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Are International Judges Afraid of Science?: A Comment on Mbengue

JOSÉ E. ALVAREZ*

International lawyers have built international courts on two myths. The first is the proposition that international judges only *find* the law, not generate it.[1] The second is that international judges make conclusive factual determinations of what actually occurred; that is, they find "the truth."[2] Ingo Venzke punctures the first myth by postulating that adjudicators are neither mechanistic appliers of pre-established sources of law nor wholly unbound interpreters issuing legal determinations based on pure volition.[3] Venzke argues that international judges make law against the stabilizing, shared assumptions of an interpretative community and that judicial lawmaking is a species of communicative practice.[4]

Makane Mbengue addresses one aspect of the second myth. He argues that international judges avoid getting embroiled with respect to at least one type of fact-finding, namely, scientific fact-finding (SFF), precisely because doing so does not fit their conception of finding "the truth."[5] His argument, based on cases such as the International Court of Justice's (ICJ) decision in the Gabcikovo-Nagymaros Case,[6] is that all

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1. *See* Ingo Venzke, *The Role of International Courts as Interpreters and Developers of the Law: Working Out the Jurisgenerative Practice of Interpretation*, 34 LOY. L.A. INT'L & COMP. L. REV. 99, 100–03 (2011) (presenting the argument that international courts apply the law, as opposed to creating it).

2. Makane Moïse Mbengue, *International Courts and Tribunals as Fact-Finders: The Case of Scientific Fact-Finding in International Adjudication*, 34 LOY. L.A. INT'L & COMP. L. REV. 53, 61 (2011).

3. *See* Venzke, *supra* note 1, at 100–02, 115–22 (explaining the role of international judges as interpreters and developers of the law and the consequences of judicial law-making).

4. *Id.* at 112–13.

5. Mbengue, *supra* note 2, at 58–59.

6. *Id.* at 64–65.

too often international judges avoid SFF or avoid weighing scientific evidence, even when the cases before them demand it. Judges do this because SFF (1) is too alien to the normal process of judicial fact-finding; (2) involves highly complex, fact-intensive inquiries; (3) requires particular technological or other expertise not present on the bench; and, most importantly, (4) is characterized by uncertainty.[7]

Mbengue stresses this last factor above all. He argues that SFF is "irresolutely oriented towards the unknown,"[8] relies on probabilities (not verifiable certainties), and is characterized by volatility, circularity, paucity, impalpability, and the use of conjectural and refutable evidence.[9] To Mbengue, SFF is at odds with what judges are more accustomed to doing, namely finding verifiable and ascertainable facts.[10] Judges, Mbengue suggests, are used to validating verities not evaluating probabilities.[11] Their uneasiness with SFF turns them into mere passive recipients of SFF instead of active questioners or shapers of it.[12]

Mbengue goes beyond describing the problem; he proposes solutions. He praises the International Centre for Settlement of Investment Disputes (ICSID) tribunal in the Methanex Case for seriously engaging in the scientific facts at the heart of that dispute.[13] He recommends that international judges embrace the uncertainties associated with SFF, overcome their discomfort with it, and avoid seeking to impose a single inappropriate yardstick for scientific facts.[14] He also disparages the argument made by Japan in the World Trade Organization's (WTO) *Southern Bluefin Tuna* Case, namely the conviction that questions of scientific fact are not justiciable.[15] Mbengue expresses confidence that international judges can and should evaluate evidence of every kind, including scientific evidence.[16] They should not, in his view, passively rely on scientific evidence that litigants present, but should proactively deploy their inherent fact-finding powers by

7. *See id.* at 63–64.
8. *Id.* at 59.
9. *Id.* at 60–62.
10. *Id.* at 72–73.
11. Mbengue, *supra* note 2, at 58–59.
12. *Id.* at 76–78.
13. *Id.* at 71 (citing Methanex Corp. v. United States, Final Award of the Tribunal on Jurisdiction and Merits, ¶ 102 (NAFTA Ch. 11 Arb. Trib.), http://naftaclaims.com/Disputes/USA/Methanex/Methanex_Final_Award.pdf).
14. *Id.* at 76–78.
15. *Id.* at 67–68 (quoting Southern Bluefin Tuna (N.Z. v. Japan, Austl. v. Japan), 23 R.I.A.A. 1 (Perm. Ct. Arb. 2000)).
16. *Id.* at 79.

appointing experts as needed.[17] They should not, in short, be afraid of reopening the appreciation of scientific evidence.

Mbengue is not the only critic of fact-finding by international courts and tribunals. Others, including this author, have criticized, for example, the ICJ for "out-sourcing," at least in part, its fact-finding to the International Criminal Tribunal for the Former Yugoslavia (ICTY) (as in its Genocide Judgment of 2007),[18] to the Porter Commission (in *DRC v. Congo*),[19] and to the International Finance Corporation (in *Pulp Mills*).[20] Nancy Combs has written a devastating book-length critique of fact-finding by international criminal courts, aptly entitled *Fact-Finding Without Facts*.[21] Mbengue's assertion that international judges are afraid of science needs to be seen within the context of these broader critiques.

There are many reasons why international adjudicators encounter difficulties in fact-finding. As the late Thomas Franck noted years ago, the ICJ is hamstrung in this respect by the fact that it is a tribunal of first *and* last resort, and because it operates under somewhat rigid procedures and old-fashioned traditions, which are not well-suited to the active probing that Mbengue recommends.[22] As is well known, ICJ proceedings rarely deviate from the written pleadings of the litigants. They do not involve the extensive presentation and cross-examination of witnesses (expert or otherwise) that one sees in, for example, ICSID tribunals; they generally do not involve the appointment of special masters, assessors, or experts by the court itself; they do not encourage the participation of amicus or active participation in hearings; and they do not conduct on-site hearings.[23] These characteristics are built into the ICJ's DNA and are difficult to change.

International courts and tribunals are factually challenged in other ways as well. Unlike domestic trial courts, which are free to make fact-determination their principal concern, the ICJ, or, for that matter, ICSID tribunals and international criminal courts, are all burdened by distance

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17. Mbengue, *supra* note 2, at 76–78.

18. Application of the Convention on the Prevention and Punishment of the Crime of Genocide (Bosn. & Herz. v. Serb. & Montenegro), 2007 I.C.J. 43 (Feb. 26); *see, e.g.*, José E. Alvarez, *Burdens of Proof*, AM. SOC'Y INT'L. L., Spring 2007 http://www.asil.org/newsletter/president/pres070625.html.

19. Armed Activities on the Territory of the Congo (Dem. Rep. Congo v. Uganda), 2005 I.C.J. 168, 179 (Dec. 19).

20. Pulp Mills on the River Uruguay (Arg. v. Uru.), Judgment, ¶ 166 (Apr. 20, 2010), *available at* http://www.icj-cij.org/docket/files/135/15877.pdf.

21. *See* NANCY ARMOURY COMBS, FACT-FINDING WITHOUT FACTS 4 (2010).

22. Thomas M. Franck, *Fact-Finding in the I.C.J.*, *in* FACT-FINDING BEFORE INTERNATIONAL TRIBUNALS 21, 21–22, 28–29, 31–32 (Richard B. Lillich ed., 1992).

23. *Id.* at 28, 32.

from the places where the litigated issues arose.[24] Unlike domestic courts whose judges share common cultural and linguistic ties, international judges are, intentionally, a culturally diverse lot.[25] This means that they are, in addition, at a considerable remove from the locus of their cases in ways that go way beyond geography. Even assuming that our international adjudicators were willing to undertake the active role in fact-finding that Mbengue and other fact-finding critics recommend, our international judges are simply less able to spot the cultural or other cues that enable local judges to assess factual assertions or the credibility of witnesses.[26] This is a structural handicap that cannot be fixed simply by changing the attitude of international judges or making them less afraid of SFF.

As Combs demonstrates through numerous specific examples, international criminal judges are severely handicapped by the educational, linguistic, and cultural gaps between judge and witness.[27] These difficulties are one reason why the international community moved from primacy to complementarity as the governing jurisdictional principle when it moved from the ICTY and the International Criminal Tribunal for Rwanda (ICTR) to the International Criminal Court (ICC).[28] The complementarity regime of the ICC accepts that fact-intensive cases should preferably be adjudicated where the facts occurred.[29] Apart from practical difficulties, international judges may be less inclined to grapple with facts for other reasons. As Richard Bilder has suggested, these reasons include: (1) difficulties in obtaining evidence, (2) the fact that international judges are often drawn from national appellate courts and have less experience in deciding factual issues, (3) the more prestigious character of decisions based on analysis of principle rather than fact, and (4) the possibility that international judges may believe that an adverse decision will be less offensive to states if based on law rather than fact since adverse findings of fact may impugn a state's veracity.[30]

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24. *Id.* at 21.

25. *Id.* at 22.

26. COMBS, *supra* note 21, at 4.

27. *Id.* at 63.

28. *See* Bartram S. Brown, *Primacy or Complementarily: Reconciling the Jurisdiction of National Courts and International Criminal Tribunals*, 23 YALE J. INT'L L. 383, 416 (1998).

29. *See* Mohamed M. El Zeidy, *The Principle of Complementarity: A New Machinery to Implement International Criminal Law*, 23 MICH. J. INT'L L. 869, 899 (2001–2002).

30. Richard B. Bilder, *The Fact/Law Distinction in International Adjudication*, *in* FACT-FINDING BEFORE INTERNATIONAL TRIBUNALS 95, 98 (Richard B. Lillich ed., 1992).

These reasons help to explain why, back in 1990, Thomas Franck critiqued the ICJ's factual avoidance in cases as distinct as the *Temple of Preah Vihear*, the Nicaragua Case, and the Advisory Opinion in *Western Sahara*.[31] Franck demonstrated how, in all three instances, the court avoided engaging in difficult fact-finding through strategies of evasion such as resorting to procedural or evidentiary rules.[32] He pointed out how such strategies enabled the court to resolve these disputes based purely on a paper trail.[33] According to Franck, in each of these cases:

> [T]he Court was able to resolve key factual issues without leaving The Hague to take testimony, appointing masters, or otherwise familiarizing itself with the sights, sounds and smells of the place in which the facts were embedded. The need for behaving like a trial court was mitigated either by the ossification of the facts, which made on-the-spot inquiry unlikely to yield anything beyond the existing paper record, which could as well be examined in The Hague; or else the Court was spared by the comparative unimportance of the facts in the face of some overriding legal doctrine that would have produced the same result, whatever facts were found by a more diligent search.[34]

Franck raised the same issues as Mbengue, even though these cases did not raise questions of science. He argued that in a case like *Nicaragua*, where the court was handicapped by the absence of the United States during consideration of the merits, the court was ill-served by its natural proclivity to say that the outcome would be the same regardless of whose version of the facts were true.[35] Franck pointed out how the failure to engage in genuine fact-finding fosters overly expansive law-generation.[36] That is, the failure to correct myth number one above (and accept the fact that judges generate as well as find the law) only exacerbates the prospect that myth number two will also be taken as true. He also noted that this failure produces other undesirable normative consequences since it favors government litigants that can stop their citizens from going to The Hague to testify, and produces judicial findings of facts, which, if later proven wrong, undermine the credibility of the court itself.[37]

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31. Franck, *supra* note 22, at 21.
32. *Id.* at 28.
33. *Id.*
34. *Id.*
35. *Id.* at 29.
36. *Id.* at 31.
37. Franck, *supra* note 22, at 31.

All of this raises five queries about Mbengue's paper and project. First, since Franck was not addressing SFF, his point raises questions about whether the problems that Mbengue identifies are really about cases involving *scientific* evidence in particular or more generally about any kind of case that is heavily fact-based, which probably includes most cases that reach the international level. Mbengue needs to tell us more about what distinguishes, in his view, scientific evidence and fact-finding from all other kinds. What exactly is SFF anyway?

Although Mbengue's examples draw particularly from cases involving health or the environment, many factual determinations international tribunals are called upon to make have the characteristics he ascribes to scientific evidence or the scientific method. Consider, as one example, ICSID awards addressing the level of liability incurred by a respondent state for injuries caused to an investor claimant. Many, perhaps most, such decisions involving sophisticated investors in complex, on-going enterprises require heavily expert-laden assessments of fair market or going concern value. Such awards rely on considerable familiarity with a particular kind of expertise, namely professional accounting standards.[38] Is this a form of SFF and if not, why not?

What about the equally expert-laden evidence presented by economists in many of the ICSID cases against Argentina, requiring determinations of whether that country's economic crisis of 2001–2002 actually threatened fundamental governmental structures and was caused by that country's own actions or those of the IMF?[39] These factual determinations, like those Mbengue discusses, rely on expert knowledge at a considerable remove from that which any layperson, or even an arbitrator trained in commercial law, can be presumed to possess. Indeed, a recent ICSID annulment award, *Enron v. Argentina*, drew a firm line when distinguishing "economic" from "legal" reasoning, and annulled an earlier ruling on the basis that the earlier tribunal had used expert evidence by economists to resolve what the annulment committee regarded as a legal question.[40]

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38. *See* LG&E Energy Corp. v. Argentine Republic, ICSID Case No. ARB/02/1, Award, ¶ 101 (July 25, 2007), http://icsid.worldbank.org/ICSID/FrontServlet?requestType=CasesRH&actionVal=showDoc&docId=DC786_En&caseId=C208.

39. *See* José E. Alvarez & Kathryn Khamsi, *The Argentine Crisis and Foreign Investors: A Glimpse into the Heart of the Investment Regime*, *in* THE YEARBOOK ON INTERNATIONAL INVESTMENT LAW AND POLICY, 2008/09 379, 379–401 (Karl P. Sanvant ed., 2009) (discussing ICSID cases against Argentina).

40. Enron Creditors Recovery Corp. Ponderosa Assets, L.P. v. Argentine Republic, ICSID Case No. ARB/01/3, Decision on the Application for Annulment of the Argentine Republic, ¶ 377 (July 30, 2010), http://italaw.com/documents/EnronAnnulmentDecision.pdf.

What about expert evidence presented in those cases purporting to address whether Argentina's emergency actions were truly the "only" way to address the underlying crisis?[41] Such judgments required arbitrators to turn themselves into public policy experts in order to decide whether alternatives truly existed to address Argentina's underlying crisis. Or consider the testimony of petroleum industry experts in other ICSID cases involving Ecuador, in which tribunals have been asked to resolve whether high oil prices were indeed foreseeable when that country and foreign investors entered into certain contracts that failed to anticipate such price hikes.[42] On the international criminal side, is the historical evidence presented in the ICTR, used to indicate, for example, the ways ethnicities were defined in Rwanda,[43] also a form of SFF?

All of these cases involved highly complex, factually intensive inquiries requiring the application of particular forms of expertise outside the ken of the respective adjudicators. In all of these instances, the tribunals were asked to make determinations involving probabilities and not verifiable certainties.[44] Many Argentinian cases involving investor-state disputes have involved probabilistic assessments of whether, on the whole, that country had made a "substantial contribution" to the underlying crisis, for example.[45] If all of these cases involve SFF, Mbengue's critique is far more expansive than he appears to assume.

A second question arising out of Mbengue's paper emerges from this last point. Mbengue blames the uncertainty associated with the scientific process on international judges' discomfort with SFF.[46] This overstates the degree to which SFF is necessarily based on probabilities or uncertainties. The value of at least some forms of scientific evidence is precisely that they can sometimes tell us that a certain product, for example tobacco, does in fact cause cancer when used as directed. Some scientific inquiries produce the convincing results that Mbengue claims

41. CMS Transmission Co. v. Argentine Republic, ICSID Case No. ARB/01/8, Award, ¶ 323 (May 12, 2005).

42. *See generally* City of Oriente Limited v. Republic of Ecuador and Empresa Estatal Petroleos de Ecuador, ICSID Case No. ARB/06/21, Decisions on Provisional Measures (Aug. 17, 2007) (rejecting request for an injunction against Ecuador prohibiting the grant of a contract to produce oil from a specific tract of the Ecuadorian Amazon).

43. *See*, *e.g.*, Prosecutor v. Akayesu, Case No. ICTR-96-4-T, Judgment (Sept. 2, 1998).

44. *See generally* Alvarez & Khamsi, *supra* note 39, at 400–01 (noting that ICSID tribunals addressing claims arising from Argentine energy utilities found that variables used by the claimants had not taken into account effects resulting from economic turmoil).

45. *Id.*

46. Mbengue, *supra* note 2, at 60–61.

judges are looking for. Indeed, the scientific method of proof is touted precisely on the basis that it can or should lead to a level of certainty about cause and effect that is missing from other disciplines such as those in the social sciences.[47]

In addition to certainty regarding cause and effect, the scientific method may yield certainty over time—as even diehard climate change deniers may now be learning.[48] If Mbengue truly wants to restrict his critique to fact-finding based on science, his emphasis on judges' alleged discomfort with conjectural or probabilistic evidence seems misplaced since, as the Argentinian cases demonstrate, we may ask our international dispute settlers to engage in far more probabilistic assessments when undertaking economic or public policy determinations than when they have recourse to "science" narrowly understood.

But even if one accepts Mbengue's point that SFF is frequently characterized by or traffics in uncertainty, he needs to provide a great deal more evidence to convince readers that judges are all that afraid of this aspect of science. Much of Mbengue's argument rests on the proposition that judges are unfamiliar or uneasy with engaging in probabilistic forms of analysis.[49] Yet, on the contrary, we expect judges—domestic and international—to assess probabilities all the time. Deciding on the basis of uncertainty is what international and domestic courts do every day.[50] They are engaged in assessing, for example, whether something was more probable than not or, in criminal cases, whether the defendant is guilty "beyond a reasonable doubt."[51] Both of these standards involve probability assessments.

Combs's critique of international criminal courts' fact-finding ends with an in-depth exploration of the probabilistic assessments routinely made even under that most rigorous standard for fact-finding among courts: determining whether a defendant is guilty "beyond a reasonable doubt."[52] Combs cites considerable evidence showing how even this standard is necessarily variable not only in practice but in how it has been described by scholars and even by courts (as when they have to explain its meaning to juries).[53]

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47. *See id.* at 64–65.
48. *Id.* at 62–63.
49. *Id.* at 60–61.
50. *See* COMBS, *supra* note 21, at 344.
51. *Id.*
52. *Id.* at 343–64.
53. *Id.* at 344–45.

It turns out that, as applied, "beyond a reasonable doubt" encompasses a broad range of probabilities. Judges evaluate the guilt of the defendant on the basis of probabilistic factors and not with any assurance of certainty.[54] They rely on such factors as assessors' tolerance for the possibility of error, including determinations of the optimal ratio between wrongful convictions and wrongful acquittals.[55] Combs also points out that, in fact, our probabilistic assessments of what it should take to find a defendant guilty varies, including among international criminal courts, depending on many subjective factors characterized by uncertainty.[56] These include the seriousness of the charge (e.g., manslaughter versus genocide), the likelihood of recidivism (e.g., a child molester versus a genocidaire, who is not likely to commit genocide again), the severity of the threatened punishment, the punishment that the defendant has already suffered, and the defendant's remorse.[57]

Combs speculates that we tolerate a relatively high level of fact-finding errors among international criminal courts precisely because of such assessments.[58] In the context of the Rwandan genocide, these assessments included weighing the fact that even if the ICTR defendant did not commit the specific offense charged, he was likely to have committed an equally punishable offense; or assessing the relative value of acquittals in high profile cases given the likely effects of such acquittals on the fragile enterprise of building viable institutions to make war criminals accountable.[59]

One can question all of these conclusions, but what seems inescapable is that judicial standards of proof involve highly variable probability calculations that may change not only from court to court, but also from case to case. It is also the case that international judges—as diverse as those on the European Court of Human Rights and those operating under ICSID in the course of investor-state arbitrations—regularly resort to principles of balancing, or the concept of proportionality when weighing the competing interests of property

54. *Id.* at 348.

55. *Id.* at 346. Combs indicates that efforts to quantify the reasonable doubt standard have traditionally been thought of as requiring a 90 to 95 percent probability of guilt. However, American studies of jury verdicts suggest that the level of certainty required for conviction under the reasonable doubt standard may be as low as 52.5%. COMBS, *supra* note 21, at 350.

56. *See id.* at 351.

57. *Id.* at 349–50.

58. *Id.* at 350–51.

59. *Id.* at 353–59.

holders and government regulators.[60] All of these determinations involve assigning weights to uncertain factors or making assessments based on probabilities.

Mbengue needs to tell us more about why judges are comfortable with tackling uncertainties head-on in all these contexts, but not with respect to SFF. Given judges' perennial exposure to probabilistic assessments we should not assume that, for example, the WTO's rejection of the precautionary principle was due to discomfort with attempts to apply probabilities.[61] If the WTO Appellate Body cast doubt on that principle it was not because of the uncertainties of science; it was probably because it was not convinced that the legal principle was itself sufficiently recognized as a matter of customary law.[62]

A third area needing more scrutiny concerns the significance of institutional structure. Mbengue's contention that international courts would do a better job of handling SFF if they were more willing to appoint their own experts and go outside the four corners of what the litigants present to them presumes that there is one model for an international "court," namely the ICJ model. If, as Mbengue asserts, the *Methanex* tribunal seemed more comfortable with tackling SFF, this comfort surely has a lot to do with the fact that the litigants in the case elevated the significance of SFF and engaged in extensive presentation of witnesses (and their cross-examination) on these issues.[63] That tribunal would have had to ignore a considerable amount of the evidence presented to it—and risk alienating the litigants—if it had ignored such questions altogether. At the same time, such arbitral tribunals—whose jurisdiction is closely tethered to what the litigants submit, and whose rulings may be annulled if they stray from this—need to be extremely careful about raising facts or law not posed by the parties before them.

While Mbengue suggests that international courts should not be so tethered to what litigants present to them, the *Methanex* case demonstrates that the failure to stray from the issues raised by the parties may not be the cause of problematic fact-finding, and that Mbengue's proposed solution may not be equally viable for all international adjudicators. Some tribunals may operate on the premise

60. *See* Alec Stone Sweet, *Investor-State Arbitration: Proportionality's New Frontier*, 4 L. & ETHICS OF HUM. RTS. 47, 59–75 (2010).

61. *See* Mbengue, *supra* note 2, at 67.

62. *See* Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 130, WT/DS58/AB/R (Oct. 12, 1998).

63. *See* Mbengue, *supra* note 2, at 71.

that they should address and resolve a dispute solely on the basis of what the litigants ask them to address. This self-imposed limitation does not necessarily handicap their assessment of facts and may, on the contrary, enhance their legitimacy.

Tribunals that operate on this adversarial model of litigation will be both constrained and emboldened in their fact-finding by such factors as the likelihood that the tribunal is free to solicit and accept amicus briefs or the views of state parties not involved in the litigation (as can be the case under the WTO or the North American Free Trade Agreement (NAFTA)).[64] Tribunals that elevate the importance of settling the concrete dispute before them above other goals are adopting the triadic model of adjudication espoused by Martin Shapiro.[65] Shapiro argues that the principal goal of courts is to render a decision that pleases the disputing parties and therefore encourages compliance with the judgment of the neutral third party adjudicator.[66]

We should not disparage such a limited goal for some forms of international adjudication—especially where solving a dispute to the satisfaction of the particular litigants helps avoid a potential breach of the peace. Settling such disputes one dispute at a time—as opposed to establishing judicial precedents pleasing to law professors—may be what those particular adjudicators seek to accomplish. This may explain why some ICSID arbitrators have signed onto diametrically opposed arbitral awards—as in the course of the Argentina cases.[67] In such instances, it would appear that some arbitrators believe that it is more important to the legitimacy of the award and its likelihood of enforcement that it be based on consensus, rather than contain a de-legitimating separate dissent. Who is to say that they are wrong?

Mbengue downplays the significance of the absence of scientific expertise among judges. He argues that the judges can always make up for this or for the potential biases of party-appointed experts by appointing their own experts.[68] But, of course, international courts and

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64. *See, e.g.*, Understanding on Rules and Procedures Governing the Settlement of Disputes art 10, § 2, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401; North American Free Trade Agreement, art. 1804, U.S.-Can.-Mex., Dec. 17, 1992, 32 I.L.M 289 (1993).

65. *See* MARTIN SHAPIRO, COURTS: A COMPARATIVE AND POLITICAL ANALYSIS 1–37, 127 (1981).

66. *Id.* at 3.

67. *Compare* CMS Transmission Co., *supra* note 41, ¶¶ 1–6 *with* LG&E Enegy Corp. v. Argentine Republic, ICSID Case No. ARB/02/1, Decision on Liability, ¶ 267(a)–(f) (Oct. 3, 2006), http://icsid.worldbank.org/ICSID/FrontServlet?requestType=GenCaseDtlsRH&actionVal=ListPending (both involving the participation of arbitrator Judge Francisco Rezek).

68. Mbengue, *supra* note 2, at 75–76.

tribunals usually operate under fiscal or other constraints, which affect what they can realistically do, including with respect to fact-finding.[69] Other structural issues—such as whether the particular international court exists within an institution that permits appellate review, insists on transparency, or provides its adjudicators with other institutional support (as is true of WTO panels, which rely on the WTO's considerable legal secretariat)[70]—also influence a court's aptitude towards engaging in detailed fact-finding.

Fiscal or operational constraints do not, however, always point against the active participation of judges in building a case, including with respect to facts. Counterexamples on this point may be the ICTY and ICTR. There is evidence that the completion strategy for those tribunals, demanding that they end all pending trials by a certain date, has inspired a more proactive judiciary with respect to fact-finding.[71] As Maximo Langer has pointed out, the pressure to quicken the pace of trials has encouraged a "managerial" approach to judging within those tribunals more akin to that found in some U.S. courts.[72] How courts handle scientific or other facts requires consideration of the differing roles envisioned for different international courts, as is reflected in their differing structures, rules, and jurisdictional limitations.

The relative embeddedness of a court within a larger regime also matters. Whether a court's assessment of the facts (or the law) is likely to remain the last word within the specific legal regime in which it operates is likely to influence how (or even whether) it engages in fact-finding.

To the extent a court exists within a broader institutional framework that permits state parties to exercise their exit and voice, this too will influence just how "proactive" on either law-making or fact-finding a judge or arbitrator is likely to be. Investor-state arbitral tribunals—which operate within a regime that permits states displeased with an arbitral outcome to resort to annulment proceedings, exercise civil disobedience by failing to pay arbitral awards, exit from the underlying treaty regimes (such as ICSID or a particular Bilateral

69. *See* Stefan Trechsel, *A World Court for Human Rights*, 1 NW. U. J. INT'L HUM. RTS. 3, ¶ 47 (2003).

70. *See Overview of the WTO Secretariat*, WORLD TRADE ORGANIZATION, http://www.wto.org/english/thewto_e/secre_e/intro_e.htm (last visited Apr. 23, 2012).

71. *See generally Completion Strategy*, UN ICTY, http://www.icty.org/sid/10016 (last visited Apr. 23, 2012).

72. Maximo Langer, *Managerial Judging Goes International, But Its Promise Remains Unfulfilled: An Empirical Assessment of the ICTY Reforms*, 36 YALE J. INT'L L. 241, 242, 289 (2011).

Investment Treaty), or issue "interpretations" of the same treaties that the arbitrators are interpreting—may be more inclined to engage in active fact-finding than other tribunals.[73]

As is true with respect to a court's ability to declare the law, a court's ability to assert itself with respect to the facts—and especially to present *sua sponte* factual issues that the litigants ignore—may turn on whether the court thinks it can get away with such determinations, or whether it needs to pay heed to its own fragile legitimacy or jurisdiction. This is not simply a matter of determining whether an international court exists within a structure of appellate review. The WTO Appellate Body can only review findings of law, not fact, and it is not capable of remanding to a WTO panel to revisit factual findings.[74] An ICSID annulment process is even more restricted, at least on paper, and is not supposed to undertake even a full-scale review of legal findings.[75] In both instances, despite some forms of appellate "review," original fact-finding determinations may prove difficult to overturn.

For its part, the ICC operates within a hierarchical system that permits appeals from a trial chamber or pre-trial chamber;[76] it also operates within a system that includes an Assembly of State Parties that at present seems inclined to "supervise" even the actions of the "independent" prosecutor to some extent.[77] We should not expect all our international tribunals, despite differences in structure or goals, to approach fact-finding the same way. The structure of our courts, as well as the rules under which they operate, matter.[78]

A fourth point is simply a reminder that, as students of evidentiary standards have pointed out for a long time, international judges' approaches to fact-finding may depend at least to some extent on their

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73. *See* José E. Alvarez, *The Return of the State*, 20 MINN. J. INT'L. L. 223, 234, 236, 244 (2011) [hereinafter Alvarez, *Return of the State*].

74. *Understanding on Rules and Procedures Governing the Settlement of Disputes*, WORLD TRADE ORGANIZATION, http://www.wto.org/english/res_e/booksp_e/analytic_index_e/dsu_05_e.htm (last visited Apr. 23, 2012).

75. Alvarez, *Return of the State*, *supra* note 73, at 242, 244–45.

76. Appeals Division, International Criminal Court, http://www.icc-cpi.int/menus/icc/structure%20of%20the%20court/chambers/appeals%20division/appeals%20division?lan=en-GB (last visited Apr. 23, 2012).

77. José E. Alvarez et al., *The Proposed Independent Oversight Mechanism for the International Criminal Court*, UCLA HUMAN RIGHTS INTERNATIONAL CRIMINAL LAW ONLINE FORUM, http://uclalawforum.com/oversight#Alvarez (last visited Apr. 23, 2012).

78. *See* F. ERMACORA, THE COMPETENCE AND FUNCTIONS OF FACT-FINDING BODIES IN INTERNATIONAL LAW AND FACT-FINDING IN THE FIELD OF HUMAN RIGHTS 83, 83 (B.G. Ramcharan ed., 1982).

own backgrounds.[79] Although the difference between Anglo-Saxon and civil law judges have been overstated, it still remains the case that, as Durward Sandifer indicated long ago, judges from the Anglo-American tradition may approach the process of judging less as a search for absolute "truth" than as a process that rewards the litigant who succeeds in presenting the most convincing evidence.[80] His or her approach may be quite different from someone trained in Germany where the judge is active even in the formulation of the issues on the basis of statements of fact submitted by the parties.[81] As Sandifer notes, despite the absence of technical rules restricting the admission of evidence within most international tribunals, members of such tribunals are inclined to weigh the evidence that is submitted to them in ways that are familiar to judges from their home state.[82] Moreover, international courts comprised of judges from both the civil and common law, such as the *ad hoc* war crimes tribunals,[83] have forged some awkward compromises that reflect these competing traditions—and perhaps some of the processes that Mbengue criticizes are the product of such compromises.[84]

Finally, it is important to consider what effect is produced by a judgment that, as Mbengue would recommend, would directly tackle (and purport to answer) questions such as whether the gasoline additive methyl tertiary butyl ether (MTBE) does or does not cause cancer. Even the *Methanex* case that Mbengue praises did not attempt to answer that scientific question, despite its central importance to that litigation.[85] The *Methanex* arbitrators found instead that the challenged California ban on MTBE was motivated by a reasonable belief that MTBE had adverse health effects, that mitigating that perceived risk by cleaning up contaminated groundwater instead of banning the chemical to begin with was too difficult and expensive, and that the policy decision that California made was not undertaken to favor domestic ethanol producers.[86]

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79. STEPHEN R. RATNER & JASON S. ABRAMS, ACCOUNTABILITY FOR HUMAN RIGHTS ATROCITIES IN INTERNATIONAL LAW: BEYOND THE NUREMBERG LEGACY 254 (2001).

80. DURWARD V. SANDIFER, EVIDENCE BEFORE INTERNATIONAL TRIBUNALS 13, 198 (rev. ed. 1975).

81. *Id.* at 199.

82. *Id.* at 13.

83. *See, e.g.*, DOCUMENTATION ON THE TOKYO INTERNATIONAL TRIBUNAL: CHARTER, INDICTMENT, AND JUDGMENTS lii–lvi (Neil Boister & Robert Cryer eds., 2008).

84. *See, e.g.*, Mbengue, *supra* note 2, at 63–64.

85. Methanex Corp. v. United States, Final Award of the Tribunal on Jurisdiction and Merits, pt. 3, ¶ 67 (NAFTA Ch. 11 Arb. Trib.), http://naftaclaims.com/Disputes/USA/Methanex/Methanex_Final_Award.pdf.

86. *Id.* pt. 3, ¶ 102.

While the *Methanex* case dealt extensively with the scientific evidence on point, it deployed that evidence to address a non-scientific, legal question: namely whether the challenged government policy violated NAFTA by being discriminatory.[87] Even the *Methanex* arbitrators seemed to accept the proposition that an ICSID tribunal is not engaged in the *same* exercise as scientists who study the effects of MTBE on the human body.[88] MTBE's effects on health can be uncertain and based on probabilities—as is the different determination of whether the authorities in California were *in all likelihood* more motivated by those studies than by the political pleas of its ethanol producers. Both are probabilistic assessments grounded in uncertainty but they are not the same assessment.

Mbengue would not characterize what the *Methanex* tribunal did in that instance as a strategy of avoidance, but it is important to see that what that tribunal did was not *in substance* all that different from what the ICJ did in the cases that Franck criticizes.[89] In all these instances, the respective tribunals avoided answering the "scientific" or factual question and answered a legal one instead. The difference among these tribunals' handling of the facts (or SFF) is a matter of degree.

Contrary to what Mbengue suggests, the decision in *Methanex* suggests the virtue of avoiding a direct confrontation with a scientific question. Had the *Methanex* tribunal directly found that MTBE causes cancer in humans, that finding would have been subject to delegitimation over time if subsequent scientific studies proved or suggested the contrary. Reliance on such a scientific finding would have exposed the *Methanex* ruling—and even ICSID arbitration itself—to an unnecessary risk. That risk is not as apparent with respect to the determination actually rendered in that case. Even if MTBE is proven not to be health risk, that outcome is not relevant to whether the U.S. government acted reasonably and prudently in that case given the state of existing scientific knowledge at that time.

The risk to the future legitimacy of the *Methanex* ruling by unknown technological developments suggests that there is some wisdom in keeping SFF, as such, within the domain of those capable of doing it, and letting lawyers and judges make passive use of what they find for their own purposes. If this is true, international judges ought to be a little afraid of tackling the underlying scientific questions—or at

87. *Id.* pt. 1, ¶ 2.
88. *Id.* pt. 3, ¶ 101.
89. Franck, *supra* note 22, at 21.

least not be overly confident that they can provide a scientific answer that even some scientists might want to avoid.

CONCLUSIONS

Mbengue gives an affirmative answer to the question posed by the title to this essay, "Are International Judges Afraid of Science?"[90] When his critique of SFF is put in the context of older critiques of fact-finding by international courts and tribunals, five questions emerge: (1) are the problems that Mbengue describes unique to "scientific" evidence?; (2) is judicial discomfort with scientific evidence really due to unease with scientific uncertainty?; (3) how do the procedural rules governing a particular international court influence judges' treatment of scientific fact?; (4) does the cultural or other background of the judges matter?; and (5) do we really want judges to give direct answers to scientific questions?

Mbengue's paper does not fully address these questions. As a result, the essay's response to the question posed by the title of this essay is more categorical than it otherwise might be. Although international judges face difficult problems when it comes to fact-finding, it is not entirely clear that the alleged uncertainties associated with science or scientific evidence have much to do with those difficulties. Further, to the extent that judges avoid direct responses to scientific questions, this avoidance may be, at least in certain cases, not such a bad thing. To the extent that international judges are "afraid" of science, this fear may reflect a wise acceptance of their limitations as legal professionals and a smart concession to the limited contributions that courts can make to "scientific" questions.

Mbengue is one in a long line of eminent critics of international adjudicative fact-finding.[91] It is all too easy to agree that international judges do not handle facts as well as they could. Indeed, some of the criticisms of international judicial fact-finding are so fundamental that Mbengue's confidence that international judges, when properly advised, can handle any type of fact before them, may be overly optimistic. Given the structural and other impediments that international judges face, accurate fact-finding, whether involving the application of science or not, may be a step too far for international courts, at least as these are presently constituted. But Mbengue's paper is not entirely convincing to the extent that it claims that international judges are doing an especially

90. Mbengue, *supra* note 2, at 63.
91. *See, e.g.*, Franck, *supra* note 22, at 30–32.

poor job with respect to handling "scientific" facts or that what is required of judges when it comes to SFF is all that distinguishable from all other tasks that we ask them to do.[92]

None of this is intended to suggest that international judges' handling of science or more generally expert-driven evidence does not merit special scrutiny. SFF raises many serious questions that are not addressed by Mbengue's article. Perhaps we should worry about more than just whether judges are afraid of science. We ought to be equally concerned with whether judges are, in some cases, overly deferential and only too ready to accept some forms of expert-driven "fact."

Critics of how international judges handle science should consider the broader questions that David Kennedy, among others, have raised about the role of experts in international law.[93] For example, does judicial resort or deference to seemingly neutral scientific "expertise" deflect attention from value-laden judgments that ought to be addressed more directly and challenged on normative grounds? The WTO's reliance, through its Agreement on Technical Barrier to Trade on international standards set by the Codex Commission is one prominent example.[94] Through decisions like *EC–Sardines*, the WTO has set the burden of proof for parties relying on the Codex so low that it effectively puts the burden of production on the state that wants to deviate from the international standard.[95]

Such decisions—which rely on a form of "scientific" expertise without exploring whether this is truly warranted—silently constrain the regulatory autonomy of governments. Decisions that rely on scientific expertise may undervalue the virtues of regulatory diversity and democratic experimentation among nations or local communities within a nation. As Kennedy suggests, reliance on international standards set by experts has normative implications that are generally left unexplored by the judges who rely on them.[96]

Enforcement of "scientific" or other standards set by epistemic communities through international courts may subtly benefit wealthy Northern states, or certain non-governmental organizations, or men over

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92. *See* Mbengue, *supra* note 2, at 72–73.

93. David Kennedy, *Challenging Expert Rule: The Politics of Global Governance*, 27 SYDNEY J. INT'L L. 5, 20 (2005).

94. Agreement on Technical Barriers to Trade, art. 2.4, Apr. 15, 1994, 1868 U.N.T.S. 120.

95. Panel Report, *European Communities – Trade Descriptions of Sardines*, ¶ 7.48–7.52, WT/DS231/R (May 29, 2002). *See also* Henrik Horn & Joseph H. H. Weiler, *European Communities – Trade Description of Sardines: Textualism and its Discontent*, *in* THE WTO CASE LAW OF 2002 248, 260–74 (Henrik Horn et al. eds., 2005).

96. Kennedy, *supra* note 93, at 7.

women. Such questions are usually not addressed by international judges. Perhaps Mbengue would argue that they are afraid to consider them. The decision in *EC–Sardines* does not indicate who benefits and who loses from reliance on scientific and other forms of expertise. If Mbengue's prescriptions encouraging judges to re-open the appreciation of scientific evidence will result in greater attention to such questions, this result may be a good reason to pursue them.