UNCERTAINTY AS A BASIS FOR STANDING

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To obtain standing, a plaintiff must show that he has suffered an "injury in fact." That injury must be concrete and particularized, as well as being actual or imminent, not conjectural or hypothetical.[1] I will argue that, paradoxically, under some circumstances the fact that an injury is extremely uncertain ought to satisfy this test.

Courts have a tendency to draw a stark line between present harms and future risks. But in the modern economy, this line is necessarily blurry. Insurance companies exist to handle risks. Risks can also be managed through futures markets and self-insurance. All of these mechanisms translate potential future events into present-day economic transactions. It would be silly to say that a rise in insurance rates or the unavailability of insurance did not constitute injuries in fact. The response of markets to risk can provide a valuable filter, distinguishing between the merely speculative prospect and the immediately costly uncertainty.

We can begin to see why this may be so by considering a classic standing case, where the Court reached the right result for the wrong reason. In *Duke Power Co. v. Carolina Environmental Study Group, Inc.*,[2] the plaintiffs challenged the constitutionality of the Price-Anderson Act,[3] which limits the liability of the nuclear industry for damages resulting from a single nuclear accident. The plaintiffs claimed that without this limitation on liability, reactors would not be built, which would be to their benefit because a proposed Duke Power reactor would damage a lake they used. Their claim on the merits, however, did not relate to these immediate environmental injuries. Instead, it related to the liability limitation if and when a reactor in their

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1. Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. 167, 180-81 (2000).

2. 438 U.S. 59 (1978).

3. 42 U.S.C. § 2210 (2005).

vicinity became involved in a nuclear accident. The plaintiffs contended that if they were injured and their damages exceeded the amount allowed by the statute, the statute would constitute an unconstitutional taking of property without compensation.

The Court did not find standing on the basis of this possible future harm, probably because of the argument that the harm was too speculative. Instead, the Court relied on another standing claim. The plaintiffs claimed that they were suffering immediate environmental injury as a result of a statute which might be unconstitutional if it were ever applied to them in the future. The reason was that without the statute, the companies involved might have been unable to get financing or insurance. Despite the tenuousness of the chain of causation, the Court held that there was a "substantial likelihood" that the nuclear plants near the plaintiffs' homes would not be completed or operated without the financial security blanket provided by the statute.[4] This was held to be a sufficient basis for standing. The defendants had also attacked the plaintiffs' standing because the injury which they were using to establish their standing had no logical relationship to their claims on the merits. The Court held, however, that such a nexus between the plaintiffs' injury and the claim on the merits was unnecessary.[5]

Not everyone has been convinced, then or later. For example, Justice Stewart said:

> The claim under federal law is to be found in the allegation that the Act, if enforced, will deprive the appellees of certain property rights, in violation of the Due Process Clause of the Fifth Amendment. One of those property rights, and perhaps the sole cognizable one, is a state-created right to recover full compensation for tort injuries. The Act impinges on that right by limiting recovery in major accidents.
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> But there never has been such an accident, and it is sheer speculation that one will ever occur. For this reason I think there is no present justiciable controversy, and that the appellees were without standing to initiate this litigation.[6]

Similarly, Justice Stevens said:

> The string of contingencies that supposedly holds this litigation together is too delicate for me. We are told that but for the

4. 438 U.S. at 81 n.26.
5. *Id.* at 78-79.
6. *Id.* at 94-95 (Stewart, J., concurring).

> Price-Anderson Act there would be no financing of nuclear power plants, no development of those plants by private parties, and hence no present injury to persons such as appellees; we are then asked to remedy an alleged due process violation that may possibly occur at some uncertain time in the future, and may possibly injure the appellees in a way that has no significant connection with any present injury. It is remarkable that such a series of speculations is considered sufficient either to make this litigation ripe for decision or to establish appellees' standing.[7]

Scholars have been equally skeptical and have tended to view the case as an example of the manipulation of standing doctrine to obtain a desired outcome.[8]

The evidence before the Court was that the chance of an accident was very small—one in twenty thousand for a serious accident, and one in a billion for a catastrophic one.[9] It is not surprising that the Court was reluctant to view such low-probability events, with the added contingency of the plaintiffs being unable to recover full damages because of the statute, as constituting injury in fact. As Justice Stewart said, whether such an event would ever occur seemed entirely speculative and shrouded in uncertainty. Or, as the majority opinion put it, "the likelihood of an accident occurring which would result in claims exceeding the sum of the financial protection required and the governmental indemnity is exceedingly remote, albeit theoretically possible."[10]

And yet, uncertainty may have very real and immediate economic costs. The evidence in *Duke Power* was that, unless the uncertainty about liability limits for catastrophic accidents could be resolved, the industry would be unable to survive. For example, when the statute was in danger of expiring, a House committee reported that "[r]eactor manufacturers and architect-engineers are already requiring escape

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7. *Id.* at 102-03 (Stevens, J., concurring).

8. *See, e.g.*, ERWIN CHEMERINSKY, FEDERAL JURISDICTION 82 (3d ed. 1999).

9. The Court noted:

> The Reactor Safety Study published by the NRC in 1975 suggested that there was a 1 in 20,000 chance (per reactor year) of an accident causing property damage approaching $100 million and having only minor health effects. By contrast, when the odds were reduced to the range of 1 in 1 billion (per reactor year), the level of damages approached $14 billion; and 3,300 early fatalities and 45,000 early illnesses were predicted.

438 U.S. at 84 n.28. I should note that these estimates may have been unreliable. In any event, the use of "reactor years" in the estimates may give a misleading impression—if there were a thousand reactors in operation, even by this estimate there would be a 1 in 10,000 risk of a truly catastrophic accident each century.

10. *Id.* at 85-86 (quoting H.R. REP. NO. 89-883, at 6-7 (1965)).

clauses in their contracts to permit cancellation in the event some form of protection from unlimited potential liability is not provided. Action is required soon to prevent disruption in utility plans for nuclear power."[11]

Sometimes an uncertainty is just an uncertainty (to paraphrase Freud's reported remark about the symbolic significance of cigars), but sometimes an uncertainty about the future is the economic equivalent of a tangible injury today. How are courts to tell the difference? As *Duke Power* indicates, the size of the odds is not always a reliable indicator. But as *Duke Power* also indicates, markets may provide a better indicator of how "real" a risk should be considered.

Risk, after all, is something that businesses must address on a daily basis, and there is an entire industry (insurance) dedicated to translating future risks into present costs. When the market takes a risk seriously, there is every reason for courts to do the same. (The converse may not be true—risk markets do not necessarily cover every risk that might be significant.) The markets obviously thought that uncertainty about future liability had immediate relevance to the industry. That ought to be good enough to satisfy a court that the risk was tangible enough to constitute an injury in fact.

From this perspective, *Duke Power* can be decided without resorting to the convoluted reasoning of the majority. On the merits, the plaintiffs' claim was based on uncertainty about the future, namely the prospect that if an accident occurred they would receive limited compensation. We know that this uncertainty was considered important enough to motivate hard-headed business executives to make major investment decisions. Thus, a decision striking down the statute would certainly inflict an injury in fact on the industry. The risk to the plaintiffs (having their liability limited) is simply the mirror image of the risk to the industry (having full liability). The markets have ruled the risk to be a significant present concern, which was enough to establish standing. Thus, we can explain *Duke Power* in a straightforward way.

Uncertainty is a particularly pervasive problem in environmental law. Chris Stone cogently described the high level of scientific uncertainty about environmental problems, noting that we "are only beginning to learn how the world works," and that our ignorance extends to global climate, habitat and biodiversity.[12] Stone made a particular effort to investigate the state of scientific knowledge regarding global

11. *Id.* at 76 (quoting H.R. REP. NO. 94-648, at 7 (1975)).

12. CHRISTOPHER D. STONE, THE GNAT IS OLDER THAN MAN: GLOBAL ENVIRONMENT AND HUMAN AGENDA 24 (1993).

climate change.[13] What he and his research assistant found was that "[t]he deeper into the better authorities we fished, the vaguer and more qualified the projections we landed."[14]

Stone's observations remain generally valid today. Consider the two topics he mentioned: biodiversity and climate change. We are still unsure of the number of species in peril. For example, although the "most commonly cited figure for the fraction of the global flora threatened with extinction" is thirteen percent, another recent estimate is that "as many as half of the world's plant species may qualify as threatened with extinction."[15] Similarly, despite much scientific progress, predictions regarding global climate change are still shrouded in uncertainty.[16] Because of this uncertainty, the International Panel on Climate Change ("IPCC") consciously decided not to include probability estimates in its Third Assessment Report ("TAR"):

> It was the unanimous view of the TAR lead authors that no method of assigning probabilities to a 100-year-climate forecast is sufficiently widely accepted and documented in the refereed literature to pass the extensive IPCC review process. Three reasons stand out: the difficulty of assigning reliable probabilities to socioeconomic trends (and hence emissions) in the latter half of the 21st century, the difficulty of obtaining consensus ranges for quantities like climate sensitivity, and the possibility of a nonlinear response in the carbon cycle or ocean circulation to very high late-21st-century greenhouse gas concentrations.[17]

In a more recent discussion of one impact of global climate change, the author concluded that "satisfactory understanding of . . . variability of Arctic climate remains elusive,"[18] and that current models fit the data poorly and "tend to produce a tremendous spread in their predicted future warming in the Arctic."[19]

As Judge Posner has observed, there is a scientific consensus that global warming is a serious problem, and dissent from that consensus may actually indicate the existence of a more serious risk rather than the

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13. *Id*. at 13-16, 20-23.

14. *Id*. at xvi.

15. Nigel C. A. Pitman and Peter Jørgensen, *Estimating the Size of the World's Threatened Flora*, 298 SCI. 989, 989 (2002).

16. Myles Allen et al., *Uncertainty in the IPCC's Third Assessment Report*, 293 SCI. 430, 430 (2001).

17. *Id*.

18. Richard E. Moritz et al., *Dynamics of Recent Climate Change in the Arctic*, 297 SCI. 1497, 1497 (2002).

19. *Id.* at 1501.

contrary.[20] The fact that some scientists believe that the future harm of global warming is lower than the consensus forecast probably also means that some are equally convinced it is higher. Hence, there is a band of uncertainty around the "consensus" estimate. Risk averse individuals (a category that includes most people) would find this uncertainty itself to be a cost, as Posner notes.[21]

Despite whatever uncertainty may exist about the predictions, we are now beginning to see litigation relating to various aspects of global warming. Not surprisingly, standing has emerged as a major issue in these cases.[22] Recently, in *Massachusetts v. EPA*,[23] the plaintiffs challenged the denial of a petition asking the EPA to regulate carbon dioxide and other greenhouse gas emissions from new motor vehicles. The D.C. Circuit panel fragmented. Judge Randolph found that the standing and merits were completely intertwined. He ruled for the EPA on the basis of uncertainty about the relationship between greenhouse gases and climate, uncertainty which is "compounded by the possibility for error inherent in the assumptions necessary to predict future climate change."[24] Judge Sentelle would have dismissed purely on the issue of standing on the theory that global warming might be "harmful to humanity at large," but that the plaintiffs had shown no particularized injury.[25] In contrast, Judge Tatel found standing because projected increases in sea level would impinge on the sovereign territory of Massachusetts, the lead plaintiff. As to causation, Judge Tatel relied on the affidavit of a former senior government scientist predicting sea level changes caused by human emissions.[26]

Arguably, current climate models are firm enough to justify Judge Tatel's conclusion about causation. But the EPA's position was to the contrary, which left Judge Sentelle in a quandry: he believed that he could not establish standing without in effect reversing the EPA's position that causation was uncertain, and yet he could not review the validity of the EPA's position without first finding standing. One escape from this dilemma is to observe that, as in *Duke Power*, the independent

20. RICHARD A. POSNER, CATASTROPHE: RISK AND RESPONSE 55-58 (2004).

21. *Id.*

22. For discussion of the issues and the case law, see Bradford C. Mank, *Standing and Global Warming: Is Injury to All Injury to None?*, 35 ENVTL. L. 1 (2005); David R. Hodas, *Standing and Climate Change: Can Anyone Complain About the Weather?*, 15 J. LAND USE & ENVTL. L. 451 (2000).

23. 415 F.3d 50 (D.C. Cir. 2005).

24. *Id.* at 57.

25. *Id.* at 60.

26. *Id.* at 61-82.

action of market actors has provided objective evidence of the economic seriousness of uncertainty.

Since insurance companies specialize in assessing risks, it is not surprising that the evidence once again comes from the insurance industry—specifically, from the segment of the insurance industry that provides reinsurance (essentially, protection for other insurance companies against excess risk). Because of the risk of global warming, reinsurance companies have increased their rates for covering catastrophic weather events such as major hurricanes in Florida, and some industry leaders are demanding government action to address global warming.[27] By 1995, major European and Japanese insurance companies had taken a formal position by issuing a Statement of Environmental Commitment,[28] and insurance companies also played a role at the Kyoto talks.[29] Some insurance companies have begun to pressure major firms whose stock they hold.[30] Indeed, the president of the Reinsurance Association of America has reportedly warned that global warming could bankrupt the insurance industry.[31] Thus, despite uncertainties, the risk of global warming is large enough to have real economic consequences, certainly in the view of the insurance industry.

It is a mistake to think that standing in cases like this depends on proof by the plaintiffs that harmful effects will in fact occur or at least be more likely than not. Sophisticated economic actors do not limit themselves to certainties or to high probability events. Instead, they recognize in the most tangible way possible—through concrete financial decisions—that uncertain and low-probability events can be just as important in rational decision making. If we are looking for a test to distinguish speculative risks from those that are real and pressing enough to form a basis of standing, economic responses to the risk may provide just the litmus paper we need.

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27. JEREMY LEGGETT, THE CARBON WAR: GLOBAL WARMING AND THE END OF THE OIL ERA 104, 122-23 (2001).

28. *Id.* at 223-24.

29. *Id.* at 294.

30. *Id.* at 304.

31. Leslie H. Howe, *New Solutions to Environmental Problems in Real Estate Deals 2004* (PLI Real Estate L. & Prac., Course Handbook Series, PLI Order No. 3152), Nov. 2004, at 411, 451.