

SIXTH CIRCUIT REVIEW

Outsourcing the Jury: *Bartlett v. DuPont*¹ and the Role of Alternative Adjudication in Preserving Jury “Fairness” in Complex Scientific Litigation

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Commenting on *Bartlett v. E. I. du Pont de Nemours & Co.*, No. 2:13-CV-0170 (S.D. Ohio Oct. 8, 2015); *In re E. I. du Pont de Nemours & Co. C-8 Personal Injury Litigation*, No. 2:13-MD-2433 (S.D. Ohio filed Apr. 9, 2013).

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¹ *Bartlett v. E. I. du Pont de Nemours & Co.*, No. 2:13-CV-0170 (S.D. Ohio Oct. 8, 2015). See *Bartlett* Verdict and Settlement Summary, JVR No. 1601150042, 2015 WL 9841769, for a selection of court filings from the case.

I. THE PROBLEM OF COMPLEX SCIENTIFIC QUESTIONS IN LITIGATION

Complex scientific questions are commonplace in modern litigation. Questions about drug interactions, patent applicability, and environmental consequences are routinely presented to judges and juries who often lack the technical background to untangle the complex legal and factual questions therein. Courts and other quasi-judicial bodies have been exploring alternative methods of adjudicating scientific questions, giving rise to a number of questions about the efficacy and legitimacy of these efforts.² One such alternative method of alternative scientific adjudication took place recently in *Bartlett v. DuPont* in the Southern District of Ohio.³ Mrs. Carla Bartlett brought suit against E. I. du Pont de Nemours and Company (DuPont) for its role in leaking a cancer-causing chemical known as “C8”⁴ into Mrs. Bartlett’s drinking water, causing her to develop kidney cancer.⁵ On October 7, 2015, a Columbus jury found DuPont liable for causing Mrs. Bartlett’s cancer.⁶ The first of 3,500 C8 personal injury suits against DuPont for its role in C8 leakage, the jury awarded Mrs. Bartlett \$1.6 million in compensatory damages.⁷

² See NANCY GERTNER & JUDITH H. MIZNER, *THE LAW OF JURIES* 12 (4th ed. 2010) (discussing failed “complexity exceptions” to the general right to a jury trial in federal civil cases). For example, as a result of the BP Gulf Oil Spill in 2010, a federal court in Louisiana employed a segmented litigation strategy to deal with the excessively complicated scientific and statutory questions before the court. ELI’s Gulf Team, *Deepwater Horizon Litigation: Where Things Stand and What Is Next*, ENVTL. L. INST. (Jan. 14, 2014), <http://eli-ocean.org/gulf/cwalitigation/> [<http://perma.cc/5K5W-MXM9>].

³ *Bartlett*, No. 2:13-CV-0170. *Bartlett* is part of the larger multidistrict litigation (MDL), the C8 Personal Injury Litigation, centered in the Southern District of Ohio pursuant to 28 U.S.C. § 1407. *In re E. I. du Pont de Nemours & Co. C-8 Pers. Injury Litig.*, No. 2:13-MD-2433 (S.D. Ohio filed Apr. 9, 2013); 28 U.S.C. § 1407(a) (2012) (“When civil actions involving one or more common questions of fact are pending in different districts, such actions may be transferred to any district for coordinated or consolidated pretrial proceedings.”); see also *Multidistrict Litigation 2433: In re E. I. du Pont de Nemours and Company*, U.S. DISTRICT CT. SOUTHERN DISTRICT OHIO, <http://www.ohsd.uscourts.gov/multidistrict-litigation-2433> [<http://perma.cc/W399-Y8DP>].

⁴ Sources differ as to “C-8” and “C8.” See, e.g., *infra* notes 6–8. This Comment uses “C8” except where quoted sources use “C-8.”

⁵ Complaint for Money Damages, *Bartlett*, No. 2:13-CV-0170, ECF No. 1, 2013 WL 11075812 [hereinafter *Bartlett* Complaint]; see also Kevin Williams, *In Ohio’s ‘Chemical Valley,’ a Debate Over Good Jobs and Bad Health*, WASH. POST (Dec. 12, 2015), https://www.washingtonpost.com/national/in-ohios-chemical-valley-a-debate-over-good-jobs-and-bad-health/2015/12/12/3341b626-8fab-11e5-baf4-bdf37355da0c_story.html [<https://perma.cc/E8SG-6WC8>].

⁶ Jury Verdict Form, *Bartlett*, No. 2:13-CV-0170, ECF No. 142, 2015 WL 7075752; see also Earl Rinehart, *DuPont Negligent in C8 Case, Owes Woman \$1.6 Million*, COLUMBUS DISPATCH (Oct. 8, 2015), <http://www.dispatch.com/content/stories/local/2015/10/07/Dupont-ordered-to-pay-damages.html> [<http://perma.cc/8XP2-AJNR>].

⁷ Jury Verdict Form, *supra* note 6; Rinehart, *supra* note 6. The jury award consisted of \$1.1 million for DuPont’s negligence in causing Mrs. Bartlett’s cancer and \$500,000 for her emotional distress. Jury Verdict Form, *supra* note 6, at 1–3; see also *Jury Awards Woman*

In *Bartlett*, parties employed a C8 Science Panel in order to conclusively determine whether C8—which was released by DuPont into Southern Ohio and West Virginia drinking water—was capable of causing certain diseases.⁸ The C8 Science Panel in *Bartlett* provides an example of efforts to develop effective ways of adjudicating cases that involve complex scientific questions and further provides an excellent vehicle for exploring whether emerging techniques help or hamper a normative understanding of the role juries play in preserving trial “fairness.”⁹

Part II of this Comment will provide a brief overview of the facts of *Bartlett* and the creation and execution of the C8 Science Panel used in the C8 personal injury litigation. Part III will outline a normative framework of the “fairness” embodied by a traditional jury in order to evaluate *Bartlett*’s efficacy in preserving fairness through use of the C8 Science Panel. Part IV will evaluate how the C8 Science Panel performs in light of this normative framework. Part V will look toward the future of alternative scientific adjudication in light of this normative framework, due process, and considerations of public policy.

II. THE CREATION OF THE C8 SCIENCE PANEL AND ITS ROLE IN *BARTLETT*

Since the 1950s, DuPont’s Teflon plant near Parkersburg, West Virginia had been releasing perfluorooctanoic acid (PFOA) or ammonium perfluorooctanoate (APFO), also known as “C8,” into the surrounding drinking water.¹⁰ The C8 contaminated area included six water districts on the Ohio and West Virginia border affecting the area known as Tupper’s Plains and parts of fourteen Ohio and West Virginia counties.¹¹ In 2001, a group of plaintiffs

\$1.6M in First C8 Lawsuit Against DuPont, CHARLESTON GAZETTE-MAIL (Oct. 7, 2015), <http://www.wvgazette.com/apps/pbcs.dll/article?AID=/20151007/GZ01/151009617/1123> [<https://perma.cc/7D37-Y9VB>] [hereinafter *Jury Awards \$1.6M*]. The jury, however, did not find that DuPont acted with “actual malice” warranting compensatory damages. Jury Verdict Form, *supra* note 6, at 4; Rinehart, *supra* note 6.

⁸ See *infra* notes 12–17 and accompanying text; see also Nathaniel Rich, *The Lawyer Who Became DuPont’s Worst Nightmare*, N.Y. TIMES (Jan. 6, 2016), <http://www.nytimes.com/2016/01/10/magazine/the-lawyer-who-became-duponts-worst-nightmare.html> [<https://perma.cc/7A2B-DVMG>].

⁹ See *infra* Parts III–IV.

¹⁰ *The Science Panel Website Home*, C8 SCI. PANEL, <http://www.c8sciencepanel.org> [<https://perma.cc/V72X-82DD>] (last updated Nov. 28, 2013); *Multidistrict Litigation 2433*, *supra* note 3; see also *Jury Awards \$1.6M*, *supra* note 7; Matthew Kelly, *Contamination Puts Wetland at Risk*, NEWCASTLE HERALD (Oct. 5, 2015), <http://www.theherald.com.au/story/2734628/contamination-puts-wetland-at-risk/> [<https://perma.cc/2JFX-VSYB>]; *Bartlett Complaint*, *supra* note 5, at para. 16. The release of C8 and other chemicals is associated with the production of non-stick products, such as Teflon. See *Jury Awards \$1.6M*, *supra* note 7; Kelly, *supra*.

¹¹ Veronica M. Vieira et al., *Perfluorooctanoic Acid Exposure and Cancer Outcomes in a Contaminated Community: A Geographic Analysis*, 121 ENVTL. HEALTH PERSP. 318, 319 (2013).

brought suit in West Virginia against DuPont under a variety of tort actions, all based on a theory of drinking water contamination.¹² This group was granted class certification (*Leach* Class) and the suit against DuPont reached a settlement agreement (*Leach* Settlement) in November 2004.¹³ The *Leach* Settlement created a C8 “Science Panel” to conduct a “Community Study” of the C8 affected area.¹⁴ The Panel was created by mutual agreement and its purpose was to conclusively determine whether there was a “Probable Link” or “No Probable Link” between the ingestion of C8 and various human diseases.¹⁵ A finding of “Probable Link” by the Panel would indicate that it was “more likely than not” that there was a link between ingestion of C8 at a particular contamination level and a human disease.¹⁶ For any linked disease, individual members of the *Leach* Class would be able to pursue claims “for personal injury and wrongful death” as well as “any claims for injunctive relief and special, general and punitive and any other damages.”¹⁷ DuPont, however, reserved the right to contest specific causation, damages, and assert any other defense not barred by the *Leach* Settlement.¹⁸ Conversely, where the C8 Science Panel found “No Probable Link” between C8 and a particular disease, those persons would be forever barred from suit.¹⁹

The *Leach* Settlement also determined composition of the C8 Science Panel.²⁰ In the *Leach* Settlement parties were required to “mutually agree upon” three “independent, appropriately credentialed epidemiologists” to form the C8 Science Panel.²¹ In order to confirm a “Probable Link,” at least two panelists had to agree that it was “more likely than not” that C8 consumption could cause

¹² Amended Class Action Complaint, *Leach v. E. I. du Pont de Nemours & Co.*, No. 01-C-698 (W. Va. Cir. Ct. Aug. 30, 2001) (attached as Exhibit A to Plaintiff’s Motion for Partial Summary Judgment, *In re E. I. du Pont de Nemours & Co. C-8 Pers. Injury Litig.*, No. 2:13-MD-2433 (S.D. Ohio Sept. 3, 2014), ECF No. 820 [hereinafter MDL Plaintiff’s MSJ], ECF No. 820-5); *see also* Rich, *supra* note 8.

¹³ Order Approving Final Settlement and Notice Plan and for Entry of Final Judgment at 1–2, *Leach*, No. 01-C-698 (Feb. 28, 2005) [hereinafter *Leach* Order] (attached as Exhibit E to MDL Plaintiff’s MSJ, ECF No. 820-9); Class Action Settlement Agreement, Exhibit 1 to *Leach* Order [hereinafter *Leach* Settlement] (attached as Exhibit D to MDL Plaintiff’s MSJ, ECF No. 820-8).

¹⁴ *Leach* Settlement, *supra* note 13, §§ 1.12, 12.2.

¹⁵ *Id.* §§ 12.2.2, 12.2.3(b) (“The Science Panel shall develop and approve . . . a protocol for a study of Human Disease among residents exposed to C-8 . . . [and] evaluate the available scientific evidence to determine . . . whether such evidence demonstrates a Probable Link between C-8 exposure and any Human Disease.”).

¹⁶ *Id.* § 1.49 (defining “Probable Link”); *id.* § 12.2.3(b).

¹⁷ *Id.* §§ 3.2–3.

¹⁸ *Id.* § 3.3.

¹⁹ *Id.* § 1.42 (defining “No Probable Link Finding”); *id.* § 3.3.

²⁰ *Leach* Settlement, *supra* note 13, § 12.2.1; Kathy Lynn Gray, *Thousands of C8 Suits Against DuPont Flood Federal Court*, COLUMBUS DISPATCH (Sept. 8, 2014), <http://www.dispatch.com/content/stories/local/2014/09/08/thousands-of-c8-suits-flood-court.html> [http://perma.cc/65R2-A544].

²¹ *Leach* Settlement, *supra* note 13, § 12.2.1.

a particular disease.²² Eventually, the parties agreed upon Dr. Fletcher of the London School of Hygiene and Tropical Medicine, Dr. Savits of Brown University, and Dr. Steenland of Emory University.²³ These scientists were chosen for their “long experience in designing and carrying out environmental health studies” and the parties’ belief that they would be able to “objectively generate and evaluate the evidence.”²⁴

Importantly, DuPont wholly paid for the C8 Science Panel.²⁵ In total, DuPont spent over \$30 million to fund the Panel’s study.²⁶ Despite its funding source, the Panel purported to be a totally neutral investigation team with no predispositions: “We came to this project as independent epidemiologists . . . and remained independent and neutral throughout. . . . We had no belief ahead of time that C8 does or doesn’t affect human health.”²⁷ With this promise of neutrality, the community study went forward under the Panel’s direction between 2005 and 2013.²⁸

Procedurally, in order to determine whether a link existed, the Panel conducted a holistic and in-depth study of the C8 affected area.²⁹ The panel drew blood, conducted questionnaires, and assessed the medical histories of approximately 69,000 Mid-Ohio Valley residents.³⁰ The panel then compiled the results of the study into publicly available reports on a “C8 Science Panel” website.³¹ Ultimately, the panel found a “Probable Link” between the ingestion of C8 via drinking water and six diseases.³²

As a part of the *Leach* Settlement, DuPont and the *Leach* Class agreed to conclusively accept the C8 Science Panel’s findings as showing general causation for those ailments with a “Probable Link” to C8 ingestion.³³

²² *Id.* § 1.49 (defining “Probable Link”); *id.* § 12.2.3.

²³ *The Science Panel*, C8 SCI. PANEL, <http://www.c8sciencepanel.org/panel.html> [<http://perma.cc/ZCH8-THF9>].

²⁴ *Id.*

²⁵ *Leach* Settlement, *supra* note 13, §§ 9, 12.2.

²⁶ *See* Rich, *supra* note 8; *see also* *C8 Class Action Settlement*, HILL, PETERSON, CARPER, BEE & DEITZLER, PLLC, <http://www.hpcbd.com/Personal-Injury/DuPont-C8/C8-Class-Action-Settlement.shtml> [<http://perma.cc/KM89-X3EW>] (noting that HPCB&D is designated as one of three lead law firms in the C8 litigation along with Taft, Stettinius & Hollister and Winter & Johnson). The *Leach* Settlement required at least \$20 million of the \$70 million to be spent on the Community Health Study. *Leach* Settlement, *supra* note 13, § 9.1.

²⁷ *The Science Panel*, *supra* note 23.

²⁸ *Id.*

²⁹ *Id.* *See generally* Andrea Winquist et al., *Design, Methods, and Population for a Study of PFOA Health Effects Among Highly Exposed Mid-Ohio Valley Community Residents and Workers*, 121 ENVTL. HEALTH PERSP. 893 (2013).

³⁰ *The Science Panel*, *supra* note 23.

³¹ *The Science Panel Website Home*, *supra* note 10.

³² *Id.* (stating that the Science Panel found a “Probable Link” between ingestion of C8 and diagnosed high cholesterol, ulcerative colitis, thyroid disease, testicular cancer, kidney cancer, and pregnancy-induced hypertension); *see also* Gray, *supra* note 20.

³³ *Leach* Settlement, *supra* note 13, § 3.3.

Consequently, plaintiffs with kidney cancer, as well as five other diseases³⁴ do not have to submit any evidence at trial, in terms of general causation, that C8 was capable of causing their ailments.³⁵ DuPont cannot refute this causal link between disease and C8 at trial.³⁶ For the second facet of causation, specific causation, plaintiffs would have to show that it was “more likely than not” that C8 ingestion caused their individual cancer.³⁷

Therefore, in order for Mrs. Bartlett to demonstrate general and specific causation, Plaintiff’s counsel simply had to prove that Mrs. Bartlett drank Tupper’s Plains water for one year and that the water was contaminated at the “Probable Link” level³⁸ and this—by differential diagnosis—was the most likely cause of her cancer.³⁹ Importantly, in order for DuPont to combat causation, they needed to show that something *other* than C8 caused Mrs. Bartlett’s cancer.⁴⁰ For Mrs. Bartlett, general causation was decided in her favor and proving that Mrs. Bartlett ingested water at the requisite level was likely a minor hurdle.⁴¹

The *Leach* Settlement was a “unique procedure” to determine whether the 80,000 members of the original *Leach* Class could file individual personal injury suits against DuPont for the various diseases they claimed C8 caused.⁴² Reported to be the first biomonitoring agreement of its kind,⁴³ the C8 Science

³⁴ See *supra* note 32.

³⁵ Dispositive Motions Order No. 1-A at 5, *In re* E. I. du Pont de Nemours & Co. C-8 Pers. Injury Litig., No. 2:13-MD-2433 (S.D. Ohio July 6, 2015), ECF No. 3972 [hereinafter MDL ECF No. 3972].

³⁶ See *Leach* Settlement, *supra* note 13, § 3.3 (“Defendant will not contest the issue of General Causation between C-8 and any Human Disease(s) as to which a Probable Link Finding has been delivered, but reserves the right to contest Specific Causation and damages.”). DuPont was not permitted to so much as point to the “limitations” of the C8 Findings at trial. Dispositive Motions Order No. 1 at 8, *In re* DuPont, No. 2:13-MD-2433 (Dec. 17, 2014), ECF No. 1679.

³⁷ MDL ECF No. 3972, *supra* note 35, at 6–9.

³⁸ *Leach* Settlement, *supra* note 13, § 2.1.1 (stating that “contaminated” water for purposes of the *Leach* Class contained “greater or equal to .05 ppb” of C8).

³⁹ MDL ECF No. 3972, *supra* note 35, at 6–9.

⁴⁰ Motions *in Limine* Order No. 2 at 1, 3–5, *In re* DuPont, No. 2:13-MD-2433 (Aug. 31, 2015), ECF No. 4206.

⁴¹ See *supra* note 36 and accompanying text; see also Kyle Steenland et al., *Predictors of PFOA Levels in a Community Surrounding a Chemical Plant*, 117 ENVTL. HEALTH PERSP. 1083, 1085–88 (2009) (discussing levels of C8 in residents of affected water districts and concluding that “PFOA levels in this population varied with distance of residence from the plant and employment at the plant”). Mrs. Bartlett lived in the “Tuppers Plains-Chester water district in or about 1980 through the present” where residents had a median PFOA of 37.2 nanograms per milliliter. *Bartlett* Complaint, *supra* note 5, at para 8; Steenland et al., *supra*, at 1084. In 2003–2004, the average U.S. citizen has 4 nanograms per milliliter. Steenland et al., *supra*, at 1083.

⁴² MDL ECF No. 3972, *supra* note 35, at 2.

⁴³ Laura Hall et al., *Litigating Toxic Risks Ahead of Regulation: Biomonitoring Science in the Courtroom*, 31 STAN. ENVTL. L.J. 3, 20 n.75 (2012); *Jury Awards \$1.6M*, *supra* note 7 (reporting that the C8 Science Panel is “one of the most extensive examinations ever of

Panel's exposure and health studies were able to conclusively determine general causation by assessing the links between C8 and any human disease.⁴⁴ In *Bartlett*, however, even with general causation decided, consideration and adjudication of issues of specific causation, negligence, damages and actual malice still lasted three weeks.⁴⁵ Now that the first DuPont trial has come to a close⁴⁶ a question of efficacy remains: based on a normative understanding of the role of juries in preserving "fairness" is the C8 Science Panel a more effective way to adjudicate a complicated scientific question, and ultimately does alternative scientific adjudication better preserve or threaten that fairness? This Comment addresses these issues below.

III. A NORMATIVE FRAMEWORK FOR "FAIRNESS" IN ALTERNATIVE ADJUDICATION AND ITS APPLICATION TO THE C8 SCIENCE PANEL

Trial by jury is a critical part of both civil and criminal adjudication.⁴⁷ The role of the jury in trial is to be a neutral, objective, and unbiased decision-maker.⁴⁸ In essence, the jury's role is to preserve "fairness."⁴⁹ Principles of due

how a toxic chemical affects humans").

⁴⁴ *C8 Study Publications*, C8 SCI. PANEL, <http://www.c8sciencepanel.org/publications.html> [<https://perma.cc/ZD2R-SK2E>] (listing links to published studies).

⁴⁵ See Jessica Dye & Kathy Lynn Gray, *DuPont Found Liable in First Trial Over Teflon-Making Chemical C-8*, REUTERS (Oct 7, 2015), <http://www.reuters.com/article/us-du-pont-c8-verdict-idUSKCN0S12KE20151007> [<https://perma.cc/R2C7-Q36P>].

⁴⁶ Judgment in a Civil Case, *Bartlett v. E. I. du Pont de Nemours & Co.*, No. 2:13-CV-0170 (S.D. Ohio Oct. 8, 2015), ECF No. 144, 2015 WL 7075769. As of publication, the next trial in the C8 personal injury litigation is set for March 21, 2016. See Case Management Order No. 12, *In re E. I. du Pont de Nemours & Co. C-8 Pers. Injury Litig.*, No. 2:13-MD-2433 (S.D. Ohio Oct. 21, 2015), ECF No. 4250 (setting the jury trial date for the second case in the MDL: *Wolf v. E. I. DuPont de Nemours & Co.*, No. 2:14-CV-095 (S.D. Ohio filed Jan. 7, 2014)). Subsequent trials have also been set every three months following *Wolf v. DuPont*. See Case Management Order No. 13, *In re DuPont*, No. 2:13-MD-2433 (Nov. 24, 2015), ECF No. 4263 (setting the jury trial date for the third case in the MDL: *Freeman v. E. I. du Pont de Nemours & Co.*, No. 2:13-CV-1103 (S.D. Ohio filed Oct. 22, 2013)); Case Management Order No. 14, *In re DuPont*, No. 2:13-MD-2433 (Dec. 3, 2015), ECF No. 4268 (setting the jury trial date for the fourth case in the MDL: *Dowdy v. E. I. du Pont de Nemours & Co.*, No. 2:14-CV-185 (S.D. Ohio filed Jan. 27, 2014)).

⁴⁷ See generally GERTNER & MIZNER, *supra* note 2, at 2–14.

⁴⁸ See ERIC T. KASPER, IMPARTIAL JUSTICE: THE REAL SUPREME COURT CASES THAT DEFINE THE CONSTITUTIONAL RIGHT TO A NEUTRAL AND DETACHED DECISIONMAKER 12–16 (2013). The jury is tasked with evaluating the evidence before them, applying legal standards, and determining whether plaintiff or defendant has carried their burden on proof such that one party, or the other, should prevail. MARGARET BULL KOVERA & BRIAN L. CUTLER, JURY SELECTION 3 (2013).

⁴⁹ See KASPER, *supra* note 48, at 11 ("The best written laws are nothing without a fair and impartial application and procedural fairness."); see also Molly Armour, *Dazed and Confused: The Need for a Legislative Solution to the Constitutional Problem of Juror Incomprehension*, 17 TEMP. POL. & C.R. L. REV. 641, 642 (2008) (discussing the need to reform juries in order to preserve fairness and due process); Scott W. Howe, *Juror Neutrality*

process demand a neutral arbiter, thus it is appropriate to categorize the “fairness” preserved by a jury to reflect due process concerns.⁵⁰ Before evaluating whether the C8 Science Panel is a better method of preserving jury fairness, it is important to outline what normative factors advance a jury’s ability to preserve fairness, and what factors limit that ability.

Several factors advance a jury’s ability to preserve fairness. Most importantly, the jury is objective, unbiased, and neutral because members are not involved in the case or affected by its outcome.⁵¹ The random selection process for generating jury pools also advances this general neutrality.⁵² Another important feature of juries is that they reflect community standards of fairness.⁵³ What is legally appropriate behavior is often determined by standards of the community,⁵⁴ and having a cross-section of the community decide cases ensures community standards are applied. Additionally, jurors make measured, non-arbitrary decisions because there must be consensus among jurors to render verdict.⁵⁵ This non-arbitrariness principle of juries is further preserved through consensus because it ensures deliberation and thoughtful discussion.⁵⁶ Finally, juries as a piece of the adjudicative process are subject to appellate and judicial redress.⁵⁷ A judge may set aside a verdict for insufficient evidence or an appellate court may make other reversible determinations.⁵⁸ This ability for

or an Impartiality Array? A Structural Theory of the Impartial Jury Mandate, 70 NOTRE DAME L. REV. 1173, 1177 (1995) (“The Court has stated and implied in its decisions that due process requires a jury, whenever it is provided, to stand impartial in every sense in which the Sixth Amendment mandates impartiality.” (footnotes omitted)).

⁵⁰ See KASPER, *supra* note 48, at 11.

⁵¹ “No man is allowed to be a judge in his own cause, because his interest would certainly bias his judgment, and, not improbably, corrupt his integrity.” THE FEDERALIST NO. 10 (James Madison) (Clinton Rossiter ed., 1961).

⁵² KOVERA & CUTLER, *supra* note 48, at 5.

⁵³ Jeffrey Abramson, *Jury Deliberation: Fair and Foul*, in JURY ETHICS 181, 181 (John Kleinig & James P. Levine eds., 2006) (“Deliberation on a cross-sectional jury ideally serves the truth by drawing on the diverse experiences and views linked to demography in America, pushing all to consider how the evidence looks to those with different backgrounds.”).

⁵⁴ See MORRIS B. HOFFMAN, THE PUNISHER’S BRAIN: THE EVOLUTION OF JUDGE AND JURY 3 (2014) (discussing the fact that a jury’s judgment is a “community judgment”).

⁵⁵ GERTNER & MIZNER, *supra* note 2, at 243–46. The Sixth Amendment has been interpreted Federal criminal trials require unanimity, which may not be waived. *Id.* at 243. Unless stipulated otherwise by the parties, federal civil trials must also have unanimous verdicts. FED. R. CIV. P. 48(b).

⁵⁶ See Abramson, *supra* note 53, at 181–99 (discussing the tactics and issues regarding different types of jury deliberations in the pursuit of unanimity).

⁵⁷ See FED. R. CIV. P. 50, 52(a)(6); FED. R. APP. P. 4(a); CLAY S. CONRAD, JURY NULLIFICATION 7 (Cato Inst. 2014) (1998) (“The decisions of civil juries are not final; a judge may decide to grant a judgment notwithstanding the verdict (*non obstante veredicto*, or simply ‘*N.O.V.*’), or to grant a ‘remittiture,’ effectively reducing the size of the jury’s award.”); ANN E. WOODLEY, LITIGATING IN FEDERAL COURT: A GUIDE TO THE RULES 103–05 (2d ed. 2014)

⁵⁸ See *supra* note 57.

redress acts as a safeguard, further ensuring non-arbitrary decisions.⁵⁹ Taken as a whole, the jury is specially poised to advance fairness because it is designed to be unbiased, objective, neutral, reflect community standards of fairness, provide appellate redress, and be non-arbitrary.

Several factors, however, limit a jury's ability to preserve fairness. First, jurors may not understand the subject of litigation, even those that are highly educated.⁶⁰ Similarly, jurors—as laypeople—are not well versed in the law.⁶¹ Moreover, there is the possibility that the processes of jury selection and voir dire itself skew the diversity of viewpoints available on the jury.⁶² In particular, attorneys on either side in jury selection are attempting to strike jurors who are overly sympathetic to the opposing side.⁶³ This creates a possibility that instead of representing community views through random selection, a jury could actually be skewed by the lawyers themselves.⁶⁴ This risk is slight, however, given that *both* sides are able to strike jurors.⁶⁵ More problematic than the ability to strike jurors is the pool of people available for jury service.⁶⁶ The pool of people available may be incomplete, and therefore skewed, given the varied and imperfect sources of names from which jury pools are drawn.⁶⁷ In addition, juries render verdicts in secret, meaning the ultimate facts upon which a decision

⁵⁹ See *supra* note 57.

⁶⁰ See *Duncan v. Louisiana*, 391 U.S. 145, 157 (1968) (“[A]t the heart of the dispute have been express or implicit assertions that juries are incapable of adequately understanding evidence or determining issues of fact, and that they are unpredictable, quixotic, and little better than a roll of dice.”). Highly educated jurors in general are more likely to be excused for inability to sit the length of trial. Further, there is a suggestion that the *ability* to be fair is correlated with higher education. KOVERA & CUTLER, *supra* note 48, at 211.

⁶¹ See *Armour*, *supra* note 49, at 641–42 (discussing the problem of juror incomprehension regarding legal standards).

⁶² KOVERA & CUTLER, *supra* note 48, at 3 (suggesting that the outcome of a trial can depend on the selection of the jury); see also LAURA I APPLEMAN, *DEFENDING THE JURY 5* (2015) (discussing the justice system’s “ongoing failure to integrate the community’s voice” in the jury box). Further, states vary in the lists used to generate jury pools. See, e.g., *Jury Selection and Pay*, GREENVILLE COUNTY CLERK OF COURT, http://www.greenvillecounty.org/Clerk_Of_Court/Jury_Duty/selection_process.asp [https://perma.cc/5L6E-S46W] (“Jurors are selected from a list made up of all registered voters, licensed drivers, and holders of state-issued photo I.D. cards.”); *Jury Duty*, POLK COUNTY CLERK OF COURTS, <http://www.polkcountyclerk.net/jury-duty/> [https://perma.cc/B5XV-A5JC] (“Names are randomly selected from the list of names supplied by the Department of Highway Safety and Motor Vehicles.”).

⁶³ KOVERA & CUTLER, *supra* note 48, at 14.

⁶⁴ In criminal cases, issues with selection bias in regards to race and sex have created requirements that gender and race may not be the impetus for striking a juror. See *Batson v. Kentucky*, 476 U.S. 79, 87 (1986); *Taylor v. Louisiana*, 419 U.S. 522, 535–36 (1975).

⁶⁵ KOVERA & CUTLER, *supra* note 48, at 13–14.

⁶⁶ See *supra* note 62.

⁶⁷ See KOVERA & CUTLER, *supra* note 48, at 6 (“They may use lists of voter registrants, driver’s license holders, taxpayers, utilities customers, and recipients of unemployment benefits”); *supra* note 62.

is made remain unknown.⁶⁸ The secrecy factor makes it difficult for judges and parties to evaluate and monitor the actual methods of decision-making a jury uses in deliberation.⁶⁹ Finally, the length and procedure of trial itself can cause wavering attention spans and perhaps even inattentiveness to all facts—a fallibility of human nature.⁷⁰ In sum, juries are limited in their ability to preserve fairness because they lack technical knowledge, have an imperfect attention span, lack familiarity with legal standards, are somewhat viewpoint selected, and render verdicts in a secret decision making process.

As examined in Part IV below, when evaluated against this framework for jury fairness, the C8 Science Panel used in *Bartlett* is relatively effective at preserving fairness and may improve upon the jury process by compensating for some of the jury’s limitations in dealing with complex scientific questions.

IV. THE EFFICACY OF THE C8 SCIENCE PANEL AS SEEN THROUGH A NORMATIVE FRAMEWORK OF JURY “FAIRNESS”

A. Factors that Advance the C8 Science Panel’s Ability to Preserve Fairness

Evaluated within the normative framework described in Part III, the C8 Science Panel as used in *Bartlett* was generally able to preserve traditional jury fairness and improve upon some jury limitations when evaluating complex scientific questions. First, the selection of the C8 Science Panel replicated the traditional process for selecting a neutral, objective, and unbiased jury. The Panel was fairly chosen because the scientists were “mutually” agreed upon.⁷¹ This mutual agreement emulates voir dire where attorneys try to strike jurors most aligned with the other side.⁷² Further, the mutual agreement provision for

⁶⁸ See *Clark v. United States*, 289 U.S. 1, 13 (1933) (Cardozo, J.) (“Freedom of debate might be stifled and independence of thought checked if jurors were made to feel that their arguments and ballots were to be freely published to the world.”).

⁶⁹ See Torrence Lewis, *Toward a Limited Right of Access to Jury Deliberations*, 58 FED. COMM. L.J. 195, 196 (2006) (arguing for an improvement in the jury system through limited disclosure of jury deliberations); Clifford Holt Ruprecht, Comment, *Are Verdicts, Too, Like Sausages?: Lifting the Cloak of Jury Secrecy*, 146 U. PA. L. REV. 217, 218 (1997) (arguing that jury deliberations should be overseen by other government actors).

⁷⁰ The many guides to attracting and keeping a juror’s attention illustrate this point. See, e.g., TREY COX, *WINNING THE JURY’S ATTENTION* 3–4 (2011). Additionally, one study of civil trials by the Federal Judicial Center found that the ability to understand evidence presented was decreased in a long trial as compared to a short trial. JOE S. CECILET AL., FED. JUDICIAL CTR., *JURY SERVICE IN LENGTHY CIVIL TRIALS* 27–28 (1987), [http://www.fjc.gov/public/pdf.nsf/lookup/jurylnth.pdf/\\$file/jurylnth.pdf](http://www.fjc.gov/public/pdf.nsf/lookup/jurylnth.pdf/$file/jurylnth.pdf) [<https://perma.cc/XAA2-8QES>]. Further, when participants were asked “How often did you find your attention wandering during the presentation of the evidence?”, 40% of jurors in long trials responded “occasionally” compared to only 24% of jurors in short trials. *Id.* at 28.

⁷¹ *Leach Settlement*, *supra* note 13, § 12.2.1.

⁷² See *supra* Part II.

selecting the C8 Science Panel may help to combat the viewpoint selection issues of a jury because unlike voir dire the attorneys were required to *agree*—meaning the most neutral scientists likely comprised the panel.⁷³ Additionally, unlike persons who comprise jury pools,⁷⁴ the pool of scientists available was arguably limitless.⁷⁵ Finally, the C8 Science Panel was paid for by the *Leach* Settlement independent of the results of the community health study.⁷⁶ While the fact that DuPont paid for the C8 Science Panel in its entirety may seem to cut against the Panel’s “fairness”—because DuPont paid the Panel regardless of the Panel’s decision⁷⁷ helps to combat any fear that DuPont was “buying” a favorable result.

In addition to the member selection process, there are some unique features of the C8 Science Panel that may advance fairness even more so than a traditional jury. Most obviously, during trial, the Panel simplified the Jury’s technical role by providing an undisputed fact that C8 is generally capable of causing kidney cancer.⁷⁸ The Panel’s technical knowledge analyzed the *causation* element using accepted scientific methods that would otherwise have posed potentially impenetrable questions for a jury (or even a judge) to understand.⁷⁹ In particular, the C8 Science Panel studied C8 and its effects of humans, over a period of *years*⁸⁰—as opposed to weeks.⁸¹ This subject-matter

⁷³ See *Leach* Settlement, *supra* note 13, § 12.2.1 (“Appropriate candidates for appointment to the Science Panel shall be recognized, independent, appropriately credentialed epidemiologists who have not testified as expert witnesses designated by the Settling Parties, and who have not been consulted by counsel for the Settling Parties prior to September 4, 2004, unless waived by mutual agreement of the Settling Parties.”).

⁷⁴ See *supra* note 62.

⁷⁵ So long as they met the minimum requirements of qualification as set by the *Leach* Settlement. See *supra* note 73.

⁷⁶ See *Leach* Settlement, *supra* note 13, § 12.2.1. The *Leach* Settlement required, regardless of result, that at least \$20 million be spent on the C8 Science Panel and the Community Health Study. *Id.* § 9.1.

⁷⁷ See *supra* note 76.

⁷⁸ See *supra* Part II.

⁷⁹ See Bruce J. Berger, *The Trouble with PFOA: Testing, Regulation and Science Concerning Perfluorooctanoic Acid and Implications for Future Litigation*, 76 DEF. COUNS. J. 460, 469 (2009) (discussing the difficulties of proving PFOA personal injury suits unless deleterious health effects in humans is directly linked to levels of PFOA in the environment); *supra* Part II.

⁸⁰ *The Science Panel Website Home*, *supra* note 10 (from 2005–2013).

⁸¹ In another adjudicative setting, the World Trade Organization (WTO), the WTO’s international dispute resolution body is able to effectuate quicker scientific “turn-around” than the C8 Science Panel in this case. The quick turn around is likely due to the fact that instead of a ground-up study, the WTO Panel relied, more like a court, on preliminary information provided by the parties. See generally Dale E. McNeil, *The First Case Under the WTO’s Sanitary and Phytosanitary Agreement: The European Union’s Hormone Ban*, 39 VA. J. INT’L L. 89, 111–12 (1998). This accelerated timing is a consideration for actions that may require a quicker turn around. See generally *id.*

simplification combats a jury's lack of technical knowledge—a crucial factor in advancing fairness in complex scientific litigation.⁸²

Additionally, the Panel's determination of general causation shortened the time frame of trial, combating the imperfect attention spans of jurors.⁸³ Mrs. Bartlett's three-week trial⁸⁴ would have lasted significantly longer if the crux of her suit, general causation, were still up for debate.⁸⁵ The Panel's ability to shorten the trial time frame advances fairness because it keeps a jury engaged as opposed to wavering in attention after weeks of trial.⁸⁶

The non-arbitrariness principle of a traditional jury is advanced because a science panel will create more consistent outcomes for litigants. Juries are not necessarily consistent when faced with similar facts, even with the consensus requirement.⁸⁷ The scientific results reached by the Panel, however, ensure that general causation is determined consistently among litigants in the C8 personal injury litigation.⁸⁸ This also provides objective fairness to Defendant DuPont because juries may be swayed in their view of science because of a particularly sympathetic plaintiff,⁸⁹ whereas a science panel evaluates *only* the science.⁹⁰

Uniquely, unlike the “secrecy” of jury deliberations,⁹¹ the Panel's process for determining causation was incredibly transparent. The information was

⁸² See *supra* Part III.

⁸³ See *supra* note 70 and accompanying text.

⁸⁴ Dye & Gray, *supra* note 45.

⁸⁵ Furthermore, the use of the C8 Science Panel circumvented the complicated issues and limitations of class certification of toxic tort litigants. Berger, *supra* note 79, at 468.

⁸⁶ See *supra* Part II and note 70.

⁸⁷ See *supra* note 62.

⁸⁸ There are 3500 individual suits stemming from the *Leach* Settlement. *Multidistrict Litigation 2433: Introduction*, U.S. DISTRICT CT. SOUTHERN DISTRICT OHIO, <http://www.ohsd.uscourts.gov/MDLINTRO> [<https://perma.cc/J8LH-KNNH>]. While the *Leach* Settlement was a class action settlement, the C8 Personal Injury litigation consists of individual suits of persons formerly in the *Leach* Class. See *supra* Part II.

⁸⁹ See Neal R. Feigenson, *Sympathy and Legal Judgment: A Psychological Analysis*, 65 TENN. L. REV. 1, 19–26 (1997) (discussing the extent and process of sympathetic decision making by juries). Courts do not allow attorneys to ask jurors to rely on sympathy by theoretically placing themselves in the plaintiff's shoes. See, e.g., *Marcoux v. Farm Serv. & Supplies, Inc.*, 290 F. Supp. 2d 457, 463 (S.D.N.Y. 2003) (“The well established ‘Golden Rule,’ also known as the ‘bag of gold’ rule, prohibits counsel from tell[ing] the jurors, either directly or by implication, that they should put themselves in plaintiff's place and render such a verdict as they would wish to receive were they in plaintiff's position.” (alteration in original)).

⁹⁰ The panel's findings were able to provide objective fairness in West Virginia, considered a plaintiff friendly state with unique litigation choices, including a controversial “medical monitoring” tort. See Patrick J. Borchers, *Punitive Damages, Forum Shopping, and the Conflict of Laws*, 70 LA. L. REV. 529, 537 (2010) (“According to the 2007 Chamber of Commerce study, the five ‘worst’—i.e., presumably most plaintiff-friendly—states are West Virginia, Mississippi, Louisiana, Alabama, and Illinois.”); Adam P. Joffe, *The Medical Monitoring Remedy: Ongoing Controversy and a Proposed Solution*, 84 CHI.-KENT L. REV. 663, 674 (2009).

⁹¹ See *supra* Part III.

made publicly available on a special “C8 Science Panel” website.”⁹² This transparency enforces the “community standards” of scientific accuracy and even more importantly ensures the non-arbitrariness principle.

Overall, the C8 Science Panel is able to better preserve fairness in evaluating technical science, combating human attention spans, creating a consistent result among litigants, and providing a transparent decision making process. Additionally, the C8 Science Panel is at least as good, if not better, than a traditional jury in preserving an objective, neutral, and detached arbiter.

B. Limitations of the C8 Science Panel’s Ability to Preserve Fairness

The C8 Science Panel’s ability to preserve fairness is limited in a few ways. First, the novel nature of the Panel’s findings could be criticized for lacking the type of scientific peer review that typically accompanies scientific research.⁹³ Therefore, the formulation of results is not necessarily reflective of accepted *scientific* community standards.⁹⁴ Similarly, there is a risk that current limitations in scientific methodology limit the efficacy of the Panel in its ability to render a scientific decision regarding any particular disease. While hard science may sometimes be inconclusive, a jury reflects a more malleable community standard of reasonability—thus juries may be able to make inferential leaps where a properly grounded science panel cannot.⁹⁵ This limitation in inference, however, is balanced by the non-arbitrariness principle discussed above.⁹⁶ A scientific determination—which arguably should have only one correct answer⁹⁷—that is consistent for purposes of large scale scientific litigation is more reflective of the “consensus” a jury must reach. Any inferential step a jury may make is likely not worth the loss of credibility the judicial system would suffer as a result of inconsistent causation outcomes.

Additionally, the C8 Science Panel does not improve upon a traditional jury’s unfamiliarity with substantive law.⁹⁸ Scientists, while highly educated,

⁹² *The Science Panel Website Home*, *supra* note 10. Piggybacking from transparency, the panel’s findings could be transferred to governmental agencies, like the EPA. This helps expand the marketplace of knowledge for regulation of companies and preservation and cleanup of environments.

⁹³ Berger, *supra* note 79, at 465–66.

⁹⁴ *See id.*; *supra* Part III (discussing that community standards ensure fairness).

⁹⁵ Hall et al., *supra* note 43, at 4–7.

⁹⁶ *See supra* Part III.

⁹⁷ For example, general causation is theoretically *always* the same regarding consumption of C8 and kidney cancer, but, without independent evaluation of this face a two separate juries may not find general causation in two C8 personal injury cases regarding kidney cancer. *See supra* note 62.

⁹⁸ Additionally, there is an issue with charging a science panel to come to a legal conclusion where the legal standard for causation (or another element) may not be consistent among states. *See MDL ECF No. 3972*, *supra* note 35, at 14–15. For example, in *Bartlett*, Defendant attempted to attack the binding nature of the C8 Science Panel findings because

cannot be said to be generally familiar with legal standards of adjudication. This unfamiliarity, however, may not be a bad attribute. While a jury is limited by its lack of legal knowledge, that may be by design. A wealth of legal knowledge may limit the ability of a jury to listen to the facts before it and render an objective verdict. Similarly, a science panel that is well versed in legal standards of causation may not be able to put that out of their minds while assessing the scientific evidence before it.⁹⁹

Another possible limitation of the C8 Science Panel is the lack of appellate redress. Whether the “No Probable Link” plaintiffs were given sufficient process is indeterminate. By terms of the *Leach* Settlement, those litigants with “No Probable Link” diseases are forever barred from suit.¹⁰⁰ While, taking the decision away from the jury is certainly more efficient for parties to the actual lawsuit, for the “No Probable Link” plaintiffs, there is no appellate structure for redress.¹⁰¹ While DuPont reserved the right to contest specific causation and damages, there is no ability preserved by the parties to appeal the C8 Science Panel’s factual findings regarding general causation.¹⁰² The C8 Science Panel only found six out of many illnesses studied to have a probable link to C8 exposure.¹⁰³ The inability of the “No Probable Link” plaintiffs to appeal the C8 Science Panel findings is a serious limitation of the C8 Science Panel’s ability to advance fairness in adjudication. Importantly, though, the class of plaintiffs agreed to this result—plaintiffs knew that if the C8 Science Panel did not find a “Probable Link” there would be no ability to file suit.

Therefore a jury is limited by its potential lack of accepted community standards in achieving scientific results, possible limitations in the current ability of science determine a result, the Panel’s unfamiliarity with legal standards, and lack of appellate redress for certain plaintiffs.

C. Summary: Determining What Is Most “Fair” for Complex Scientific Litigation

Ultimately, what is most “fair” in determining causation for complex scientific litigation remains to be seen. The C8 Science Panel in *Bartlett*, though, is a good example of preserving traditional jury fairness.¹⁰⁴ Within the normative framework,¹⁰⁵ the most significant limitation of the C8 Science Panel

the Ohio Standard for general causation in toxic torts is worded slightly differently than the standard for causation used by the C8 Science Panel. *Id.*

⁹⁹ See *supra* Part III. There is always the chance that a legally educated science panel would research and conclude results with legal, as opposed to scientific, standards in mind. See *supra* Part III.

¹⁰⁰ See *supra* note 19.

¹⁰¹ See *supra* note 19.

¹⁰² See *supra* note 19.

¹⁰³ See *supra* note 32. See generally *C8 Study Publications*, *supra* note 44 (listing numerous links to human disease studies and the design of the C8 community health study).

¹⁰⁴ See *supra* Part IV.A.

¹⁰⁵ See *supra* Part III.

is the lack of appellate redress for “No Probable Link” plaintiffs. This bar on appealing the Panel’s factual findings, however, may be worth the many positive and unique fairness advantages the C8 Science Panel achieved. Unlike a jury, the Panel was able to use scientific expertise to parse through the impenetrable science involved in the C8 litigation and deliver an objective, neutral, and non-arbitrary result to an entire class of personal injury plaintiffs.

V. THE FUTURE OF COMPLEX SCIENTIFIC ADJUDICATION & POLICY PERSPECTIVES IN PRESERVING “FAIRNESS” IN LITIGATION

The courtroom is no stranger to complicated toxic tort litigation.¹⁰⁶ By its nature, however, a jury does not have sophisticated scientific knowledge, which in complicated scientific litigation threatens a jury’s normative role in preserving fairness. In *Bartlett*, the C8 Science Panel’s general causation findings allowed the jury to get past the complex science and decide the factual questions that ascribed legal responsibility to DuPont. Moving beyond *Bartlett*, though, it is important to also consider whether use of a science panel properly preserves due process.

The “fairness” embodied by a jury itself reflects due process¹⁰⁷, therefore it is important to consider the theoretical issues with taking a necessary element of a given claim—here, general causation—away from the jury. The constitutional right to due process has been interpreted by the Supreme Court to protect the right to an impartial jury in criminal and civil cases.¹⁰⁸ What it means to have an impartial jury, however, is not so easily defined. There are plenty of avenues where legal questions are decided that do not involve a jury.¹⁰⁹ For instance, it is established practice for parties to segment litigation,¹¹⁰ or stipulate to a variety of facts before trial.¹¹¹ Many trials are only on damages after parties have stipulated to generally liability.¹¹² Further, when it comes to complex

¹⁰⁶ See generally Neal Ellis Jr., *Introduction*, in TOXIC TORT LITIGATION 1–14 (D. Alan Rudlin ed., 2007).

¹⁰⁷ See *supra* Part II.

¹⁰⁸ KASPER, *supra* note 48, at 6. In the *Leach* Settlement, parties waived a right to a jury trial on the issue of general causation by agreeing to a bar on suits regarding “No Probable Link” plaintiffs as well as an agreement by Defendant DuPont not to “contest the issue of General Causation.” *Leach* Settlement, *supra* note 13, § 3.3; *Bartlett* Complaint, *supra* note 5, at paras. 142–43.

¹⁰⁹ WOODLEY, *supra* note 57, at 77–79; see also *Alternative Dispute Resolution*, BLACK’S LAW DICTIONARY (10th ed. 2014) (defining alternative dispute resolution as “[a]ny procedure for settling a dispute by means other than litigation, as by arbitration or mediation”).

¹¹⁰ See Derek A. Shoemake, *Bifurcation: A Powerful but Underutilized Tool in South Carolina Civil Litigation*, 59 S.C. L. REV. 433 (2008); ELI’s Gulf Team, *supra* note 2 (discussing the segmented *Deepwater Horizon* litigation).

¹¹¹ Misty C. Duke et al., *The Effect of Liability on Damage Awards in a Personal Injury Case*, 21 PSYCHOL. PUB. POL’Y & L. 265, 265 (2015).

¹¹² See *id.*

scientific questions, a jury may even be *more* impartial where excessively complicated scientific questions are decided by those with technical training and traditional legal issues remain with the jury.¹¹³

Moving beyond due process concerns with taking legal questions away from a jury, there is a question of whether it is appropriate—as a matter of public policy—to contract around a jury decision. Here, DuPont arguably traded its “burden” of defending the general causation element for each C8 lawsuit in exchange for defending fewer lawsuits.¹¹⁴ Here, one of the biggest hurdles in toxic tort litigation—general causation—was already decided in favor of any “Probable Link” plaintiff.¹¹⁵ The C8 Science Panel’s findings, in effect, created an irrebuttable presumption of causation in favor of any defendant who suffered from one of the six “Probable Link” diseases.¹¹⁶ Those plaintiffs have a reduced litigation burden by virtue of having general causation pre-determined, *but* as the *Leach* Settlement mandates Plaintiffs whose disease did not have a probable link are forever barred from suit against DuPont.¹¹⁷ Thus, DuPont is *certain* that it will only have to defend suits regarding those six “Probable Link” diseases and no more. In a sense of fairness and policy, this factor is unclear. But, it is certainly a method of adjudication worth considering for Defendants. At a minimum, DuPont may plan its litigation strategy more concretely and “Probable Link” plaintiffs may file suit knowing they have a higher likelihood of success.¹¹⁸

Despite any theoretical or policy issues with segmenting toxic tort litigation, the C8 Science Panel in *Bartlett*, was able to replicate traditional fairness-preserving attributes normally employed by a jury. In order to improve upon the *Bartlett* C8 Science Panel, future panels of this sort may consider a method of “scientific review” in order to combat any fairness issues with the C8 Science Panel’s lack of appellate review.

Litigation over the consequences of chemical risks is not going to abate. Global chemical production is predicted to grow and keep growing.¹¹⁹ Use of alternative methods of adjudicating scientific questions is one way to manage this trend and retain the fairness of traditional jury resolution. The C8 Science Panel is one such method of alternative adjudication litigants should consider.

¹¹³ See *supra* Part IV.

¹¹⁴ See *supra* Part II.

¹¹⁵ See Ellis, *supra* note 106, at 4; *supra* Part II.

¹¹⁶ See *Leach* Settlement, *supra* note 13, § 3.3; *supra* Part II.

¹¹⁷ *Leach* Settlement, *supra* note 13, §§ 3.2–3.

¹¹⁸ *Id.* § 4.1 (“Defendant states that it is entering into this Settlement to avoid the time, expense and distraction of embroilment in the current Lawsuit and potential future litigation and disputes relating to present, past or future C-8 exposure claimed to be attributable to the operations of Washington Works.”).

¹¹⁹ Hall et al., *supra* note 43, at 4; see also Matthew Kelly, *Toxic Truth: \$1.6M Court Win for Cancer Victim Exposed to Same Chemical in RAAF Base Leak*, NEWCASTLE HERALD (Oct. 13, 2015), <http://www.theherald.com.au/story/3420585/payout-for-cancer-victim-exposed-to-leaked-chemicals/> [<https://perma.cc/2X8D-JZXA>] (reporting that the US case of *Bartlett v. DuPont* could have a major impact on Australian toxic tort litigation).