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BEHIND THE CURVE: THE NATIONAL MEDIA'S REPORTING ON GLOBAL WARMING

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Abstract: In July 2004, eight States, the City of New York and three land trusts filed suit against five electric power corporations for contributing to global warming. The complaints allege that the defendants are the largest global warming polluters in the United States. The plaintiffs seek an injunction under the federal common law of public nuisance, or in the alternative, under state nuisance law, to require the power companies to reduce their emissions of carbon dioxide. Press coverage of the plaintiffs' global warming case so far has been mixed. The press has generally failed to understand several of the important legal principles involved, including the legal doctrine of public nuisance. The legal case takes place against a backdrop of a long campaign of distortion by industry relating to the science of global warming that has affected the reporting on global warming generally. Historically, the press has unwittingly distorted coverage of global warming science by uncritically accepting the industry view that the science is in dispute.

Introduction

In July 2004, eight States, a city, and three nonprofit land trusts filed suit against six electric power corporations for contributing to

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global warming.¹ Together, the defendants operate approximately 174 fossil fuel-fired power plants in twenty states.² The lawsuit alleges that the defendants' annual emissions of approximately 650 million tons of carbon dioxide are contributing to global warming and that global warming constitutes a public nuisance.³ The lawsuit also alleges that the defendants are the largest global warming polluters in the United States, and among the largest in the world; according to the allegations of the complaint, their annual emissions alone constitute ten percent of all U.S. carbon dioxide emissions.⁴ The plaintiffs seek an injunction under the federal common law of public nuisance, or in the alternative, under state nuisance law, to require the power companies to reduce their emissions.⁵

The plaintiffs in *Connecticut v. American Electric Power Co.* allege that global warming poses threats of severe harm to people, property, and the natural environment.⁶ They also contend that global warming will: (1) increase heat deaths; (2) increase ground-level smog, and hence, suffering from asthma and other respiratory diseases; (3) disrupt water supplies in the Western United States and other places dependent upon snowpack for water supply; (4) intensify the hydrologic cycle, creating more and greater floods and an increased likelihood of drought; (5) reduce water levels in the Great Lakes; (6) disrupt and permanently damage forests and ecosystems; and (7) accelerate sea level rise, thereby causing increased beach erosion, permanent inundation of low-lying coastal property, damage to property and hazard to human safety from larger coastal storm surges, and flooding of salt marshes and tidal wetlands that are vital breeding grounds for fish and shellfish.⁷

¹ Connecticut v. Am. Elec. Power Co., No. 04 Civ. 5669, U.S. Dist. LEXIS 19964, at *6 (S.D.N.Y. Sept. 19, 2005), *appeal docketed*, No. 05-5119-cv (2d Cir.). The governmental plaintiffs are California, Connecticut, Iowa, New Jersey, New York, Rhode Island, Vermont, Wisconsin, and New York City. The land trust plaintiffs are the Open Space Institute, the Open Space Conservancy, and the Audubon Society of New Hampshire.

² Complaint at 45–49, *Am. Elec. Power*, 2005 U.S. Dist. LEXIS 19964 (No. 04 Civ. 5669). The defendants' fossil fuel-fired electricity-generating facilities are located in Alabama, Arkansas, Colorado, Georgia, Florida, Indiana, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, New Mexico, Ohio, Oklahoma, South Dakota, Tennessee, Texas, Virginia, West Virginia, and Wisconsin. *See id.*

³ Am. Elec. Power, 2005 U.S. Dist. LEXIS 19964, at *6-7.

⁴ Id. at *7.

⁵ See id. at *6.

⁶ *Id*.

⁷ Complaint at 30–42, Am. Elec. Power, 2005 U.S. Dist. LEXIS 19964 (No. 04 Civ. 5669).

The federal district court recently dismissed *American Electric Power* on the basis of the nonjusticiable political question doctrine; however, that decision is now on appeal to the Second Circuit Court of Appeals.⁸

I. LEGAL BACKDROP TO THE GLOBAL WARMING PUBLIC NUISANCE CASE

This Part sets forth the legal theories underpinning the public nuisance claim in *Connecticut v. American Electric Power Co.* through a discussion of public nuisances and joint and several liability in the global warming context.

A. Public Nuisance Case Law

A public nuisance is "an unreasonable interference with a right common to the general public." An action to abate a public nuisance is a quasi-criminal exercise of the police power —an important feature relevant to standing and other aspects of the doctrine. Public nuisance "is very comprehensive—it includes everything that endangers life or health, gives offense to the senses, violates the laws of decency, or obstructs the reasonable and comfortable use of property." Public nuisance is widely recognized to have significant "flexibility as a tort concept" and the Restatement definition adopted in 1972 "provides the tort considerable space in which to develop and adapt to the needs of the time." Because of its flexibility, common law nuisance continues to play a vital role in complementing statutory environ-

⁸ See Am. Elec. Power, 2005 U.S. Dist. LEXIS 19964, at *27.

⁹ In re Oswego Barge Corp., 664 F.2d 327, 332 n.5 (2d Cir. 1981) (quoting United States v. Ira S. Bushey & Sons, Inc., 363 F. Supp. 110, 120 (D. Vt 1973)); RESTATEMENT (SECOND) OF TORTS § 821B(1) (1977).

¹⁰ See Brancato v. City of New York, 244 F. Supp. 2d 239, 245 (S.D.N.Y. 2003); John E. Bryson & Angus Macbeth, Public Nuisance, the Restatement (Second) of Torts and Environmental Law. 2 Ecology L.O. 241, 246–47, 249 (1972).

¹¹ United States v. County Bd. of Arlington County, 487 F. Supp. 137, 143 (E.D. Va. 1979).

¹² Bryson & Macbeth, *supra* note 10, at 247, 249. This article is an excellent overview of the Restatement (Second) of Torts definition of public nuisance and the use of public nuisance in environmental law; it was written just as the new definition was being finalized. *Id.* at 241. The authors demonstrate the potency of public nuisance claims in protecting the environment, and argue eloquently for continued vitality of the doctrine in environmental cases. *See generally id.* Ironically, one of the authors—Macbeth—is now defense counsel in *American Electric Power. See* No. 04 Civ. 5669, U.S. Dist. LEXIS 19964, at *6 (S.D.N.Y. Sept. 19, 2005), *appeal docketed*, No. 05-5119-cv (2d Cir.).

mental enforcement tools, particularly to address newly discovered threats. 13

Environmental harm is the quintessential public nuisance. In fact, modern environmental and energy statutes are codifications of the common law of public nuisance:

The theory of nuisance lends itself naturally to combating the harms created by environmental problems... "The deepest doctrinal roots of modern environmental law are found in principles of nuisance.... Nuisance actions have involved pollution of all physical media—air, water, land—by a wide variety of means.... Nuisance actions have challenged virtually every major industrial and municipal activity which is today the subject of comprehensive environmental regulation.... Nuisance theory and case law is the common law backbone of modern environmental and energy law."¹⁴

On the same day that it established the modern framework for the federal common law of public nuisance in *Illinois v. City of Milwaukee* (*Milwaukee I*), 15 the Supreme Court of the United States found that "[a]ir pollution is, of course, one of the most notorious types of public nuisance in modern experience." 16

The complaints in *American Electric Power* invoke federal common law as their primary claim because the dispute involves ambient, interstate air pollution.¹⁷ The Supreme Court held, in its unanimous opinion in *Milwaukee I*, that "[w]hen we deal with air and water in their ambient or interstate aspects, there is a federal common law." ¹⁸ The emissions at issue in the global warming case, in fact, are inher-

¹³ See, e.g., New York v. Shore Realty Corp., 759 F.2d 1032, 1049–53 (2d Cir. 1985) (finding the state not entitled to injunctive relief under federal Superfund statute, but affirming injunction under public nuisance claim); see also Robert Abrams & Val Washington, The Misunderstood Law of Public Nuisance: A Comparison with Private Nuisance Twenty Years After Boomer, 54 Alb. L. Rev. 359, 391–92 (1990) ("Even after the passage of major environmental laws, but before the enactment of statutes in the late 1970s and early 1980s directly addressing the disposal of hazardous waste, public nuisance frequently offered the only remedy to secure the cleanup of toxic dumps.") (citations omitted).

¹⁴ Cox v. City of Dallas, 256 F.3d 281, 291 (5th Cir. 2001) (quoting William H. Rodgers, Jr., Handbook on Environmental Law § 2.1, at 100 (1977)) (second and subsequent alterations in original) (citation omitted).

¹⁵ Illinois v. City of Milwaukee (*Milwaukee I*), 406 U.S. 91, 103–08 (1972).

¹⁶ Washington v. Gen. Motors Corp., 406 U.S. 109, 114 (1972).

¹⁷ See 2005 U.S. Dist. LEXIS 19964, at *6-7.

^{18 406} U.S. at 103.

ently ambient and interstate because carbon dioxide emitted in any one state affects the concentration of carbon dioxide in other states.

Milwaukee I held that federal common law cases addressing interstate pollution give rise to subject matter jurisdiction as a federal question, under 28 U.S.C. § 1331(a), and thus may be filed in federal district court. ¹⁹ Previously, such cases were addressed under the Supreme Court's original jurisdiction, which is exclusive with respect to cases between states and nonexclusive with respect to cases by a state against a citizen of another state. ²⁰ While the jurisdictional aspect of Milwaukee I was new, the recognition of a federal common law cause of action for interstate environmental harm in Milwaukee I was not new.

Milwaukee I remains good law notwithstanding the Court's later decision that the federal common law claim at issue in Milwaukee II was preempted,²¹ because Milwaukee II was based entirely upon legislation enacted after Milwaukee I.²² The Supreme Court has continued to cite Milwaukee I as good law after Milwaukee II.²³ Moreover, in International Paper Co. v. Ouellette, the Court stated that "the control of interstate pollution is primarily a matter of federal law." ²⁴ For unregulated interstate or ambient pollution, Milwaukee I remains good law.

The doctrinal roots of *Milwaukee I* are deep, reaching back at least to *Missouri v. Illinois*, in which the Court permitted a downstream state to seek injunctive relief against an upstream state for sewage pollution of a river.²⁵ The Court held that the right of a state to seek relief in federal court against an interstate nuisance was inherent in a constitutional scheme in which the states gave up their rights to resolve such disputes with military force, stating:

[I]t must surely be conceded that, if the health and comfort of the inhabitants of a State are threatened, the State is the proper party to represent and defend them. If Missouri were an independent and sovereign State all must admit that she could seek a remedy by negotiation, and, that failing, by

¹⁹ See id. at 98-108.

²⁰ See 28 U.S.C. § 1251 (2000).

²¹ City of Milwaukee v. Illinois (*Milwaukee II*), 451 U.S. 304, 325–32 (1981).

²² See id. at 307-08.

²³ For example, in *Texas Indus., Inc. v. Radcliff Materials, Inc.*, decided one month after *Milwaukee II*, the Supreme Court held that "federal common law exists" in "interstate and international disputes implicating the conflicting rights of States or our relations with foreign nations" and cited *Milwaukee I* as its primary example of such proper federal common law. 451 U.S. 630, 641 & n.13 (1981).

²⁴ 479 U.S. 481, 492 (1987).

²⁵ See Missouri v. Illinois, 180 U.S. 208, 241 (1901).

force. Diplomatic powers and the right to make war having been surrendered to the general government, it was to be expected that upon the latter would be devolved the duty of providing a remedy and that remedy, we think, is found in the constitutional provisions we are considering.²⁶

Since *Missouri*, the Supreme Court repeatedly has recognized the federal common law cause of action for interstate environmental harm.²⁷ The Court deems these cases "nuisance actions," ²⁸ which encompass a broad class of interstate harms including economic and other injuries.²⁹

Justice Holmes' opinion for the Court in *Georgia v. Tennessee Copper Co.* remains the Court's most eloquent exposition of the federal common law of public nuisance.³⁰ In that case, Georgia sought an injunction against copper smelting facilities in Tennessee whose sulfur dioxide emissions—the same emissions that today are known to cause acid rain—crossed into Georgia.³¹ The Court again based its decision upon the inherent right of a state to defend itself even in a constitutional scheme in which states renounced their rights to the use military force:

When the States by their union made the forcible abatement of outside nuisances impossible to each, they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining *quasi*-sovereign interests; and the alternative to force is a suit in this court.

. . .

 $^{^{26}}$ Id.

²⁷ See, e.g., New Jersey v. City of New York, 283 U.S. 473, 476–77 (1931) (suing to restrain ocean dumping of trash); North Dakota v. Minnesota, 263 U.S. 365, 366 (1923) (seeking to restrain drainage changes increasing the flow of water in an interstate stream); New York v. New Jersey, 256 U.S. 296, 298 (1921) (suing to enjoin the discharge of sewage into New York harbor); Georgia v. Tenn. Copper Co., 206 U.S. 230, 236–38 (1907) (suing to restrain sulfurous air emissions crossing state lines). Interestingly, in *Ohio v. Wyandotte Chemicals Corp.*, the Court found that interstate pollution is a matter of state law, 401 U.S. 493, 495–99 (1971), but this holding was reversed the following year in *Milwaukee I. See Milwaukee II*, 451 U.S. at 327 n.19 (stating that *Milwaukee I* overruled the indication in *Wyandotte* that state law would control); *Milwaukee I*, 406 U.S. 91, 102 n.3 (1972).

²⁸ Milwaukee I, 406 U.S. at 106-07.

²⁹ See, e.g., Georgia v. Pa. R.R. Co., 324 U.S. 439, 443 (1945) (suing to enjoin discriminatory freight rates); Kansas v. Colorado, 206 U.S. 46, 47–48 (1907) (seeking to restrain the diversion of water from interstate stream).

³⁰ See 206 U.S. at 236-39.

³¹ Id. at 236.

It is a fair and reasonable demand on the part of a sovereign that the air over its territory should not be polluted on a great scale by sulphurous acid gas, that the forests on its mountains, be they better or worse, and whatever domestic destruction they have suffered, should not be further destroyed or threatened by the act of persons beyond its control, that the crops and orchards on its hills should not be endangered from the same source. If any such demand is to be enforced this must be, notwithstanding the hesitation that we might feel if the suit were between private parties, and the doubt whether for the injuries which they might be suffering to their property they should not be left to an action at law.³²

Significantly, the traditional balancing of interests of the parties that a court undertakes in an equitable case, and in cases between states, is not appropriate in a case between a sovereign state and a private party, especially where public health is at stake.³³ This is made clear from *Tennessee Copper*, where the Court stated, "[t]his court has not quite the same freedom to balance the harm that will be done by an injunction against that of which the plaintiff complains, that it would have in deciding between two subjects of a single political power,"³⁴ and "[t]he possible disaster to those outside the State must be accepted as a consequence of [Georgia's] standing upon her extreme rights."³⁵ Based upon *Tennessee Copper*, the Seventh Circuit has held:

[W]hen the polluting activity is shown to endanger the public health, injunctive relief is generally appropriate.

Similarly, while determining whether to issue an injunction generally involves a balancing of the interests of the parties, the balance is of less importance when the plaintiff is a sovereign state. And if the pollution endangers the public health, injunctive relief is proper, without resort to any balancing.³⁶

In short, the current global warming case invokes a well-established body of public nuisance case law. The harms identified in the

 $^{^{32}}$ Id. at 237–38 (citation omitted). These passages were later relied upon by the Court in Milwaukee I. See 406 U.S. at 104–05.

³³ See Tenn. Copper, 206 U.S. at 237–38.

³⁴ Id. at 238.

³⁵ Id. at 239.

³⁶ Illinois v. City of Milwaukee, 599 F.2d 151, 166 (7th Cir. 1979) (citations omitted), rev'd on other grounds, Milwaukee II, 451 U.S. 304, 312, 332 (1981).

case clearly involve harms to public rights and benefits including: public safety, due to threats from heat deaths and flooding; public health, due to threats from heat stress and increase in ground-level ozone smog; the integrity of natural resources, such as water supplies and forests; and public property, due to damage from inundation of coastal land and interference with navigation. These are typical public harms for traditional public nuisance claims. Moreover, the harms from global warming are as long-lasting and permanent as possible because the effects of global warming will be felt for thousands of years. Unquestionably, the harms from global warming present a quintessential public nuisance.

B. Joint and Several Liability

The principle of joint and several liability for contributing to an indivisible injury applies to the global warming case. Public nuisance liability attaches where a defendant causes or contributes to a public nuisance.³⁷ Where the actions of numerous parties aggregate to produce a single injury, each party is jointly and severally liable.³⁸ The law has long been clear that a polluter may be enjoined from contributing to a public nuisance regardless of the number of co-contributors, even if the defendant's contributions alone would be insufficient to create the nuisance.

Three seminal state law cases that have been relied upon in federal common law are illustrative. In *People v. Gold Run Ditch & Mining Co.*, California brought a public nuisance abatement action against one of several mining companies that was dumping mine tailings in a river, causing downstream flooding.³⁹ The Supreme Court of Californian.

³⁷ See, e.g., Cox v. City of Dallas, 256 F.3d 281, 292 n.19 (5th Cir. 2001).

³⁸ See Restatement (Second) of Torts § 840E (1977) ("the fact that other persons contribute to a nuisance is not a bar to the defendant's liability for his own contribution"); id. § 875 ("Each of two or more persons whose tortious conduct is a legal cause of a single and indivisible harm to the injured party is subject to liability to the injured party for the entire harm."); see also City of New York v. Beretta U.S.A. Corp., 315 F. Supp. 2d 256, 282 (E.D.N.Y. 2004) ("Where it is difficult or impossible to separate the injury caused by one contributing actor from that caused by another and where each contributing actor's responsibility individually does not constitute a substantial interference with a public right, defendants may still be found liable for conduct creating in the aggregate a public nuisance if the suit is one for injunctive relief." (citing NAACP v. Acusport, Inc. 271 F. Supp. 2d 435, 493 (E.D.N.Y. 2003)); Prosser and Keeton on the Law of Torts § 52, at 354 (W. Page Keeton et al. eds., 5th ed. 1984) ("Pollution of a stream to even a slight extent becomes unreasonable when similar pollution by others makes the condition of the stream approach the danger point.").

³⁹ 4 P. 1152, 1153–54 (Cal. 1884).

nia affirmed an injunction even though the trial court found that the defendant's contribution alone might not have been harmful.⁴⁰ The court quoted the following passage from the trial court's ruling:

"On the American river and its tributaries a vast amount of mining was done in early times, and up to this time a great deal is being done, besides that by the defendant. No other mine contributes annually more *detritus* to the river than the defendant; still I am unable to say that defendant's mine alone, without reference to the *debris* from other mines, materially contributes to the evils mentioned; or, in other words, if there were no mining operations save those of the defendant, I am not prepared to say that it would materially injure the valley lands or the navigation of the river. It is the aggregate of *debris* from all the mines which produces the injuries mentioned in these findings."⁴¹

Although the defendant's pollution alone would not have created the nuisance, the court held that "in an action to abate a public or private nuisance all persons engaged in the commission of the wrongful acts which constitute the nuisance may be enjoined jointly or severally." ⁴²

Likewise, in *Woodyear v. Schaefer*,⁴³ the Court of Appeals of Maryland rejected the defendant's argument that its pollution alone was insignificant in light of the large number of co-contributors in a nuisance action by a downstream landowner:

It is no answer to a complaint of nuisance that a great many others are committing similar acts of nuisance upon the stream. Each and every one is liable to a separate action, and to be restrained.

The extent to which the appellee has contributed to the nuisance, may be slight and scarcely appreciable. Standing alone, it might well be that it would only, very slightly, if at all, prove a source of annoyance. And so it might be, as to each of the other numerous persons contributing to the nuisance. Each standing alone, might amount to little or nothing. But it is when all are united together, and contribute to a common result, that they become important as factors, in

⁴⁰ Id. at 1157, 1160.

⁴¹ Id. at 1156.

⁴² *Id.* at 1157.

^{43 57} Md. 1, 13 (1881).

producing the mischief complained of. And it may only be after from year to year, the number of contributors to the injury has greatly increased, that sufficient disturbance of the appellant's rights has been caused to justify a complaint.

One drop of poison in a person's cup, may have no injurious effect. But when a dozen, or twenty, or fifty, each put in a drop, fatal results may follow. It would not do to say that neither was to be held responsible.⁴⁴

In *Lockwood Co. v. Lawrence*, a downstream owner sought an injunction against several sawmill operators that were dumping wood shavings and refuse wood into the stream above the plaintiffs' property. ⁴⁵ The plaintiffs acknowledged that "it is impossible to distinguish what particular share of damage each has inflicted or will inflict," but contended that each was contributing something to the nuisance. ⁴⁶ The Supreme Judicial Court of Maine held that injunctive relief was proper notwithstanding the fact that each defendant's contribution alone might have been harmless, stating:

In the case at bar, it may be that the act of any one respondent alone might not be sufficient cause for any well grounded action on the part of the complainants; but when the individual acts of the several respondents, through the combined results of these individual acts, produce appreciable and serious injury, it is a single result, not traceable perhaps to any particular one of these respondents, but a result for which they may be liable in equity as contributing to the common nuisance, as we have before stated.⁴⁷

All three of these cases were relied upon as part of the federal common law of public nuisance in *United States v. Luce*, in which a fish processing plant—one of two contributors to air pollution that constituted a nuisance at a nearby federal facility—was held jointly and severally liable.⁴⁸ More recently, the district court in *Illinois v. Milwaukee* imposed joint and several liability in a multiple polluter case as a matter of federal common law. "It is impossible to demonstrate that any Illinois resident has been infected by pathogens originating in Mil-

⁴⁴ *Id.* at 9–10 (citations omitted).

^{45 77} Me. 297, 302-03 (1885).

⁴⁶ Id. at 303.

⁴⁷ Id. at 309-10.

⁴⁸ 141 F. 385, 390, 411-12 (D. Del. 1905).

waukee sewage. Viruses and bacteria do not bear labels "⁴⁹ None-theless, the court imposed liability. ⁵⁰ The plaintiffs in that case not only alleged harm from pathogens, but also from the nutrients phosphorus and nitrogen contained in the sewage, which contributed to the eutrophication of an entire Great Lake. ⁵¹ The court held:

Anyone who contributes to the injury is liable, even though his conduct, standing alone, might not have been sufficient to cause the injury. Here, it may be that Milwaukee's one million pounds of phosphorous a year would not cause a problem in the lake if there were no other phosphorous being added. But there is other phosphorous being added, and it is clear that the total amount of phosphorous being put into the lake is causing a problem.

There may be a discharge so small that, as a practical matter, it can be regarded as de minimis, even though as a logical matter it is still part of the whole. But clearly that is not this case. We are dealing here with the most significant point source on the lake.⁵²

Every homeowner in the Lake Michigan watershed who used traditional laundry detergent was also contributing phosphorous to the lake. Every farm in the watershed was a non-point source contributing nutrients to the lake. ⁵³ Yet, this did not bar a case against the watershed's biggest point source polluters under federal common law. Indeed, it did not even bar liability following a full trial on the merits. ⁵⁴ Only the fact that Congress passed a statute that eventually preempted the claim came to the defendants' rescue. ⁵⁵ Thus, under federal and state common law of public nuisance, it is simply not a defense that a defendant's pollution alone would not have created the nuisance. ⁵⁶ A contributor is liable when his pollution combines with that of others to produce the nuisance. ⁵⁷

⁴⁹ Illinois v. City of Milwaukee, No. 72 C 1253, 1973 U.S. Dist. LEXIS 15607, at *16 (N.D. Ill. 1973) aff'd in part, rev'd in part, 599 F.2d 151 (7th Cir. 1979), vacated on other grounds, 451 U.S. 304 (1981).

⁵⁰ See id. at *17.

 $^{^{51}}$ See id. at *20.

⁵² Id. at *22-23.

⁵³ See id. at *16.

⁵⁴ See id. at * 25.

⁵⁵ Milwaukee II, 451 U.S. 304, 325-26 (1981).

⁵⁶ Luce, 141 F. at 412.

⁵⁷ *Id*.

Federal courts frequently apply this principle of joint and several liability as a matter of federal common law in multiple-polluter cases under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).⁵⁸ Such cases typically involve numerous responsible parties who have contributed hazardous waste to a dump site. Congress did not legislatively establish joint and several liability in CERCLA; rather, federal courts have developed joint and several liability in such cases as a matter of federal common law ever since the decision in *United States v. Chem-Dyne Corp.* ⁵⁹ Joint and several liability under federal common law has now become a basic tenet of CERCLA law. ⁶⁰ The principle of joint and several liability for multiple polluters is thus well-established under federal common law and familiar to the courts.

The principle of joint and several liability for multiple polluters is highly significant. The principle affects the standing inquiry insofar as courts may not "raise the standing hurdle higher than the necessary showing for success on the merits in an action." ⁶¹ Thus, standing rules of cause-in-fact and redressability cannot rewrite the controlling liability rules; rather, a court must look to the entire corpus of pollution from all contributors when assessing these elements of standing. The principle of joint and several liability also means that other polluters are not indispensable parties because it is blackletter law that joint tortfeasors are not indispensable parties. ⁶²

^{58 42} U.S.C. §§ 9601-9675 (2000).

⁵⁹ 572 F. Supp. 802, 808–10 (S.D. Ohio 1983) (holding that federal common law controls and applying Restatement (Second) of Torts principles of joint and several liability for indivisible injuries).

⁶⁰ See, e.g., United States v. Alcan Aluminum Corp., 990 F.2d 711, 722 (2d Cir. 1993) ("[W]here each tortfeasor causes a single indivisible harm, then damages are not apportioned and each is liable in damages for the entire harm."); O'Neil v. Picillo, 883 F.2d 176, 178 (1st Cir. 1989) ("The rule adopted by the majority of courts, and the one we adopt, is based on the Restatement (Second) of Torts: damages should be apportioned only if the defendant can demonstrate that the harm is divisible.").

⁶¹ Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., 528 U.S. 167, 181 (2000).

⁶² See, e.g., Temple v. Synthes Corp., 498 U.S. 5, 7 (1990) (per curiam) ("It has long been the rule that it is not necessary for all joint tortfeasors to be named as defendants in a single lawsuit."); Samaha v. Presbyterian Hosp. of New York, 757 F.2d 529, 531 (2d Cir. 1985) ("it is settled federal law that joint tortfeasors are not indispensable parties"); New York v. Shore Realty Corp., No. CV-84-0864, 1984 U.S. Dist. LEXIS 16183, at *4 (E.D.N.Y. June 4, 1984) ("It is well settled law that one tortfrasor [sic] may not compel the joinder of other alleged joint tortfeasors under Rule 19.").

II. REPORTING ON GLOBAL WARMING IN GENERAL

A. Deception and Denial

A central problem that has plagued reporting on global warming for over a decade has been the tendency of reporters to accept uncritically the industry view that the science of global warming is in dispute. Because reporters are trained to report both sides of a story, they repeatedly have fallen prey to the industry tactic of trying to create a scientific dispute when in fact there is none. However, as journalist Ross Gelbspan has observed, the journalistic rule to report both sides of a story is appropriate for opinions, but not for facts:

The ethic of journalistic balance comes into play when there is a story involving opinion: Should abortion be legal? Should we invade Iraq? Should we have bilingual education or English immersion? At that point, an ethical journalist is obligated to give each competing view its most articulate presentation—and equivalent space.

But when it's a question of fact, it's up to a reporter to dig into a story and find out what the facts are. The issue of balance is not relevant when the focus of a story is factual. In this case, what is known about the climate comes from the largest and most rigorously peer-reviewed scientific collaboration in history.

As James Baker, head of the U.S. National Atmospheric and Oceanic Administration, said, "There's no better scientific consensus on any other issue I know—except perhaps Newton's second law of dynamics." ⁶³

A recent study of this problem attempted to determine whether there indeed was a disconnect between the scientific consensus on global warming and the reporting on the problem in America's leading newspapers.⁶⁴ The investigators started by examining two scientific issues with respect to global warming: the existence of anthropogenic global warming and the actions to be taken in response to global warming.⁶⁵ They found a clear scientific consensus that human

⁶³ Ross Gelbspan, Boiling Point 73 (2004).

⁶⁴ Maxwell T. Boykoff & Jules M. Boykoff, *Balance as Bias: Global Warming and the US Prestige Press*, 14 Global Envil. Change 125, 131 (2004). The authors are professors of Environmental Studies and Government, respectively. *Id.* at 125.

⁶⁵ *Id*.

emissions of greenhouse gases are the dominant force behind global warming and that immediate and mandatory actions are necessary to combat the problem. 66 They next examined over 3500 articles in the New York Times, Los Angeles Times, Washington Post, and Wall Street Journal from 1988 to 2002 and found that the majority of articles provided "balanced" coverage that gave the incorrect impression of the significant scientific dispute on these topics. 67

This study probably understates the extent of the misreporting problem with respect to the existence of anthropogenic global warming by defining the scientific consensus as admitting some debate with respect to the dominant cause of recent global warming.⁶⁸ A more recent, deeper survey of nearly 1000 scientific articles, published in peerreviewed scientific journals, found that no papers addressing global climate change disagreed with the consensus position of the Intergovernmental Panel on Climate Change (IPCC), which is that "[M]ost of the observed warming over the last 50 years is likely to have been due to the increase in greenhouse gas concentrations." As pointed out in this survey, the American Meteorological Society, the American Geophysical Union, and the American Association for the Advancement of Science "all have issued statements in recent years concluding that the evidence for human modification of climate is compelling." ⁷⁰

Earlier this year, the national science academies of Brazil, Canada, China, France, Germany, India, Italy, Japan, Russia, the United Kingdom, and the United States issued a joint statement claiming that:

[T]here is now strong evidence that significant global warming is occurring.... It is likely that most of the warming in recent decades can be attributed to human activities....

. . . .

It is vital that all nations identify cost-effective steps that they can take now, to contribute to substantial and long-term reduction in net global greenhouse gas emissions.

⁶⁶ Id. at 131.

⁶⁷ Id. at 128, 129.

⁶⁸ See id. at 129.

⁶⁹ Naomi Oreskes, *The Scientific Consensus on Climate Change*, 306 Sci. 1686, 1686 (2004) (alteration in original) (quoting Intergovernmental Panel on Climate Change, Climate Change 2001: Impacts, Adaptation, and Vulnerability 21 (J.J. McCarthy et al. eds., 2001)).

⁷⁰ *Id*.

Action taken now to reduce significantly the build-up of greenhouse gases in the atmosphere will lessen the magnitude and rate of climate change.⁷¹

Yet, despite this extraordinary consensus among scientists that grows stronger every year, news stories continue to report a supposed dispute among scientists. One recent example from the *Washington Post* states:

Scientists have documented a gradual increase in Earth's temperature in recent decades. Most authorities on climate change believe that the burning of fossil fuels, such as coal and gasoline, is at least partially responsible for the rise. Some scientists disagree, however, saying the increase may be the result of normal weather cycles.⁷²

Ironically, this misleading statement appears in an article reporting on the results of a *Washington Post*-ABC News poll regarding public attitudes on global warming. The article reports that while fifty-six percent of respondents believed that global warming was occurring, only forty-one percent said it requires immediate governmental action and forty-seven percent adhere to the position that the problem must be studied further before the government acts. The position that more study is required prior to government action is, of course, the fossil fuel industry's standard position and is a means of delaying action to address global warming. The article's statement about an alleged scientific dispute will, of course, only further the public misperception that there is such a legitimate dispute, and will thus affect one of the central questions being polled by the *Washington Post*—whether further scientific study is required before taking action. To

Why is the press missing the boat so badly on global warming? The perception of a divided scientific community is largely the product of a long and sophisticated public relations campaign by the electric power, coal, oil, and automobile industries to mislead the public. This campaign has, as its central feature, promotion of the idea that there is a dispute about global warming through the use of industry-

⁷¹ Joint Science Academies' Statement: Global Response to Climate Change, http://nationalacademies.org/onpi/06072005.pdf (last visited Apr. 2, 2006) (citations omitted).

⁷² Richard Morin, *Beliefs About Climate Change Hold Steady*, WASH. POST, Oct. 2, 2005, at A16 (emphasis added).

⁷³ *Id*.

⁷⁴ *Id*.

⁷⁵ See id.

funded "skeptics." For the most part, these skeptics have some scientific training but are not climatologists. They are not "skeptics" in the positive sense in which scientists should be skeptical with an open and critical mind subject to persuasion by the best evidence. Rather, their skepticism is one-sided, taking issue only with scientific evidence that would tend to harm the interests of their corporate paymasters. Tellingly, their criticisms are almost never published in peer-reviewed journals but on the pages of the *Wall Street Journal's* editorial page, the *Washington Times*, or in industry-funded "journals" that are not peer-reviewed. The use of industry-funded "skeptics" to cast doubt on the science seems to have succeeded in fooling many journalists who report on global warming—even as a subset of those journalists have unmasked this effort.⁷⁷

In addition, industry has produced a bewildering array of organizations with names such as the Advancement of Sound Science Coalition, Global Climate Coalition (GCC), and the Science & Environmental Policy Project, which sprang up in the 1990s as global warming science matured and policymakers became serious about tackling the problem with mandatory emissions reductions. GCC—formed by automobile, oil, coal, and electric power corporations—was one of the most forceful of these industry groups. GCC "maintain[ed] that global warming is speculation," and its tactics have been compared to those of the Tobacco Institute. The campaign continues today:

⁷⁶ See, e.g., John H. Cushman, Jr., Industrial Group Plans To Battle Climate Treaty, N.Y. Times, Apr. 26, 1998, at A1 (reporting that "[a]n informal group of people working for big oil companies, trade associations and conservative policy research organizations" collaborated to "draft[] an ambitious proposal to spend millions of dollars to convince the public that [a treaty on global warming] is based on shaky science"); David Ivanovich, Industry Backs Global Warming Skeptics, Houston Chron., Oct. 6, 1996, at 1E; Jennifer 8. Lee, Exxon Backs Groups that Question Global Warming, N.Y. Times, May 28, 2003, at C5; Jeff Nesmith, Industry Promotes Skeptical View of Global Warming, Cox News Service, May 29, 2003; Mary O'Driscoll, Greenhouse Ads Target 'Low-Income' Women, 'Less-Educated' Men, Energy Daily, June 24, 1991, at 1; William K. Stevens, Science Academy Disputes Attack on Global Warming, N.Y. TIMES, Apr. 22, 1998, at A22; Matthew L. Wald, Pro-Coal Ad Campaign Disputes Warming Idea, N.Y. Times, July 8, 1991, at D2 (stating that the Edison Electric Institute helped organize a campaign to "reposition global warming as theory and not fact" (internal quotation marks omitted)); see also David A. Grossman, Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation, 28 COLUM. J. ENVTL. L. 1, 4 (2003) (discussing "some fossil fuel companies' efforts to encourage public uncertainty and inaction on global warming").

⁷⁷ See sources cited supra note 76.

⁷⁸ See, e.g., Cushman, supra note 76; David Rubenstein, A Counter-SLAPP in the Offing?, Corp. Legal Times, July 2000, at 70.

⁷⁹ See Rubenstein, supra note 78.

⁸⁰ *Id*.

American Electric Power Service, a defendant in the current public nuisance case, is a former board member of the now-disbanded GCC.⁸¹

One of GCC's more notorious deceptions was the widespread distribution in 1998 of a petition—supposedly signed by 17,000 scientists opposing the Kyoto Protocol—accompanied by a "scientific study" concluding that carbon dioxide emissions pose no climatic threat and instead amount to "a wonderful and unexpected gift from the industrial revolution."82 The petition mimicked the format of the National Academy of Sciences, and was so misleading that the Academy took the unusual step of distancing itself from the petition in order to mitigate the confusion.⁸³ It later became clear that the organization that assembled the petition—the Oregon Institute of Science and Medicine—was a self-described "very small" endeavor run by a biochemist who also advocates nuclear shelters and home schooling.⁸⁴ Even more disconcerting is the fact that among the list of 17,000 "scientists" who signed the petition via the Internet, were the names of fictional television characters from M*A*S*H, the singer James Brown, and a singer from the Spice Girls.85

A somewhat similar petition had been organized two years earlier by Dr. S. Fred Singer, one of the most notorious industry-funded skeptics. Titled "The Leipzig Declaration on Global Climate Change," the petition stated that "there does not exist today a general scientific consensus about the importance of greenhouse warming from rising levels of carbon dioxide" and was allegedly signed by over one hundred "independent scientists concerned with atmospheric and climate problems." The vast majority of the signatories were not climatologists; rather, they included medical doctors, nuclear scientists, one

 $^{^{\}rm 81}$ Press Release, Global Climate Coalition, Global Climate Coalition Membership (on file with author).

⁸² Arthur B. Robinson & Zachary W. Robinson, *Science Has Spoken: Global Warming Is a Myth*, Wall St. J., Dec. 4, 1997, at A22; Stevens, *supra* note 76, at A22; Or. Inst. of Sci. & Med., Global Warming Petition, http://www.oism.org/oism/s32p31.htm (last visited Mar. 23, 2006).

⁸³ Stevens, *supra* note 76.

⁸⁴ *Id.*; Or. Inst. of Sci. & Med., Overview, http://www.oism.org/oism/s31p21.htm (last visited Mar. 23, 2006).

⁸⁵ Campaign ExxonMobil, How ExxonMobil is Misleading Shareholders, Policymakers and the Public About Global Warming 4, *available at* http://www.campaignexxonmobil.org/pdf/misleading.pdf (last visited Apr. 2, 2006).

⁸⁶ Sci. & Envtl. Policy Project, The Leipzig Declaration on Global Climate Change, http://www.sepp.org/leipzig.html (last visited Apr. 2, 2006); Sci. & Envtl. Policy Project, Signatories to the Leipzig Declaration, http://www.sepp.org/LDsigs.html (last visited Apr. 2, 2006).

expert on flying insects, and some people who could not be located.⁸⁷ Approximately one-third of the European signatories, when contacted by the Danish Broadcasting Company, claimed they had never signed it.⁸⁸ One signatory was Roy Leep, a weatherman for a local news station in Tampa, Florida, who does not have a college degree.⁸⁹ Another signatory was Richard F. Groeber, who runs Dick's Weather Service in Springfield, Ohio.⁹⁰ When asked if he was a scientist, he replied "I sorta consider myself so . . . I had two or three years of college training in the scientific area, and 30 or 40 years of self-study." ⁹¹

Although these episodes may seem comical at some level for their Keystone Cops qualities, these were serious efforts by highly sophisticated industries to discredit the science of global warming. Moreover, repeatedly trotting out skeptics to counter the mainstream scientific consensus has been successful in convincing many people that there is a serious scientific debate over whether global warming is even happening:

[D]espite being rather easy targets for their critics, the skeptics do seem to have been successful at changing the parameters of the global warming debate.

Because of their visibility in newspaper articles, radio talk shows and television news programs, they have managed to create the impression of widespread debate in the scientific community on the global warming issue, perhaps far more than their actual numbers would suggest.⁹²

While the small handful of reporters who have revealed industry's role in manufacturing a false scientific debate are to be commended, the vast majority of their colleagues have fallen prey to industry's manipulation. In being duped, the national media has unwittingly helped create a dominant impression among the American public that the science of global warming is unsettled.

Unfortunately, this trend continues. In February 2005, the Wall Street Journal gave front-page coverage to a study supposedly revealing a

⁸⁷ Christian Jensen, How Many Climate Researchers Support the "Leipzig Declaration", http://naturalscience.com/ns/letters/ns_let08.html (Feb. 11, 1998).

⁸⁸ Id.

⁸⁹ David Olinger, Cool to the Warnings of Global Warming's Dangers, St. Petersburg Times, July 29, 1996, at 1A.

⁹⁰ *Id*.

⁹¹ *Id*.

⁹² Ivanovich, *supra* note 76.

flaw in the calculations underlying the famous hockey stick graph. ⁹³ The hockey stick graph was assembled by Dr. Michael Mann, formerly of the University of Virginia and now Director of the Earth System Science Center at Pennsylvania State University. ⁹⁴ The graph—assembled from paleoclimatic data and modern temperature measurements—depicts the northern hemisphere's average temperature holding relatively steady for centuries, and then climbing rapidly in the late twentieth century. ⁹⁵ As such, the graph resembles a hockey stick on its side with the blade representing the late twentieth century. ⁹⁶ Although the hockey stick graph is only one of many lines of scientific evidence demonstrating that the increase in temperature over the last fifty years is anomalous and highly unlikely to be attributable to natural causes, it is significant enough to have become a target for industry. ⁹⁷

The front-page article in the *Wall Street Journal* set off a controversy over what should have been quiet climate research. It has been stated that "[d]ecades of research have created a massive body of scientific literature on climate change, and thousands of new studies on the subject appear every year in different science journals." Yet, the *Wall Street Journal*—which had published only two other stories based upon new research from scientific journals in the previous year, neither of which were front-page items 99—placed the anti-hockey stick

⁹³ Antonio Regalado, *Global Warring: In Climate Debate, the 'Hockey Stick' Leads to a Face-Off,* Wall St. J., Feb. 14, 2005, at A1, *available at* http://www.heatisonline.org/contentserver/objecthandlers/index.cfm?id=5108&method=full.

⁹⁴ See Curriculum Vitae, Michael E. Mann, http://www.meteo.psu.edu/~mann/Mann/cv/cv.html (last visited Apr. 3, 2006).

 $^{^{95}}$ Real Climate, Hockey Stick (Nov. 28, 2004), http://www.realclimate.org/index. php?p=16.

⁹⁶ See id.

⁹⁷ Dr. Mann's defense of the hockey stick graph and response to the study reported by the *Wall Street Journal* can be found at a web site to which Dr. Mann contributes. *See generally* Real Climate, Real Climate—Climate Science, http://www.realclimate.org/index.php? author_name=mike (last visited Apr. 3, 2006). The site also includes a link to a recent peer-reviewed paper by Dr. Mann and six other climate researchers reaching the same conclusion as the original hockey stick graph paper but by different methods. *See* T.M. Cronin et al., *Multiproxy Evidence of Holocene Climate Variability from Estuarine Sediments, Eastern North America*, 20 Paleoceanography PA4006, at *1 (Oct. 19, 2005), available at http://www.meteo.psu.edu/~mann/Mann/articles/articles.html; *see also* Richard A. Kerr, *Millennium's Hottest Decade Retains Its Title, for Now*, 307 Sci. 828 (2005) (reporting study by Russian and Swedish scientists affirming unprecedented nature of recent warming trend through independent methodology).

⁹⁸ Paul D. Thacker, *How* The Wall Street Journal *and Rep. Barton Celebrated a Global-Warming Skeptic*, Envtl. Sci. & Tech. Online News, Aug. 31, 2005, http://pubs.acs.org/subscribe/journals/esthag-w/2005/aug/business/pt_wsj.html.

⁹⁹ *Id*.

graph article on its front page. A firestorm of criticism, aimed at the hockey stick graph, erupted from individuals including Representative Joe Barton of Texas, Chairman of the U.S. House of Representatives Energy and Commerce Committee, who commenced an inquisition of Dr. Mann and his colleagues based upon the article. ¹⁰⁰ Barton is the leading recipient of political cash from the energy industry, and has hired lobbyists from the electric and petrochemical industries to run his committee. ¹⁰¹

These newest members of the climate skeptics corps—that the *Wall Street Journal* covered on page one—have limited scientific credentials, if any, but they do have ties to fossil fuel industries. ¹⁰² The lead author of the study reported so prominently in the *Wall Street Journal* is a businessman who has served as director or officer of a number of small public mineral exploration companies, and is currently a consultant for CGX Energy, Inc., an oil and gas exploration company. ¹⁰³ His education is not in science, but in math as an undergraduate, and in politics, philosophy, and economics at the graduate level. ¹⁰⁴ The coauthor of the study is an Associate Professor in the Economics Department at the University of Guelph, Ontario, and a Senior Fellow of the Fraser Insti-

based upon the *Wall Street Journal* article in which his congressional committee demanded information on the hockey stick graph as well as a list of all grants recieved and a description of all work conducted for the IPCC. *See id.* (discussing Letter from Joe Barton, Chairman, House Subcomm. on Oversight & Investigations, to Dr. Michael Mann, Assistant Professor, Dept. of Envtl. Sci., Univ. Va. (June 23, 2005), *available at* http://energycommerce. house.gov/108/Letters/062305_Mann.pdf); *see also* H. Comm. on Energy & Commerce, Chairman Joe Barton, Letters Requesting Information Regarding Global Warming Studies, http://energycommerce.house.gov/108/Letters/06232005_1570.htm (last visited Apr. 4, 2006). The European Geosciences Union has protested the letters as a "personal inquisition of individual scientists." *See* European Geosciences Union, Position Statement on Climate Research and Recent Letters from the Chairman of the U.S. House of Representatives Committee of Energy and Commerce 1 (July 4, 2005), *available at* http://pubs.acs.org/subscribe/journals/esthag-w/2005/jul/policy/figures/EGSstatement.pdf.

¹⁰¹ See Thomas B. Edsall & Justin Blum, Rep. Barton Faces Energy Challenge, Wash. Post, April 14, 2005, at A25 ("Since 1997, oil, gas, electricity, nuclear, coal and chemical companies have contributed \$1.84 million to Barton, more than to any other House member."); Editorial, Houses Divided on Warming, N.Y. TIMES, July 23, 2005, at A12 ("According to the Center for Responsive Politics, Mr. Barton has also been a leading beneficiary of campaign funds from the oil, gas and utility industries, which have belittled the warming threat and resisted regulatory efforts to control the burning of fossil fuels.").

¹⁰² See Paul D. Thacker, Congressman Unmoved by Peer Review, Asks to See Raw Data, Envtl. Sci. & Tech. Online News, July 6, 2005, http://pubs.acs.org/subscribe/journals/esthag-w/2005/jul/policy/pt_congress.html.

¹⁰³ Thacker, *supra* note 98.

¹⁰⁴ See Steven McIntyre, Short Bio, available at http://www.uoguelph.ca/~rmckitri/research/stevebio.doc (last visited Apr. 4, 2006).

tute in British Columbia—a conservative think tank that received \$60,000 from ExxonMobil in 2003.¹⁰⁵ The coauthor is also associated with the George C. Marshall Institute—a conservative organization run by an ExxonMobil lobbyist that espouses the industry view on global warming with self-published "scientific articles" that are not peer-reviewed.¹⁰⁶ The results of their study were provided in a briefing at the George C. Marshall Institute prior to publication in a peer-reviewed journal.¹⁰⁷

The *Wall Street Journal's* front-page coverage of the scientific report attacking the hockey stick graph has been decried by the former page-one editor:

[T]he harshest critic of the whole issue is former *Wall Street Journal* page-one editor, Frank Allen. He now directs the Institutes for Journalism & Natural Resources in Missoula, Mont. When asked to read the front-page article, he described it to *ES&T* as a "public disservice" littered with "snide comments" and "unsupported assumptions". He says he does not understand how the story got past the editors.

"It was a strange story [as] it had this bizarre undertone of being investigative but it didn't investigate," says Allen. "And this piece—what I thought was bothersome about it—it purported to be authoritative, and it's just full of holes." ¹⁰⁸

While the facts about this and similar episodes have come to light through journalism itself, often, they are found only in smaller publications such as *Environmental Science & Technology Online News*, which hardly affects the public's understanding of the global warming issue. Mainstream newspapers like the *Wall Street Journal* and the *New York Times* affect public attitudes and beliefs about global warming, especially when such reputable sources provide front-page coverage. Yet, one can search the *New York Times* in vain for a discussion of this episode, and find nothing more than a short article about Representative Barton's information request on page A14. 109

¹⁰⁵ See Exxon Mobil Corp., 2003 Contributions 42, available at http://www.exxon mobil.com/Corporate/files/corporate/giving_report.pdf; George C. Marshall Inst., Ross McKitrick, http://www.marshall.org/experts.php?id=100 (last visited Apr. 4, 2006).

¹⁰⁶ See George C. Marshall Inst., William O'Keefe, http://www.marshall.org/experts.php?id=83 (last visited Apr. 4, 2006).

¹⁰⁷ See Thacker, supra note 98.

 $^{^{108}}$ *Id*

¹⁰⁹ See Andrew C. Revkin, Two G.O.P. Lawmakers Spar Over Climate Study, N.Y. TIMES, July 18, 2005, at A14.

Thus, the campaign of deception and denial that may well have been responsible for derailing progress on global warming throughout the 1990s continues. When the issue is one of scientific fact, reporters have a duty to determine the state of scientific thought and must not simply accept at face value a proffered scientific "dispute" that, upon closer examination, does not exist.

B. Complexity and Other Impediments to Effective Journalism

The media's problems in covering global warming can be attributed to other factors as well. One major problem is complexity. While the basic story of global warming is not complex—burning of fossil fuels emits carbon dioxide, which traps planetary heat like an atmospheric blanket—the scientific research is multidisciplinary and can be difficult to follow. Often, the problem is compounded by scientists themselves, whose findings are frequently obscured through jargon, or by a different standard of proof.

Scientists tend to withhold judgment until they have a very high confidence level. For example, the Intergovernmental Panel on Climate Change (IPCC) uses "very likely" and "likely" as terms of art meaning a 90–99% chance and a 66–90% chance, respectively. 110 Thus, when the IPCC states that "most of the observed warming over the last fifty years is likely to have been due to the increase in greenhouse gas concentrations, "111 it is referring to a conclusion that is much more certain than, for example, the preponderance of the evidence standard—more than fifty percent likely—used in civil cases. The nature of scientific inquiry is commendably cautious. However, as Ross Gelbspan has pointed out, a good journalist can learn about the true implications of a scientific study by discussing the issues directly with the scientist:

On the record, scientists typically speak in terms of probabilities and estimates and uncertainties. As a result, they sound to an untrained reporter as vague, wishy-washy, almost indecisive. But off the record, when asked to distill the implications of their findings, many scientists would make such statements as, "This is scary as hell." 112

¹¹⁰ Intergovernmental Panel on Climate Change, Summary for Policymakers 2 n.7 (2001), *available at* http://www.ipcc.ch/pub/spm22-01.pdf.

¹¹¹ *Id*. at 10.

¹¹² Gelbspan, *supra* note 63, at 74.

Another reason for the disconnect between the science of global warming and adequate coverage is the media's tendency to turn every issue into a political one, thus obscuring the true scientific issues. The political nature of the issue can be political in the literal sense, as when global warming becomes a campaign issue, or in a figurative sense, as when the focus is on who is gaining the upper hand in attacking whom in the world of climate science. Important scientific information can get lost when the focus is on politics and personalities.

A final factor that has been identified as partially responsible for the inadequate coverage of global warming science is the reduction in independent news outlets and the corresponding increase in corporate ownership of the media. ¹¹³ Independent news outlets are more focused on high-quality news, while corporate owners tend to be profit focused. ¹¹⁴

III. REPORTING ON THE GLOBAL WARMING PUBLIC NUISANCE CASE

From a plaintiff lawyer's perspective, the reporting on the public nuisance case has been mixed. While there have been a few very thoughtful articles, most coverage of the case has been highly superficial. Two major problems in the coverage have emerged, both stemming from a failure to grasp legal principles that are not especially difficult to understand.

The first major problem is journalists' universal failure to understand the joint and several liability theory undergirding the case. 116 Media outlets have thus reported that the plaintiffs will need to prove that emissions from particular power plants are causing harm. 117 However, this is not the law; rather, in a pollution case in which the defendants' pollutants mix with those of others and the entire body of pollution is causing the harm, a plaintiff need only prove that the de-

¹¹³ Id. at 81-82.

¹¹⁴ See id.

¹¹⁵ See, e.g., Mark Clayton, In Hot Pursuit of Polluters, Christian Sci. Monitor, Aug. 19, 2004. at 15, available at http://www.csmonitor.com/2004/0819/p15s02-sten.html.

¹¹⁶ See, e.g., Michael T. Burr, Corporate America Feels The Heat, Corp. Legal Times, Aug. 2005, at 44 ("pinning the liability on any given party seems impossible"), available at http://www.insidecounsel.com/issues/insidecounsel/15_165/features/87-1.html; Tomas Kellner, Hurricane Tort, Forbes, Oct. 17, 2005, at 52 (plaintiffs "have to link damage to the emissions of a particular defendant"), available at http://www.forbes.com/archive/forbes/2005/1017/052.html.

 $^{^{117}}$ See Chris Mooney, The Courthouse Effect, SLATE, May 23, 2005, http://www.slate.com/id/2119312/ ("They must trace their injury to the defendant's behavior, in this case greenhouse-gas emissions.").

fendant contributed to the overall load of pollutants. ¹¹⁸ Courts have routinely rejected the contention that a defendant should not be held liable where its pollution alone was insignificant in light of the large number of co-contributors. ¹¹⁹

In the global warming public nuisance case, the fact that the power plants at issue are emitting millions of tons of carbon dioxide every year is not going a matter of dispute; the power plants report their emissions of carbon dioxide to the Energy Information Administration every year, pursuant to the Energy Policy Act of 1992. 120 Plaintiffs, based upon over a hundred years of public nuisance case law, will not need to isolate the impacts of the defendants' emissions.

The second major problem stems from the difficulty nonlawyers have in understanding the legal doctrine of public nuisance. To a nonlawyer, the word "nuisance" means a small or minor annoyance rather than a severe harm. But in the law, public nuisance is a powerful doctrine with roots in the police power with a far-reaching ability to impose court-ordered changes in conduct. For example, in *United* States v. Reserve Mining Co., the court issued an injunction under federal common law, requiring the shut down of a facility supplying twelve percent of ore for the nation's steel production because of massive air pollution from the facility. 121 The Eighth Circuit Court of Appeals found that, while the pollution was insufficiently interstate to trigger federal common law, injunctive relief was warranted under statutory law; the appellate court modified the injunction to allow the plant to continue operating, but required the expenditure of \$243 million on pollution control. 122 The federal common law of public nuisance is a particularly powerful doctrine; it is grounded in the constitutional right of states and citizens to defend themselves against harmful conduct occurring outside their borders that causes harm inside their borders. 123 Under the federal common law of public nuisance, when a sovereign state proves that there is harm to which a pri-

¹¹⁸ See discussion supra Part I.B.

¹¹⁹ See, e.g., Woodyear v. Schaefer, 57 Md. 1, 9–10 (1881).

^{120 42} U.S.C. § 13,385 (2000).

¹²¹ 380 F. Supp. 11, 20–21 (D. Minn. 1974).

¹²² Reserve Mining Co. v. EPA, 514 F.2d 492, 536–42 (8th Cir. 1975).

 $^{^{123}}$ See Georgia v. Tenn. Copper Co., 206 U.S. 230, 237–38 (1907); Missouri v. Illinois, 180 U.S. 208, 241 (1901).

vate out-of-state defendant is contributing, a court order requiring the defendant to cease the harmful conduct is necessary.¹²⁴

Moreover, a "nuisance case" in the lay person's mind usually means a legal case that is frivolous and has been filed for annoyance in the hopes of extracting a settlement. This has been exploited by those opposed to the lawsuit, who use this pejorative definition of nuisance to disparage the lawsuit. 125

¹²⁴ See Tenn. Copper, 206 U.S. at 238–39; Illinois v. City of Milwaukee, 599 F.2d 151, 166 (7th Cir. 1979), rev'd on other grounds, Milwaukee II, 451 U.S. 304, 312, 332 (1981); see also discussion supra Part I.A.

¹²⁵ See Amanda Griscom, *Public Nuisance No. 1*, GRIST, July 30, 2004, http://www.grist.org/news/muck/2004/07/30/griscom-lawsuit/index.html (quoting Scott Segal, industry lawyer, that the lawsuit "brings new meaning to the term 'nuisance lawsuit'").