to improve workplace safety.

55 Workplace and product safety regulation also failed to protect workers who were exposed to
56 asbestos. Occupational safety programs started in many US states in the 1950s and 1960s, but rules
57 were often voluntary and poorly enforced. Some regulations actually increased workers' exposure to
58 asbestos, such as building code regulations that required ventilation systems to be lined with
59 asbestos insulation. As the insulation aged, it crumbled into microscopic fibers and fans blew the
60 fibers through the workplace, where workers breathed them. Federal regulatory agencies such as the
61 Occupational Health and Safety Administration (OSHA) and the Consumer Product Safety Com-
62 mission (CPSC) came along in the 1970s and began to regulate asbestos exposure. But for many
63 years, OSHA's workplace standards for preventing asbestos exposure were not tight enough to
64 prevent workers from developing asbestos disease. Similarly, the CPSC's standards for limiting
65 asbestos in consumer products in the 1970s and 1980s were mainly voluntary. Overall, state and
66 Federal efforts to limit exposure to asbestos in the USA largely failed until the 1990s. This failure of
67 regulation meant that many asbestos workers and product users suffered injuries due to asbestos
68 exposure. This failure of regulation was not unique: other countries were no more successful in
69 preventing asbestos exposure and they were generally slower than the USA to remove asbestos
70 products from the market (White 2004; Wikipedia 2014).

71 In the next sections, I consider various factors that explain why asbestos litigation in the USA
72 grew so large. I also review research on asbestos litigation and discuss various solutions – successful
73 and unsuccessful – that have been proposed to resolve asbestos litigation.

74 **Why Asbestos Litigation Grew**

75 A combination of factors, rather than a single factor, was responsible for the growth of asbestos
76 litigation. Because workers' compensation systems are workers' exclusive legal remedy against
77 their employers for on-the-job injuries, asbestos producers in the USA were not liable when their
78 workers developed asbestos-related diseases. But asbestos producers were not shielded from
79 liability to users of their products, and asbestos litigation therefore developed based on product
80 liability law. The first successful trial of a lawsuit for damage due to asbestos exposure occurred in
81 1973 and involved an insulation worker who sued one of the large manufacturers of asbestos
82 insulation (*Borel v. Fibreboard*, 443 F.2nd 1076 [5th Cir. 1973]). During the ensuing decade,
83 25,000 additional lawsuits were filed against asbestos product manufacturers and the number of

84 lawsuits continued to grow. Because asbestos lawsuits were brought under products liability law
85 rather than workers' compensation, plaintiffs could receive both compensatory and punitive damage
86 awards. Damage awards could be in the millions of dollars, especially when juries awarded punitive
87 damages (Berenson 2003).

88 One factor that favored asbestos plaintiffs was a change in products liability law in the 1960s that
89 made producers strictly liable for harm to users of their products; previously, they were liable only if
90 they were found to be negligent. The strict liability doctrine made producers liable as long as their
91 products were "unreasonably dangerous," or users were not adequately warned of the danger. The
92 change from negligence to strict liability made it easier for plaintiffs to win asbestos lawsuits, both
93 because asbestos products were extremely dangerous and because they rarely contained warnings.

94 Another factor that favored plaintiffs in asbestos litigation is that a number of plaintiffs' law firms
95 specialized in handling asbestos claims. These law firms invested in developing evidence against
96 asbestos producers that could be used in all of their lawsuits. The need for law firms to invest in
97 developing evidence kept the number of entrants small, so that the asbestos litigation "industry"
98 remained concentrated, with the ten top law firms representing 50–75 % of asbestos claims filed. The
99 high concentration meant that profits were high (Carroll et al. 2003).

100 In developing a strong legal case against asbestos manufacturers, plaintiffs' lawyers were aided
101 by the fact that several independent epidemiological studies were published in the 1960s that
102 demonstrated strong links between asbestos exposure and asbestos disease. Asbestos plaintiffs'
103 lawyers also developed evidence that producers conducted research on the health effects of asbestos
104 exposure starting in the 1930s and found that exposure was harmful. But producers kept the results
105 secret and did not warn workers or product users of the danger. This evidence of a cover-up of the
106 dangers of asbestos exposure strengthened plaintiffs' claims in subsequent asbestos trials (Carroll
107 et al. 2003).

108 The evidence suggesting a cover-up of the dangers of asbestos caused juries to frequently award
109 punitive damages as well as compensatory damages in trials involving asbestos claims. One-sixth of
110 all damage awards in asbestos lawsuits include punitive damages – a high proportion compared to
111 other types of litigation. Unlike compensatory damages, punitive damage awards are often not
112 covered by defendants' products liability insurance. The high damage awards and lack of insurance
113 coverage made defendants eager to settle rather than litigate asbestos claims. But when claims
114 frequently settle, they are very profitable for plaintiffs' lawyers to file, since lawyers' costs occur
115 mainly at trial. This meant that plaintiffs' lawyers had an incentive to locate and file as many claims
116 as possible.

117 Asbestos plaintiffs also benefit from the fact that they can sue many defendants. Typical asbestos
118 plaintiffs sue 25 or more defendants, including producers of all of the asbestos products that they
119 might have been exposed to while working or engaging in other activities. In a number of states, joint
120 and several liability applies, so that each defendant found liable for damages is liable for the full
121 amount of the damage award. Joint and several liability makes damage awards more valuable, since
122 plaintiffs can collect up to the full amount of the award from any defendant(s) or their insurers. Thus
123 even if some defendants pay little or nothing, damage awards can be collected from other
124 defendants.

125 Another advantage that plaintiffs have in asbestos litigation is that their lawyers choose the most
126 favorable court in which to file lawsuits – a phenomenon known as "forum-shopping." Plaintiffs'
127 lawyers handling asbestos claims have a choice between filing in Federal versus state courts, and, if
128 the latter, they can choose a state that has pro-plaintiff laws and legal procedures. Particular states are
129 often favored because they do not require judges to approve lawyers' fees when claims are settled

130 (this means legal fees can be higher), because they use joint and several liability and/or because they
131 do not limit the size of punitive damage awards.

132 Within a particular state, plaintiffs' lawyers also choose a favorable location in which to file
133 claims. Many asbestos claims are filed in out-of-the-way county courts where plaintiffs' lawyers
134 have a relationship with local judges. These judges can help plaintiffs' lawyers by reducing
135 defendants' ability to conduct pretrial discovery, scheduling trials at short notice so that defendants'
136 lawyers have difficulty getting to the court in time, directing juries to consider awarding punitive
137 damages, and pressuring defendants to settle. In return, plaintiffs' lawyers contribute to judges'
138 reelection campaigns and benefit the local region by bringing in economic activity that raises
139 demand for local hotels and restaurants. Favored locations for asbestos litigation in the past have
140 included Madison, Illinois, Kanawha, West Virginia, and Jefferson County, Mississippi, as well as
141 larger cities such as Philadelphia, Houston, and San Francisco – the latter because they are home to
142 large shipyards and many former sailors who were exposed to asbestos while serving on navy ships.

143 Judges also developed new legal doctrines and legal procedures that favored plaintiffs and
144 therefore encouraged plaintiffs' lawyers to file claims. One important change was a decision that
145 greatly increased insurers' liability to asbestos claimants by legally reclassifying products liability
146 insurance policies as premises insurance policies. While products' liability policies have a coverage
147 limit that limits insurers' total liability under the policy to a fixed dollar figure, premises policies
148 apply the coverage limit to each occurrence – where each individual asbestos claim is interpreted as
149 an occurrence. Other legal changes expanded insurers' liability for claims made after the time period
150 when their policies were in effect. These changes greatly increased insurers' liability for asbestos
151 damage by reviving old insurance policies that had already paid out their coverage limits (Epstein
152 1984; Anderson 1987).

153 Another legal change was that judges allowed multiple asbestos lawsuits to be litigated together,
154 thus creating informal class actions. Asbestos plaintiffs' lawyers initially tried to have all asbestos
155 claims certified as a class action in Federal court and settled all at once, but the Supreme Court
156 overruled two settlements of class actions involving asbestos claims (*Amchen Products v. Windsor*,
157 117 S.Ct. 2231 (1997) and *Ortiz v. Fibreboard Corp.*, 119 S.Ct. 2295 (1999)). After these two
158 decisions, plaintiffs' lawyers shifted to filing most asbestos claims in state courts. Judges in these
159 courts allowed groups of lawsuits to be consolidated for either the pretrial or the trial stages of
160 litigation, or both, using a procedure known as mass joinder. These consolidations often combined
161 multiple claims by out-of-state plaintiffs with a small number of claims by in-state plaintiffs. The
162 total number of claims consolidated ranged from a few to up to 9,600. Judges would hold a single
163 trial before a single jury for all claims, with the jury sometimes making separate decisions for each
164 plaintiff and sometimes making a single decision for all plaintiffs (Carroll et al. 2005). Combining
165 multiple lawsuits for litigation benefits plaintiffs by making the trial outcomes more positively
166 correlated. This makes going to trial more risky for defendants, because losing many cases at once
167 could exhaust their insurance coverage and force them to file for bankruptcy. The more claims that
168 are combined, the more bargaining power plaintiffs' lawyers have. Thus when large numbers of
169 asbestos claims are consolidated for trial, defendants are likely to settle even claims that are
170 legally weak.

171 Another legal change that benefitted plaintiffs in asbestos lawsuits is the use of bifurcated or
172 reverse bifurcated trials. In a bifurcated trial, evidence concerning liability is presented first and the
173 jury decides separately on each defendant's liability. Then the trial is suspended while plaintiffs and
174 defendants who have been found liable bargain over a settlement. If they fail to settle, the trial is
175 resumed at a later date – sometimes with the same jury – for the damages portion of the trial. In
176 a reverse bifurcated trial, the format is the same, but damages are tried in the first stage and liability in

177 the second stage. Bifurcation saves on trial time relative to holding a unitary trial if the parties settle
178 after the first stage. The parties are also more likely to settle at the end of the first stage than before the
179 trial starts, since they have some of the information that the trial will generate.

180 Reverse bifurcation was developed specifically for asbestos trials and is particularly thought to
181 benefit plaintiffs. This is because plaintiffs often have severe damage from their asbestos
182 exposure – making damage awards high. In contrast, plaintiffs' claims are often weak on the liability
183 side, because they cannot show that they were exposed to particular defendants' asbestos products.
184 So using reverse rather than straight bifurcation strengthens plaintiffs' bargaining power in settle-
185 ment negotiations, because the information generated by the first stage of the trial is very favorable to
186 plaintiffs and raises their bargaining power in settlement negotiations.

187 Bouquet trials are another procedural innovation developed for asbestos litigation. In a bouquet
188 trial, a small group of asbestos plaintiffs is selected for trial from a larger group of consolidated
189 claims. The trial group includes plaintiffs with severe asbestos disease and plaintiffs with no
190 impairment. The idea of the bouquet trial is that the outcomes at trial for the various types of
191 plaintiffs will be used as a template for settling the remaining claims in the larger group. Using
192 a bouquet trial allows larger numbers of claims to be consolidated, since a bouquet trial can be held
193 even when the full consolidated group of claims is too large to hold a single trial. One well-known
194 example is a trial of 12 asbestos claims in Mississippi that were selected from a larger group of 1,738
195 asbestos claims. At the bouquet trial, the jury awarded plaintiffs damage of \$4 million each. The
196 prospect of the jury assessing similarly high damage awards for the remaining plaintiffs caused
197 defendants to settle all the remaining claims on very favorable terms (Parloff 2002).

198 Another factor that allowed the asbestos mass tort to grow so large is the large number of potential
199 plaintiffs. As discussed above, the widespread use of asbestos meant that millions of people were
200 exposed. Typical plaintiffs include ex-sailors who were exposed to asbestos on ships during World
201 War II, workers who install insulation, workers in shipyards and steel mills, and textile workers who
202 were exposed to airborne asbestos fibers in factories. Plaintiffs' lawyers search for new plaintiffs by
203 extensive advertising and by conducting mass screenings. A frequent procedure was to bring a van
204 equipped with an X-ray machine to a factory and take chest X-rays of all the factory workers. Any
205 found to have scarring or thickening of the lungs or the pleural lining would be signed up as asbestos
206 plaintiffs. Doctors often read hundreds of X-rays per day and found that nearly all of them had
207 asbestos-related damage. More recently, plaintiffs' law firms have shifted to television advertise-
208 ments to recruit plaintiffs whose exposure to asbestos may be non-work-related.

209 Another issue that has allowed asbestos litigation to become so large is that claims are valuable
210 even when plaintiffs have no impairment from their asbestos exposure or had no asbestos exposure
211 so that their claims are downright fraudulent. Because asbestos lawsuits are mainly settled rather
212 than tried, non-impaired and fraudulent claims are valuable because they increase the size of
213 consolidations and raise plaintiffs' lawyers bargaining power with defendants. Settlements cover
214 both fraudulent and valid claims. Estimates suggest that as few as 10 % of plaintiffs with asbestos
215 claims have asbestos-related cancers – a widely used measure of disabling asbestos disease (Carroll
216 et al. 2003). Legal standards that allowed non-impaired plaintiffs to collect damages are an important
217 feature of asbestos litigation.

218 The asbestos mass tort also involves many types of defendants. In the first stage of the litigation,
219 defendants were the major producers of asbestos insulation. These companies eventually went
220 bankrupt. In the second stage, these defendants were replaced by producers of asbestos-containing
221 products, retailers that sold these products, and firms that operated workplaces containing asbestos.
222 Examples include the automobile companies, sued because car brakes contained asbestos; Sears
223 Roebuck, sued because its stores sold asbestos-containing products; 3M Corporation, sued because

224 it made dust masks that didn't protect users from asbestos exposure if they used the masks
225 improperly; and Crown Cork and Seal, sued because it briefly owned a company that included
226 a division which produced asbestos-containing insulation. Crown Cork quickly sold the division
227 that produced insulation, but nonetheless it eventually paid out \$700 million in asbestos settlements
228 and damage awards. Both small and large firms were sued, since even small defendants have
229 insurance. Each time new defendants were added to the litigation, previous plaintiffs filed new
230 claims against them. Because there were so many plaintiffs and so many potential defendants, the
231 asbestos mass tort continued to grow.

232 Finally, bankruptcy also played a role in encouraging asbestos litigation. Many of the large firms
233 that produced asbestos insulation and asbestos-containing products went bankrupt due to their
234 asbestos liabilities – the first was the Johns-Manville Corporation in 1982. When asbestos-
235 producing firms go bankrupt, present and future damage claims against them are assigned to
236 a trust which receives some or all of the reorganized firms' equity and uses the funds to pay
237 compensation to asbestos victims. Congress adopted legislation defining these trusts in 1994 and
238 required that they follow the general outlines of the Manville Trust that was set up following the
239 Johns-Manville bankruptcy. Trusts first estimate the number and severity of future asbestos claims
240 against them and then determine what level of compensation payments they can pay such that their
241 funds will cover both present and future claims. Trusts payments vary with the severity of the
242 claimant's asbestos disease and the length of exposure to asbestos. The trusts do not require that
243 claimants show impairment from their asbestos exposure and they use quite loose standards for
244 demonstrating exposure to the bankrupt firm's asbestos products. This was done in order to reduce
245 transactions costs and increase the fraction of damage payments that went to claimants rather than
246 lawyers. However the loose standards for receiving compensation caused the number of claims to
247 increase, causing many of the trusts to cut their compensation payments. On average, claimants with
248 no asbestos-related impairment receive a total of around \$8,000 in compensation from all of the
249 trusts, while claimants with moderate impairment receive around \$19,000. Compensation trusts
250 have paid out a total of around \$17 billion to asbestos claimants (Scarcella et al. 2013).

251 The bankruptcy trusts encourage asbestos litigation in two ways. First, when corporations go
252 bankrupt, their damage payments fall drastically. This encourages plaintiffs' lawyers to find new
253 asbestos defendants to substitute for those that have gone bankrupt. The bankruptcies thus have
254 contributed to bringing in many new corporations as defendants whose involvement with asbestos is
255 increasingly remote. Second, although the trusts' compensation payments are relatively small,
256 representing trust claimants is nonetheless profitable for plaintiffs' lawyers if they represent large
257 numbers of claims. The trusts therefore encourage plaintiffs' lawyers to continue recruiting large
258 numbers of non-impaired claimants, since the loose compensation rules allow these claimants to
259 receive payments from many or all of the trusts.

260 Overall, a combination of factors is needed to explain why asbestos litigation grew so large.

261 **Research on Asbestos Litigation**

262 In White (2006), I examined why judges adopt the procedural innovations used in asbestos trials and
263 the effect of both forum-shopping and procedural innovations on trial outcomes. The procedural
264 innovations, discussed above, are consolidation of multiple lawsuits for trial, bifurcation and reverse
265 bifurcation, and bouquet trials.

266 Why do judges adopt these innovations for asbestos trials? Judges in favored jurisdictions for
267 asbestos litigation have crowded dockets. Because it would be impossible to hold individual trials

268 for all cases, judges favor procedures that encourage the parties to settle and therefore reduce trial
269 time. Consolidating claims for trial is a method of reducing trial time, because only one jury must be
270 selected and some of the evidence can be presented only once for all plaintiffs. Consolidation also
271 increases the probability of settlement, because trial outcomes become more positively correlated
272 and defendants therefore find it riskier to go to trial. Bifurcating trials reduces trial time relative to
273 holding a unitary trial, because the information generated in the first phase of trial increases the
274 probability of settlement when the parties bargain after the first phase. Finally, bouquet trials save
275 trial time by allowing larger numbers of asbestos claims to be consolidated – if a trial is needed, then
276 a bouquet trial can be held when the number of claims in the consolidation would otherwise make it
277 too large for a single trial.

278 The study uses a dataset consisting of all asbestos lawsuits that were tried in court to a verdict on
279 liability or damages or both between 1987 and 2003. Each observation consists of a trial of a single
280 plaintiff's asbestos claim against all defendants. There were around 5,200 observations in the
281 dataset, implying that less than 1 % of asbestos plaintiffs' claims go to trials.

282 The data include the plaintiffs' alleged disease, the trial venue, the trial outcome, whether the
283 claim was consolidated for trial and the number of claims in the consolidated group, whether the trial
284 was bifurcated or reverse bifurcated, whether a bouquet trial was used, and the number of defendants
285 that each plaintiff sued.

286 Half of all claims had individual trials, while the rest were consolidated with at least one other
287 claim for trial. Approximately one-fifth of trials were bifurcated or reverse bifurcated and 4 % were
288 bouquet trials. Use of the procedural innovations was geographically concentrated: bifurcated trials
289 were frequently used in Manhattan and Philadelphia, while bouquet trials mainly occurred in
290 Mississippi. Sixty-four percent of plaintiffs were awarded compensatory damages and the average
291 compensatory damage award (contingent on defendants being found liable) was \$1.3 million in
292 2003 dollars; 20% of plaintiffs were awarded punitive damages and the average punitive damage
293 award (contingent on defendants being found liable for both compensatory and punitive damages)
294 was \$1.8 million. Plaintiffs' expected return from going to trial was \$1.1 million for the entire
295 sample, with those having mesothelioma receiving around \$3 million more.

296 To examine the effect of consolidating claims for trial on the correlation of the trial outcomes,
297 I computed a correlation coefficient for all trials involving two plaintiffs and compared the result
298 with the correlation coefficient for single-plaintiff trials when plaintiffs were randomly assigned in
299 pairs. I also followed the same procedure for three- and five-claim consolidations. The results show
300 that the correlation coefficient of expected total damages ranges from 0.84 to 0.92 in the actual
301 groups, compared to only 0.01–0.04 in the randomly assigned groups. The results were similar if
302 only liability or only damages are considered. These results suggest that consolidating claims for
303 trial makes trial outcomes much more positively correlated and supports the hypothesis that going to
304 trial in a consolidation is much more risky for defendants.

305 To examine the effect of forum-shopping and the procedural innovations on trial outcomes,
306 I estimated probit regressions explaining whether plaintiffs were awarded compensatory damages
307 and whether they were awarded punitive damages conditional on receiving compensatory damages.
308 I also estimated Tobit regressions explaining the amount of compensatory and punitive damages,
309 with damages set equal to zero when the plaintiff loses. Forum-shopping was found to be extremely
310 favorable to plaintiffs, with plaintiffs' probability of receiving compensatory damages increasing by
311 up to 30 percentage points in the most favorable jurisdictions relative to the most commonly used
312 jurisdiction. Also plaintiffs' probability of being awarded punitive damages rose by up to 91 per-
313 centage points in the most favorable jurisdiction relative to the most commonly used jurisdiction.

314 Use of the procedural innovations also increased plaintiffs' expected return from going to trial.
315 Having a bifurcated trial raised plaintiffs' probability of being awarded compensatory damages by
316 27 percentage points and raised compensatory damage awards by \$924,000. Having a bifurcated
317 trial also increased plaintiffs' expected return from going to trial by \$650,000. But bifurcated trials
318 did not significantly increase plaintiffs' probability of winning punitive damages or the size of the
319 punitive damage award. Having a bouquet trial raised plaintiffs' probability of being awarded
320 punitive damages and caused both compensatory and punitive damage awards to be higher.
321 Plaintiffs' expected return from going to trial increased by \$1.2 million when a bouquet trial was
322 held. Having a small consolidated trial consisting of 2–5 plaintiffs' claims increased plaintiffs'
323 probability of winning both compensatory and punitive damages, but was associated with lower
324 compensatory damage awards. Surprisingly, having a larger consolidated trial of six or more
325 plaintiffs did not significantly change plaintiffs' returns from going to trial.

326 Overall the results suggest that the return to plaintiffs and their lawyers from filing asbestos claims
327 is greatly increased by forum-shopping and by plaintiffs' lawyers picking jurisdictions where judges
328 use the procedural innovations. Although the research did not address the issue of how forum-
329 shopping and procedural innovations affect the size of asbestos settlements, the standard economic
330 model of settlements suggests that they mirror trial outcomes and are higher in courts where
331 plaintiffs' expected returns from going to trial are higher (Mnookin and Kornhauser 1979). Thus
332 forum-shopping and procedural innovations are also likely to raise the amount that defendants pay to
333 settle asbestos claims.

334 **Methods of Resolving Asbestos Litigation: Hypothetical and Actual**

335 In this section, I consider solutions for resolving asbestos litigation – including both proposed
336 solutions that were never adopted and actual solutions that were.

337 One proposed solution in the 1990s was to certify a class action of all asbestos claimants. In a class
338 action, all asbestos claims are combined in a single lawsuit and all are resolved at once, usually by
339 a settlement. Both present and future asbestos claims are resolved. Individual plaintiffs would be
340 bound by the outcome of the class action and would not have had the right to opt out. The Federal
341 courts certified two class actions of asbestos claimants, but – as discussed above – the US Supreme
342 Court rejected both class certifications in 1997 and 1999, on the grounds that asbestos claimants
343 were too diverse to be combined into a single class.

344 This was followed by another proposed solution for asbestos litigation: a Federal government-
345 administered compensation scheme for asbestos victims. The proposed bill was the Fairness
346 Asbestos Injury Resolution or “FAIR” Act of 2005, S. 852. It was based on previous federally
347 administered programs, one that compensated miners who developed black lung disease and one
348 that compensated children harmed by childhood vaccines. Compensation of up to \$140 billion
349 would have been financed by levies on asbestos producers and insurers. Asbestos victims would lose
350 their right to file lawsuits, but would instead receive compensation from the trust. Claimants who had
351 mesothelioma or cancer would receive the highest awards of \$1.1 million and those with less
352 disabling diseases would receive \$25,000 or more. Non-impaired claimants would receive
353 medical monitoring, but no compensation (Stengel 2006). However the FAIR Act was not enacted
354 (Barnes 2011).

355 While both the class action settlement and the compensation scheme for asbestos claims failed,
356 courts began in the early 2000s to adopt new procedural innovations that reduced the amount of
357 asbestos litigation. One such device was the “inactive docket” which put claims by non-impaired

358 asbestos plaintiffs on an inactive basis, preserving their right to sue in the future, but preventing their
359 claims from proceeding in the legal system until they become impaired from their asbestos exposure.
360 Inactive dockets solve the problem that plaintiffs must file claims quickly after discovering their
361 asbestos-related harm in order to satisfy statutes of limitations. But because most asbestos claims are
362 classified as inactive, asbestos litigation now consists mainly of plaintiffs who have severe asbestos-
363 related diseases.

364 As a result of the use of inactive dockets, plaintiffs' lawyers can no longer litigate large groups of
365 claims consisting mainly of non-impaired plaintiffs, and they therefore have less bargaining power
366 to force defendants to settle. The fraction of asbestos damage awards going to non-impaired
367 plaintiffs has fallen from around 50 % in 1997–1999 to less than 5 % in 2013 (Scarcella
368 et al. 2013). This change has greatly reduced plaintiffs' lawyers' return from recruiting
369 non-impaired asbestos claimants. It has been so successful in reducing the volume of asbestos
370 litigation that an observer is led to wonder why judges did not adopt it much earlier.

371 Another recent development is that some states that were centers for asbestos litigation have
372 adopted legal reforms to discourage the filing of asbestos claims in the state. An important change in
373 several states was to bar judges from consolidating out-of-state with in-state asbestos claims for
374 litigation. As a result, out-of-state claims could no longer be litigated in the state and therefore
375 plaintiffs' lawyers could no longer put together large consolidations. Among states that previously
376 allowed large consolidations of asbestos claims, West Virginia, Mississippi, and Illinois all made
377 changes along these lines in the early 2000s. Several other states changed their legal rules to
378 explicitly disallow large consolidations of asbestos claims, although they generally still allow
379 out-of-state claims to be consolidated with in-state asbestos claims. Another change is that New
380 York, Texas, and several other states substituted proportional liability for joint and several liability to
381 asbestos claimants, so that individual defendants are no longer liable for plaintiffs' entire damage
382 award. This shields non-bankrupt defendants from being held liable for bankrupt defendants' share
383 of plaintiffs' damage (Hanlon and Geise 2007). The result of these changes in state law is that most
384 asbestos litigation now involves a much smaller number of claims by plaintiffs with serious
385 asbestos-related diseases and these claims are litigated individually or in small groups.

386 Finally, judges have become more likely to dismiss fraudulent claims, rather than pressure
387 defendants to settle them. This approach was used recently to resolve a different mass tort: claims
388 for damage due to silica exposure. Silica litigation was a spinoff from asbestos litigation and took
389 a similar form. Plaintiffs allege harm from inhaling airborne silica crystals that can lead to scarring of
390 the lung lining, silicosis, or lung cancer. Because of the similarity between asbestos disease and
391 silica disease, plaintiffs' lawyers recruit silica claimants using the same mass screenings with chest
392 X-rays that they use to recruit asbestos claimants. In fact, plaintiffs' lawyers often file both silica
393 claims and asbestos claims on behalf of the same individuals, using the same chest X-rays; this is
394 despite the fact that it is rare for individuals to have been exposed to both silica and asbestos.
395 However the judge who presided over the silica litigation dismissed nearly all of the claims on the
396 grounds that they were fraudulent and threatened to bring criminal charges against the doctors who
397 read the plaintiffs' X-rays. This effectively ended the silica mass tort, leaving only a small number
398 of lawsuits by plaintiffs with severe silica-related disease. The publicity given to the silica
399 litigation has probably made judges more likely to dismiss asbestos claims as well (Behrens and
400 Goldberg 2005/2006).

401 **Future Directions**

402 Because asbestos litigation has been so lucrative, plaintiffs' lawyers have searched widely for other
403 defective products that could serve as the basis for new mass torts, using the techniques they
404 developed for asbestos litigation. Among potential future mass torts are litigation involving harm
405 due to exposure to lead paint, harm due to guns, and claims of obesity due to consumption of fast
406 food (White 2004). However none of these spinoff mass torts have been successful in court.

407 But the asbestos mass tort itself continues to mutate into new forms that keep it alive. One recent
408 development is lawsuits filed by family members of asbestos workers who claim second-hand
409 exposure to asbestos from relatives' clothing. Family members, unlike workers themselves, are not
410 barred by workers' compensation from suing their relatives' employers. Thus they can both sue their
411 relatives' employers and the producers of asbestos products that their relatives were exposed
412 to. Another new development in asbestos litigation is claimed by lung cancer victims against
413 asbestos producers and the asbestos bankruptcy trusts. Most lung cancer is caused by smoking,
414 but plaintiffs with lung cancer nonetheless claim that their cancer was caused by exposure to
415 asbestos. These claims qualify for compensation from the asbestos bankruptcy trusts, and, because
416 lung cancer is a serious disease, their lawsuits against non-bankrupt defendants are not placed on the
417 inactive docket (Nocera 2013). And since there are 200,000 new lung cancer cases each year
418 compared to only 2–3,000 new mesothelioma cases, lung cancer claims present a valuable oppor-
419 tunity for lawyers to continue the asbestos mass tort.

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Uncorrected Proof

Author Queries

Query Refs.	Details Required
Q1	Please provide missing city and country name in author affiliation.
Q2	The citation “Briggs et al 2001” has been changed to “Biggs et al. 2001”. Please check if appropriate.

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