THE DEBATE ON THE USE OF EXPERTS BY THE INTERNATIONAL COURT OF JUSTICE: AN INQUIRY THROUGH SOCIOLOGICAL LENSES

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I. INTRODUCTION

The growing number of appearances of scientific experts in proceedings before the International Court of Justice (ICJ) in the aftermath of the *Pulp Mills* judgment has triggered an unprecedented debate about the capacity of an international court to incorporate scientific input into its judicial activity.[1] In *Pulp Mills*, while admonishing the parties for inadequately presenting technical evidence in consideration of the special circumstances of the dispute, the Court also employed a dubious instrument for assessing scientific evidence—so-called "phantom experts."[2]

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1. *See generally* Pulp Mills on the River Uruguay (Arg. v. Uru.), Judgment, 2010 I.C.J. 14 (Apr. 20).

2. Bruno Simma, *The International Court of Justice and Scientific Expertise*, 106 AM. SOC'Y

Phantom experts provide information that goes beyond the "scientific/technical margins of the case" and are often not subject to cross-examination.[3] A significant amount of criticism, from both scholars and dissenting voices within the Court, accompanied the judgment. The debate reappeared in subsequent cases involving scientific disputes in which new techniques for dealing with scientific evidence were employed by the parties and the Court.

The overarching question underlying the debate was whether, and to what extent, a court of law, especially one with the diplomatic contours of the ICJ, could properly grapple with complex evidence[4] when called to settle a dispute with science-heavy or technically knotty aspects. As one scholar aptly observed, "[s]cientific disputes pose new challenges within the rationalist conception of adjudication in the international setting."[5] Ultimately, the debate that ensued was also a broader discussion about the difficult relationship between science and law—two fields in which elusive dialogue is influenced by a number of faintly reconcilable socio-cultural factors and epistemic-related components.[6] In this vein, experts are necessary tools to overcome these challenges and bridge the gaps between different

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INT'L L. PROC. 230, 231 (2012).

3. *Id.*

4. On the framework of evidence law before the ICJ, see ANNA RIDDELL & BRENDAN PLANT, EVIDENCE BEFORE THE INTERNATIONAL COURT OF JUSTICE (2009); Markus Benzing, *Evidentiary Issues*, *in* THE STATUTE OF THE INTERNATIONAL COURT OF JUSTICE: A COMMENTARY (2d ed. 2012); Eduardo Valencia-Ospina, *Evidence Before the International Court of Justice*, 1 INT'L L.F. D. INT'L 202 (1999); HUGH THIRLWAY, THE INTERNATIONAL COURT OF JUSTICE 99 (2016); Manfred Lachs, *Evidence in the Procedure of the International Court of Justice: Role of the Court*, *in* ESSAYS IN HONOUR OF JUDGE TASLIM OLAWALE ELIAS (Emmanuel G. Bello & Bola A. Ajibola eds., 1992); LUIGI FERRARI BRAVO, LA PROVA NEL PROCESSO INTERNAZIONALE [THE TEST IN THE INTERNATIONAL PROCESS] (1958) (It.); JAMES GERARD DEVANEY, FACT-FINDING BEFORE THE INTERNATIONAL COURT OF JUSTICE (2016); Neil H. Alford Jr., *Fact Finding by the World Court*, 4 VILL. L. REV. 38 (1958). On the adversarial framework of evidence of the ICJ, see SHABTAI ROSENNE, THE LAW AND PRACTICE OF THE INTERNATIONAL COURT, 1920–2005 (2006) [hereinafter ROSENNE, THE LAW AND PRACTICE OF THE INTERNATIONAL COURT, 1920–2005]; JUAN JOSÉ QUINTANA, LITIGATION AT THE INTERNATIONAL COURT OF JUSTICE: PRACTICE AND PROCEDURE (2015); ROBERT KOLB, THE INTERNATIONAL COURT OF JUSTICE 930 (2013); CARLO SANTULLI, DROIT DU CONTENTIEUX INTERNATIONAL [INTERNATIONAL LITIGATION LAW] (2d ed. 2015) (Fr.); Jean-Flavien Lalive, *Quelques remarques sur la preuve devant la cour permanente et la cour internationale de justice* [*Some Notes on Evidence Before the Permanent Court and the International Court of Justice*], 7 ANNUAIRE SUISSE DE DROIT INTERNATIONAL [A.S.D.I.] 77 (1950) (Fr.); SHABTAI ROSENNE, ESSAYS ON INTERNATIONAL LAW AND PRACTICE (2007).

5. CAROLINE E. FOSTER, SCIENCE AND THE PRECAUTIONARY PRINCIPLE IN INTERNATIONAL COURTS AND TRIBUNALS: EXPERT EVIDENCE, BURDEN OF PROOF AND FINALITY 341 (2011).

6. On the question of science and the law, see THE ROLE OF 'EXPERTS' IN INTERNATIONAL AND EUROPEAN DECISION-MAKING PROCESSES: ADVISORS, DECISION MAKERS OR IRRELEVANT ACTORS? (Monika Ambrus et al. eds., 2014); Wouter G. Werner, *The Politics of Expertise: Applying Paradoxes of Scientific Expertise to International Law*, *in* THE ROLE OF 'EXPERTS' IN INTERNATIONAL AND EUROPEAN DECISION-MAKING PROCESSES (2014); Jan Klabbers, *The Virtues of Expertise*, *in* THE ROLE OF 'EXPERTS' IN INTERNATIONAL AND EUROPEAN DECISION-MAKING PROCESSES (Ambrus et al. eds, 2014); Andrew Lang, *International Lawyers and the Study of Expertise: Representationalism and Performativity*, *in* RESEARCH HANDBOOK ON THE SOCIOLOGY OF INTERNATIONAL LAW (Hirsch et al. eds., 2018); JACOBO RÍOS RODRÍGUEZ, L'EXPERT EN DROIT INTERNATIONAL [THE EXPERT IN INTERNATIONAL LAW] (2009) (Fr.).

epistemic communities within the decision-making process of an international court.

The presence of an expert in a courtroom introduces a number of legal problems, including questions regarding the process of nominating experts and the weight attributed to their opinions. These problems can be addressed not only from a legal viewpoint, but also through the lens of a sociological approach to adjudication.[7] The introduction of experts in international court proceedings raises several important issues that transcend the difficult question of how best to incorporate external, non-legal elements into legal procedure and raise critical issues of control, power, authority, and effectiveness. Accordingly, different socio-professional groups espouse different ideas in the debate. A number of scholars, judges, and practitioners addressed these issues. Experts and scientists have also had a say in these major discussions.

All in all, the issues raised by the incorporation of scientific expertise into judicial proceedings may be regarded as creating a field of tension in which different social groups pull toward different directions, emphasizing different social values and preferences. It is difficult to avoid the impression that the behavior of the parties—as well as that of the Court—regarding the appearance of experts seems to have been influenced by this larger debate and by the interaction of different social actors.

The purpose of this article is to take a step back and examine the discussion about the use of experts before the ICJ by applying a sociological lens. Aiming at a better understanding of the debate and its ramifications, this analysis focuses on the internal and external levels of discussions about the use of experts and attempts to offer one possible narrative of the evolution of the ICJ's procedure, stressing the common points of convergence and divergence of the socio-professional actors involved. These actors are mainly ICJ judges, the parties—represented by agents and counsels, scholars, and the scientists appearing as experts. By identifying the interests at stake and the core values of each one of the social groups participating in the debate, I illuminate the different rationalities each group uses to justify their positions and show how the ICJ's approach to scientific knowledge in recent cases involving scientific evidence strikes a balance between these core values.[8]

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7. For more information on the sociological approach to adjudication, see Mikael Rask Madsen, *Sociological Approaches to International Courts*, *in* THE OXFORD HANDBOOK OF INTERNATIONAL ADJUDICATION (Romano et al. eds., 2013); Salvatore Caserta & Mikael Rask Madsen, *Sociological Approaches to International Adjudication*, *in* MAX PLANCK ENCYCLOPEDIA OF INTERNATIONAL PROCEDURAL LAW (2019); MOSHE HIRSCH, INVITATION TO THE SOCIOLOGY OF INTERNATIONAL LAW (2016); YVES DEZALAY & BRYANT G. GARTH, DEALING IN VIRTUE: INTERNATIONAL COMMERCIAL ARBITRATION AND THE CONSTRUCTION OF A TRANSNATIONAL LEGAL ORDER (1996); Juan A. Mayoral et al., *Creating EU Judges, the Role of Generational Differences, Legal Education and Career Paths in National Judges' Assessment Regarding EU Law Knowledge*, 21 J. EUR. PUB. POL. 1120 (2014); Mikkel Jarle Christensen, *The Emerging Sociology of International Criminal Courts: Between Global Restructurings and Scientific Innovations*, 63 CURRENT SOC. 825 (2015); Alexandra Huneeus, *Constitutional Lawyers and the Inter-American Court's Varied Authority*, 79 LAW & CONTEMP. PROBS. 179 (2016).

8. For cases in which the Court adopted a new methodology for the presentation and testing experts, see Pulp Mills on the River Uruguay (Arg. v. Uru.), Judgment, 2010 I.C.J. 14 (Apr. 20); Whaling in the Antarctic (Austl. v. Japan), Judgment, 2014 I.C.J. 226 (Mar. 31); Certain Activities

Part II of this article reviews the Court's practice since the *Pulp Mills* case regarding the appearance of experts in the proceedings. Although a number of interesting questions related to the appearance of experts arose in that case, I emphasize the main interactions between the different social groups in relation to the procedure adopted regarding experts. In Part III, I examine, from the point of view of each socio-professional group, the main values and interests at stake. Consequently, this article sheds some light on the main positions sustained in the debate about the use of experts. Part IV demonstrates that the Court's current procedures regarding the use of experts were devised to strike a balance between the core values to be protected by each of the social groups involved in the larger debate.

II. THE EVOLVING PRACTICE: A COURT PRONE TO ENGAGE IN SCIENTIFIC ISSUES?

The question of how courts of law approach scientific issues can be traced back to the eighteenth century during the industrial revolution.[9] The ways to deal with these problems depend on, to a certain extent, the contours of the legal system in which they arise. While the Anglo-Saxon system favored the use of party-appointed experts,[10] *le juge de la codification* of civil law systems would not even conceive of the idea of letting the parties be almost exclusively responsible for identifying the "truth."[11] Both systems had problems in taming science within their courtrooms. As the evidentiary system of the ICJ appears to be a blend between the two systems,[12]

Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicar.) and Construction of a Road in Costa Rica along the San Juan River (Nicar. v. Costa Rica), Judgment, 2015 I.C.J. 665 (Dec. 16) [hereinafter Certain Activities and Construction of a Road]; Maritime Delimitation in the Caribbean Sea and the Pacific Ocean (Costa Rica v. Nicar.), Judgment, 2018 I.C.J. 139 (Feb. 2); and Land Boundary in the Northern Part of Isla Portillos (Costa Rica v. Nicar.), Judgment, 2018 I.C.J. 139 (Feb. 2).

9. *See generally* Tal Golan, *Revisiting the History of Scientific Expert Testimony*, 73 BROOK. L. REV. 879 (2008); DÉIRDRE DWYER, THE JUDICIAL ASSESSMENT OF EXPERT EVIDENCE (2008); John Langbein, *Historical Foundations of the Law of Evidence*, 96 COLUM. L. REV. 1168 (1996).

10. TAL GOLAN, LAWS OF MEN AND LAWS OF NATURE: THE HISTORY OF SCIENTIFIC EXPERT TESTIMONY IN ENGLAND AND AMERICA 3 (2004).

11. *See* JOHN ANTHONY JOLOWICZ, ON CIVIL PROCEDURE 185 (2000) (noting how parties turn to litigation demanding advantages for themselves and how laws in relation to these demands serve as a guide to judges). *See generally* OLIVIER LECLERC, LE JUGE ET L'EXPERT: CONTRIBUITION À L'ÉTUDE DES RAPPORTS ENTRE LE DROIT ET LA SCIENCE [THE JUDGE AND THE EXPERT: CONTRIBUTION TO THE STUDY OF THE RELATIONSHIP BETWEEN LAW AND SCIENCE] (2005) (Fr.); *see generally* VINCENZO ANSANELLI, LA CONSULENZA TECNICA NEL PROCESSO CIVILE: PROBLEMI E FUNZIONALITÀ [TECHNICAL ADVISE IN CIVIL TRIALS: PROBLEMS AND FUNCTIONALITY] (2011) (It.).

12. In this regard, Polish jurist Manfred H. Lachs pinpointed that "[i]t has been recalled on several occasions that the Court aimed to 'hold a middle course between those two systems.' This goal has been maintained throughout the existence of the two Courts." Lachs, *supra* note 4, at 265. "Evidence" is understood as the generic name for the adversarial presentation of facts underlying a dispute. ROSENNE, ESSAYS ON INTERNATIONAL LAW AND PRACTICE, *supra* note 4, at 235; *see also* LA PREUVE DEVANT LES JURISDICTIONS INTERNATIONALES [EVIDENCE BEFORE INTERNATIONAL COURTS] (Hélène Ruiz Fabri & Jean-Marc Sorel eds., 2007) (Fr.); Emmanuelle Jouannet, *La preuve comme reflet des évolutions majeures de la societé international* [*Evidence as a Reflection of Major Developments in International Society*], CONTENTIEUX INTERNATIONAL (2007) (Fr.).

it is not surprising to see some of those problems being mirrored at the international level.

Experts can perform different functions before the ICJ. Different categories of experts are envisaged in the ICJ Rules, which can be generally divided into two categories: party-appointed (*ex parte*) experts and court-appointed (*ex curia*) experts.[13] Parties can employ experts as members of their defense team, the so-called *expert counsel*, and nominate experts to serve as witnesses, subject to cross-examination, in specific proceeding set forth by ICJ Rules.[14] In addition, the Court can appoint its own experts under Article 50 and assessors under Article 30.[15] It can also recurrently employ phantom experts as members of the Registry. Each one of these categories encompass advantages and shortcomings. One of the main features of the aforementioned debate about the use of experts' concerns determining which is the best category to incorporate expertise during proceedings.

While the Court exercised its powers to nominate experts in one of its first cases, *—Corfu Channel,*[16] the issue received little attention for many years thereafter. Even in the highly complex *Gabčíkovo-Nagymaros* case,[17] the question of technical and scientific evidence was neither the primary focus nor determinative of the outcome of the dispute and was of lesser significance than issues concerning the law of treaties. It was only in *Pulp Mills* that the question of scientific expertise reappeared and touched upon several issues, calling the Court to address its methodology for assessing scientific evidence.[18]

A. Between Fantômes and Expert-Counsel: The Pulp Mills Case.

The *Pulp Mills* case was the first significant occasion in which the Court directly addressed the way the parties introduced scientific evidence, which in turn prompted a substantial scholarly debate on the matter. Among other issues, the dispute required the Court to verify the existence of environmental damage caused by the installation of a pulp mill on the border of the Uruguay River.[19] The Court did not exercise the authority granted by Article 50 of the ICJ Statute to appoint its own experts and instead decided the case by simply relying on the proofs introduced by the parties. In a well-known passage, the Court stated that:

> [D]espite the volume and complexity of the factual information submitted to it, it is the responsibility of the Court, after having given careful consideration to all the evidence placed before it by the Parties, to determine which facts must be considered relevant, to assess their probative value, and to draw conclusions from them as appropriate.[20]

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13. International Court of Justice, Rules of Court arts. 62, 67 (1978) [hereinafter I.C.J. Rules of Court], *available at* https://www.icj-cij.org/en/rules.

14. *Id.* arts. 62–68.

15. *Id.* arts. 50, 30.

16. Corfu Channel (U.K. v. Alb.), Judgment, 1949 I.C.J. 4 (Apr. 4).

17. Gabčíkovo-Nagymaros Project (Hung./Slovk.), Judgment, 1997 I.C.J. 7 (Sept. 25).

18. Pulp Mills on the River Uruguay (Arg. v. Uru.), Judgment, 2010 I.C.J. 14, ¶ 168 (Apr. 20).

19. *Id.* ¶ 167.

20. *Id.* ¶ 168.

Since the evidentiary issue arose during the proceedings, this declaration can be perceived as the Court restating that it is primarily responsible for marshalling the evidence presented by the parties. In the social interaction between the stakeholders of this case, the judges recalled the functions of the various social groups involved: it is for the parties and their counsel, in line with the principle of the burden of proof, to "place" the evidence before the judges, but it is for the judges to weigh its probative value and have the final word about its legal meaning. Although it does not directly mention the role of experts, when the Court observes in the judgment that experts are "persons who provide evidence before the Court based on their scientific or technical knowledge," it seems to include them in the general scheme of distribution of the burden of proof.[21] The necessity for such a statement may be perceived as the Court justifying its choices in relation to evidentiary issues. It also reveals the Court's global attitude concerning the control of the assessment of the evidence.

In addition to this restatement, there are two other interesting issues regarding experts in the *Pulp Mills* case. The first is the fact that the Court's judgment criticized the way the parties presented technical and scientific evidence. The second regards criticism within the Court, which is reflected in the individual opinions regarding the Court's general approach to evidence. I will consider each of these criticisms in turn.

In addition to the technical evidence presented to the Court through the parties' documentary submissions, the parties also made use of experts who appeared before the Court as counsels—members of the legal team that pleaded before the Court, which is a recurrent practice from previous proceedings. In these circumstances, the experts cannot be cross-examined.[22] The Court's reaction to the parties' approach was trenchant:

> Regarding those experts who appeared before it as counsel at the hearings, the Court would have found it more useful had they been presented by the Parties as expert witnesses under Articles 57 and 64 of the Rules of Court, instead of being included as counsel in their respective delegations. The Court indeed considers that those persons who provide evidence before the Court based on their scientific or technical knowledge and on their personal experience should testify before the Court as experts, witnesses or in some cases in both capacities, rather than counsel, so that they may be submitted to questioning by the other party as well as by the Court.[23]

By indicating to the parties, and at the same time to future litigants, the more "useful" way to introduce scientific evidence, the judges of the Court sent a strong message about their preferences regarding this kind of evidence. The judges' preferences emphasize the importance of testing scientific evidence and signal to the parties that, even if they are free to decide how to introduce evidence before the Court, there are consequences that flow from their decisions.

In another passage of the judgment, the Court addressed the question of the

21. *Id.* ¶ 167.

22. Simma, *supra* note 2, at 231.

23. Arg. v. Uru., Judgment, 2010 I.C.J. ¶ 167.

probative value of the different "interpretations" of scientific fact offered by the experts when serving as counsel.[24] The Court observed that "in assessing the probative value of the evidence placed before it, the Court will principally weigh and evaluate the data, rather than the conflicting interpretations given to it by the Parties or their experts and consultants."[25] This passage highlights another feature. In cases in which scientific questions are at stake, it is expected that both parties will offer scientific expertise to prove their arguments on factual questions and, consequently, the Court will be faced with conflicting expert evidence. This situation creates a different scenario that the Court is required to tackle. The issue is no longer a question of determining the probative value of the evidence but rather of directly engaging with the scientific evidence or the scientific uncertainty of a certain dispute. In these situations, the probative value of the expert's counsel tends to be almost pointless. This appears to be the final conclusion arrived at by the Court. The absence of *expertise* in a case can be inadvisable, but their presence is not decisive if presented in such a way.

The second issue is regarding the fact that the dissent in *Pulp Mills* revived a long-standing debate concerning the Court's use of so-called "'invisible' experts."[26] In order to evaluate technical and complex evidence underlying a case, the ICJ has taken recourse to invisible experts or *experts fantômes*,[27] internal "unofficial" experts.[28] As the name suggests, this category of experts is invisible; it usually unknown when they are used by the ICJ and what is contained in their reports. Nevertheless, it is known that sometimes, during the deliberation stage, the Court utilized the assistance of experts who do not officially participate in the procedure. The main proof of their existence is found in references to these experts made by some judges or by the Court's Registrar.[29]

The Court's use of these experts has been criticized because it does not observe

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24. *Id.* ¶ 236.

25. *Id.*

26. The term "'invisible' experts" specifically appears in the dissenting opinion of Judges Al-Khasawneh and Simma in the *Pulp Mills* case. Pulp Mills on the River Uruguay (Arg. v. Uru.), Joint Dissenting Opinion of Judges Al-Khasawneh and Simma, 2010 I.C.J. 108, ¶ 14 (Apr. 20).

27. These words are also from Judges Simma and Al-Khasawneh in their joint dissenting opinion in *Pulp Mills*. *Id.*

28. Benzing, *supra* note 4, at 1258.

29. Judge Simma admitted to the use of phantom experts by the Court, arguing that "[t]o mention them does not breach confidentiality." Simma, *supra* note 2, at 231. In the words of a former President of the Court, Robert Jennings, "[the] Court has indeed not infrequently employed cartographers, hydrographers, geographers, linguists, and even specialized legal experts to assist in the understanding of the issue in a case before it; and has not on the whole felt any need to make this public knowledge or even to apprise the parties." *Id.* (quoting Robert Jennings, *International Lawyers and the Progressive Development of International Law*, *in* THEORY OF INTERNATIONAL LAW AT THE THRESHOLD OF THE 21ST CENTURY: ESSAYS IN HONOUR OF KRZYSTOF SKUBISZEWSKI 416 (Jerzy Makarczyk ed., 1996)); *see also* Philippe Couvreur, *Le règlement juridictionnel* [*The Jurisdictional Regulation*], *in* LE PROCESSUS DE DÉLIMITATION MARITIME ÉTUDE D'UN CAS FICTIF: COLLOQUE INTERNATIONAL MONACO 27–29 MARS 2003 [THE MARITIME DELIMITATION PROCESS STUDY OF A FICTITIOUS CASE: MONACO INTERNATIONAL SYMPOSIUM 27–29 MARCH 2003] 384 (2004) (Fr.).

the criteria of transparency and procedural fairness.[30] When the Court employs invisible experts, the parties: (i) do not know the identity of these experts (and hence cannot question the expert's training and experience, or probe for the existence of potential bias); (ii) do not know the opinion the experts provided to the Court; (iii) do not know the doubts and questions that the judges have, which is an important element in regard to the full comprehension of the facts and the thinking of the Court; and (iv) do not have the opportunity to offer any counterarguments against the arguments offered by these experts.[31] In addition, even when the Court does use invisible experts, their presence cannot guarantee a full understanding of the complex and scientific facts in dispute. This point was made by Judges Simma and Al-Khasawneh in their joint dissenting opinion in the *Pulp Mills* case. They keenly criticized the Court's methods of fact-assessing, holding that:

> Under circumstances such as in the present case, adopting such a practice would deprive the Court of the above-mentioned advantages of transparency, openness, procedural fairness, and the ability for the Parties to comment upon or otherwise assist the Court in understanding the evidence before it.[32]

The two judges argued that in some cases the consultation of this category of experts may be appropriate "if the input they provide relates to the scientific margins of a case;" however, they stressed that the situation changes when the case deals with complex scientific evidence.[33]

Criticism of the Court's method of fact-assessment was voiced by other judges[34] and by certain scholars who considered the *Pulp Mills* case a missed opportunity for the Court to wield its powers under Article 50 and nominate its own experts.[35] On the other hand, some of the judges defended the Court's method for handling evidence in this case, endorsing the "fundamental principle that, in proceedings before the Court, the burden of proving any given fact rests on the party asserting that fact."[36] Unveiling the divisiveness among judges within the courtroom

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30. Arg. v. Uru., Joint Dissenting Opinion of Judges Al-Khasaweh and Simma, 2010 I.C.J. ¶ 14.

31. *See* Caroline Foster, *New Clothes for the Emperor? Consultation of Experts by the International Court of Justice*, 5 J. INT'L DISP. SETTLEMENT 139, 171 (2014) (noting that under the prevailing arrangement, exchanges between judges and *experts fantômes* are kept confidential).

32. Arg. v. Uru., Joint Dissenting Opinion of Judges Al-Khasaweh and Simma, 2010 I.C.J., ¶ 14.

33. *Id.*

34. Pulp Mills on the River Uruguay (Arg. v. Uru.), Separate Opinion of Judge Cançado Trindade, 2010 I.C.J. 135, ¶ 151 (Apr. 20) (criticizing the ICJ for not using all avenues of fact-finding in the current case); Pulp Mills on the River Uruguay (Arg. v. Uru.), Declaration of Judge Yusuf, 2010 I.C.J. 216, ¶ 1 (Apr. 20) (expressing that the ICJ should have appointed an expert under Article 50); Pulp Mills on the River Uruguay (Arg. v. Uru.), Dissenting Opinion Judge ad hoc Vinuesa, 2010 I.C.J. 266, ¶¶ 93–95 (Apr. 20) (questioning the Court's ability to judge facts without appointed expert).

35. *See* Guillaume Gros, *The ICJ'S Handling of Science in the Whaling in the Antarctic Case: A Whale of a Case?*, 6 J. INT'L DISP. SETTLEMENT 578, 580 (2015) (referring to the *Pulp Mills* case as an example of an unsatisfactory approach to scientific evidence).

36. Pulp Mills on the River Uruguay (Arg. v. Uru.), Separate Opinion of Judge Greenwood, 2010 I.C.J. 221, ¶ 24 (Apr. 20) (criticizing the Court for not using all avenues of fact-finding in the

regarding the Court's role in the fact-finding, these opinions also reveal that the socio-professional group of judges has its own internal struggles when questions of expertise arise before the Court. One is left with the impression that those judges trained in a *common law* background tend to prefer an adversarial approach to evidence, while those coming from a *civil law* system would prefer that the Court play a more active role in the production of evidence.

The fact that the invisible experts exist and have been used by the Court is a clear sign demonstrating the Court's need for technical input. From a sociological stance, invisible experts might be perceived as a useful tool closely connected to one of the social groups involved in litigation: the judges. The invisible experts assist judges in achieving their ultimate judicial function, enhancing the legitimacy of the judgment, because of the correctness of its content, at a low cost for the overall control of the procedure. As Simma pointed out, "the Court on its own could not possibly assess and weigh such complex evidence without expert assistance."[37] However, the employment of invisible experts satisfies the need of one social group (judges) to the detriment of the other (parties). By enhancing the correctness of the judgment through the use of this kind of expert, judges put at risk other values important to the *de facto*[38] authority of a certain judgment, such as transparency and due process.

The two issues regarding experts raised in *Pulp Mills* reveal a primary tension between two social groups: a clash between the preferences of parties and those of judges. This tension will reappear in other controversies over the use of experts.

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current case); Pulp Mills on the River Uruguay (Arg. v. Uru.), Separate Opinion of Judge Keith, 2010 I.C.J. 121, ¶ 11 (Apr. 20) (questioning the usefulness of Article 50 measures and noting that parties did not request them).

37. Simma, *supra* note 2, at 231.

38. *See generally* Karen J. Alter et al., *How Context Shapes the Authority of International Courts*, 79 LAW & CONTEMP. PROBS. 1 (2016); Ingo Venzke, *International Courts' De Facto Authority and Its Justification*, *in* INTERNATIONAL COURT AUTHORITY (Karen Alter et al. eds., 2018); KAREN J. ALTER, THE NEW TERRAIN OF INTERNATIONAL LAW: COURTS, POLITICS, RIGHTS (2014); ARMIN VON BOGDANDY & INGO VENZKE, IN WHOSE NAME? A PUBLIC LAW THEORY OF INTERNATIONAL ADJUDICATION (2014); Jacob Katz Cogan, *Competition and Control in International Adjudication*, 48 VA. J. INT'L L. 411 (2008).

B. Improving the Procedure: The Whaling in the Antarctic Case.

Whaling in the Antarctic,[39] another case involving "vast amounts of highly technical scientific evidence"[40] presented before the Court, whose task was to determine whether the Japanese whaling program (JARPA II) could be considered as meeting the "scientific research" exception under the terms of Article VIII of the Whaling Convention.[41] In relation to the use of experts, the case was innovative, not only because the Court and the parties changed completely their approach to experts, but also because the Court had an opportunity to explain its approach to evaluating contested scientific evidence. On the one hand, the case reflects a general adjustment of the procedure regarding experts. On the other hand, the Court conveys the impression that it is more prone to engage in scientific issues, indicating to the parties when they were useful and the criteria adopted to assess expert evidence.

A first improvement of the procedure regarding experts is that the Court's criticism of the use of expert counsels in the *Pulp Mills* case seems to have been taken into account by the parties in the *Whaling in the Antarctic* case, where neither party resorted to expert counsel. Additionally, the Court did not utilize invisible experts in this particular case,[42] which can also be perceived as a response to the criticism addressed by judges and scholars in relation to the former judgment. Both examples can be perceived as an interactive social reaction by a certain professional group in response to criticism from other social groups. While it is difficult to establish an undisputed cause-effect relationship between the criticism and the adaptation of the procedure, it seems to be a common place in the literature that the criticism was duly noticed by individual members of the Court.[43] The innovative procedural aspect of the *Whaling in the Antarctic* case is the resort to, and the refinement of, the expert procedure since the parties had recourse to experts appointed in accordance with Articles 57 and 64 of the Court's Rules.[44] *Whaling in the Antarctic*, therefore, sets the precedent for the use and cross-examination of

39. Austl. v. Japan, Judgment, 2014 I.C.J. 226 (Mar. 31).

40. Peter Tomka, President, Int'l Court of Justice, Speech by H.E. Judge Peter Tomka to the Sixth Committee of the General Assembly 2 (Oct. 31, 2014).

41. For an overall assessment of the case, see Christine Gray, *The 2014 Judicial Activity of the International Court of Justice*, 109 AM. J. INT'L L. 583, 589–602 (2015); Gros, *supra* note 35, at 578–81.

42. Giorgio Gaja, *Assessing Expert Evidence in the ICJ*, 15 LAW & PRAC. INT'L CTS. & TRIBUNALS 409, 414 (2016).

43. *See* James Devaney, *Reappraising the Role of Experts in Recent Cases Before the International Court of Justice*, 62 GER. Y.B. INT'L L. (forthcoming 2019), *available at* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3519799 (arguing that, since the *Pulp Mills* case, the ICJ has changed its expert practices in response to criticism). In his speech before the sixth Committee of the United Nations, President Yusuf observed that the fact that "the Court did not exercise its power under Article 50 of the Statute for more than 40 years gave rise to allegations that it was reluctant to appoint experts." These criticisms were not only external. They also came from the Bench itself, in the form of separate or dissenting opinions or declarations. Abdulqawi Yusuf, President, Int'l Court of Justice, Speech by H.E. Mr. Abdulqawi Ahmed Yusuf, President of the International Court of Justice, before the Sixth Committee of the General Assembly ¶ 24 (Oct. 26, 2018).

44. I.C.J. Rules of Court arts. 57, 64.

party-appointed experts in a method particularly close to the *common law* system. Judges and commentators stressed the importance of cross-examination in testing scientific evidence.[45]

Interestingly, the Court has offered some indications regarding the assessment of these experts that reveals its general approach to the assessment and testing of scientific evidence.[46] Some of the criteria indicated by the Court mirrored those which it has previously employed for evaluating witnesses, including the fact that (i) the expert's opinion diverged from the position taken by the State that appointed him;[47] (ii) there is an agreement between the opinions expressed by the experts from both parties;[48] and (iii) the opinion expressed by an expert appointed by a party had not been contested by the other party.[49] These three criteria (or second-order indicators)[50] are particularly important because they set the dialogue between the social-groups. In their pleadings, the parties try to highlight the aspects that they believe the Court should put greater emphasis on during its evaluation of the evidence.

The Court reacts to these choices as well. On the one hand, the Court indicates which elements received more or less weight in its evidentiary assessment in that specific case. On the other hand, by identifying the criteria enhancing the performance of an expert, the Court is sending a message to future litigants about the strengths and weaknesses of specific strategic choices. This exchange between different social actors contributes to the general refinement of the procedure. For example, the agreement of scientific data between expert opinions seems to have been particularly taken into consideration by the Court. It is telling because it favors a certain logic connected to the adversarial structure of the procedure. As has been argued elsewhere, experts allow the emergence of "an agreement with regard to the scientific facts in dispute," which makes the "'search' for consensus appear[], to

45. *See* Gros, *supra* note 35, at 582–86 (noting innovative use of expert witnesses and court's emphasis on cross-examination, a technique familiar to the common law, to determine scientific fact).

46. The techniques for evaluating scientific evidence were explored by Gaja, *supra* note 42, at 410–11; Joan E. Donoghue, *Expert Scientific Evidence in a Broader Context*, 9 J. INT'L DISP. SETTLEMENT 379 (2018); and Lucas Carlos Lima, *The Evidential Weight of Experts before the ICJ: Reflections on the* Whaling in the Antarctic *Case*, 6 J. INT'L DISP. SETTLEMENT 621 (2015).

47. The Court noted when Japan's appointed expert, Mr. Walløe, criticized the lack of transparency by scientists in setting sample sizes for the JARPA II program. Whaling in the Antarctic (Austl. v. Japan), Judgment, 2014 I.C.J. 226, ¶ 159 (Mar. 31).

48. For instance, when assessing the transparency of the Japanese program, the Court observed that "[t]he evidence shows that the JARPA II Research Plan lacks transparency in the reasons for selecting particular sample sizes for individual research items. This is a matter on which the experts called by the two Parties agreed." *Id.* ¶ 188. It also emphasized that "the process used to determine the sample size for minke whales lacks transparency, as the experts called by each of the Parties agreed." *Id.* ¶ 225.

49. *See id.* ¶ 190 (noting when Japan failed to refute an expert opinion).

50. Donoghue, *supra* note 46, at 383; *see* Oren Perez, *Judicial Strategies for Reviewing Conflicting Expert Evidence: Biases, Heuristics, and Higher-Order Evidence*, 64 AM. J. COMP. L. 75 (2016) (discussing second-order indicators); ERICA BEECHER-MONAS, EVALUATING SCIENTIFIC EVIDENCE 9–11 (2007) (arguing that many American judges have struggled to engage directly with scientific evidence).

some degree, to have a greater role than the 'search' for scientific truth."[51] The Court's attitude raises the question of whether elevating a search for consensus over a search for truth is normatively desirable or not. While the search for consensus favors acceptance and compliance—which are certainly desirable values for an international court—it is arguably difficult to clearly identify where a line should be drawn when more divisive scientific questions should appear.

As noted by some judges and authors,[52] a problem arises when experts take different positions on controversial questions of a technical and scientific nature, a situation that has been labelled by the Court as "the clash of expert opinions."[53] In the past, as the *Gabčíkovo-Nagymaros Project*[54] and *Pulp Mills* cases show, when confronted with divergent scientific evidence, "the Court [did] not find it necessary to resolve the clash of expert opinions"[55] and clearly stated that "[t]he Court is unable to accept the position that in order to decide this case, it must first make a determination upon a disagreement between scientists of distinction as to the more plausibly correct interpretation of apparently incomplete scientific data."[56] Some authors suggested that in those situations, the Court prefers to circumvent the problem and rely on legal techniques.[57]

This approach was also followed in *Whaling in the Antarctic*. In order to avoid taking a position on issues over which experts had expressed divergent views, the Court referred to different arguments. For instance, with regard to the problem of the reliability and value of data collected in JARPA II, the experts appointed by the parties offered contradictory opinions and the Court considered that "[t]his disagreement appears to be about a matter of scientific opinion."[58] With regard to the experts' disagreement about the determination of the criteria in order to establish the meaning of the expression "scientific research," in the sense of Article VIII of the Whaling Convention,[59] the Court relied on the distinction between questions of fact and questions of law.[60] It found that since the interpretation of the expression

51. Lima, *supra* note 46, at 633.

52. *See generally* Pulp Mills on River Uruguay (Arg. v. Uru.), Separate Opinion of Judge Cançado Trindade, 2010 I.C.J. 221 ¶¶ 148, 151 (Apr. 20); Tullio Scovazzi, *Between Law and Science: Some Considerations Inspired by the* Whaling in the Antarctic *Judgment*, 2 QUESTIONS INT'L L. 188, 204–05 (2015).

53. Lima, *supra* note 46, at 633; Case Concerning Sovereignty over Pedra Branca/Pulau Batu Puteh, Middle Rocks and South Ledge (Malay./Sing.), Judgment, 2008 I.C.J. 12 ¶ 147 (May 23).

54. Hung./Slovk., Judgment, 1997 I.C.J. 7 (Sept. 25).

55. Lima, *supra* note 46, at 634 (citing Malay./Sing., Judgment, 2008 I.C.J. ¶147).

56. *Id.* (citing Continental Shelf (Tunis./Libyan Arab Jamahiriya), Judgment, 1985 I.C.J. 18, ¶ 41 (June 3)).

57. Riddell & Plant, *supra* note 4, at 199. *See generally* Jean D'Aspremont & Makane Moïse Mbengue, *Strategies of Engagement with Scientific Fact-Finding in International Adjudication*, 5 J. INT'L DISP. SETTLEMENT 240 (2014).

58. Whaling in the Antarctic (Austl. v. Japan), Judgment, 2014 I.C.J. 226, ¶ 134 (Mar. 31) [hereinafter Austl. V Japan].

59. International Convention for the Regulation of Whaling art. viii, Dec. 2, 1946, 62 Stat. 1716, 161 U.N.T.S. 74.

60. *See* Gray, *supra* note 41 at 589–602 (discussing the ICJ's analysis in *Whaling in the Antarctic* about what constitutes scientific research under the Whaling Convention for purposes of

'scientific research' was a question of law,[61] it was for the Court to solve, without decisively taking into consideration the indications offered by the experts. The Court explained that:

> [A]s a matter of scientific opinion, the experts called by the Parties agreed that lethal methods can have a place in scientific research, while not necessarily agreeing on the conditions for their use. Their conclusions as scientists, however, must be distinguished from the interpretation of the Convention, which is the task of this Court.[62]

As a general assessment, however, in comparison with the approach taken in past practice, it was rightly observed that "[t]he Court's change of approach in the *Whaling in the Antarctic* case is to be welcomed, as it offers the opportunity for a more rigorous treatment of complex scientific evidence."[63]

The synthesis of *Whaling in the Antarctic* is that the social actors significantly adapted the approach to science allowing some values such as transparency, scientific due process (through cross-examination), and participation to play a greater role. It also improved the dialogue through different indications of assessment of the evidence. However, the case also revealed another emerging tension between the expert's function in the proceedings and the Court's willingness to have the final word on the substantial matters of the dispute.

The approach adopted in *Whaling in the Antarctic* furthered the interests of different social groups. By not using ghost experts, the Court advanced the interests of states and of counsel (as well as values of transparency and fairness). By not using expert counsel, the process advanced the interests of the Court (and the truth telling aspects of adversarial procedures). And, perhaps by inducing parties to hire (and pay) their own experts, the procedure advanced the interests of experts, who like to have more, rather than less, opportunities to serve in this capacity and to prove their importance in highly-complex evidentiary disputes.

C. Reinforcing the New Method: The Certain Activities and Construction of a Road Cases.

Technical questions were raised during the joint proceedings of Certain Activities Carried Out by Nicaragua in the Border Area (Certain Activities) and Construction of a Road in Costa Rica Along the San Juan River (Construction of a Road).[64] The first case concerned, among other things, Nicaragua's alleged violations of international obligations as a result of its dredging activities performed in the Colorado River. The second case was related to Costa Rica's alleged violations of its obligations through the construction of a road along the San Juan River. Both parties had scientific advisers and experts as part of their delegations, but they also

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evidence and testimony).

61. Makane Moïse Mbengue, *Between Law and Science: A Commentary on the Whaling in the Antarctic Case*, 14 QUESTIONS INT'L L. 3, 7 (2015).

62. Austl. v. Japan, Judgment, 2014 I.C.J. ¶ 82.

63. Gray, *supra* note 41, at 597. S*ee generally* James Devaney, *Evidentiary Fairness and Experts in International Tribunals*, *in* PROCEDURAL FAIRNESS IN INTERNATIONAL COURTS AND TRIBUNALS (Arman Sarvarian et al. eds., 2015).

64. *See generally* Certain Activities and Construction of a Road.

nominated party-appointed experts to present reports and to be cross-examined during the hearings in accordance with Articles 57, 64 and 65 of the ICJ's Rules.[65] The use of experts in these cases demonstrates some similarities with the use of experts in Whaling in the Antarctic.

One interesting feature of these cases relates to the appointment of experts and the struggle between two socio-professional groups. Before the oral hearings in *Construction of a Road*, Nicaragua suggested the appointment of "a neutral expert on the basis of Articles 66 and 67 of the Rules."[66] Costa Rica did not agree with the request and, in response, asserted "that there [was] no basis for the Court to exercise its power to appoint an expert as requested by Nicaragua."[67] It was not the first case in which the Court was asked by one of the parties to appoint experts to collaborate with respect to an assessment of the factual background of a dispute.[68] Nor was it the first time that the Court preferred not to appoint neutral experts without offering the reasons for its decision. On one hand, the Court preferred not to appoint independent experts; on the other hand, the Court assumed a more active role in indicating the kind of expert evidence it would be interested in hearing. Through its Registry and at the beginning of the proceedings, the Court suggested that the parties call experts who offered technical support to the legal teams in the writing phase:

> [T]he Registrar informed the Parties that the Court would find it useful if, during the course of the hearings in the two cases, they could call the experts whose reports were annexed to the written pleadings, in particular Mr. Thorne and Mr. Kondolf. The Registrar also indicated that the Court would be grateful if, by 15 January 2015 at the latest, the Parties would make suggestions regarding the modalities of the examination of those experts.[69]

To put it another way, the Court suggested to the litigants that they should repeat the approach taken by the parties in *Whaling in the Antarctic*. It appears that there is a line of continuity in the Court's thinking in terms of its discouragement of the use of expert counsel in *Pulp Mills* and its statement of willingness to receive a certain kind of expert evidence in *Certain Activities* and *Construction of a Road*. In doing so, one could argue that the Court seems to indicate a "preferable practice" with regard to the appointment of experts. Moreover, the Court nominally pointed out whom it would find particularly useful to hear from during the oral phase. A second unfolding conclusion of this passage in the Court's the judgment in *Certain Activities* and *Construction of a Road* reinforces the idea that it is not sufficient that the parties adduce technical and scientific evidence through written evidence and reports. Instead, the Court made clear that this evidence should be properly scrutinized by cross-examination.

As to the role of experts in the cases at issue, it appears that they performed a relevant function—especially if one considers that the Court made reference to the

65. I.C.J. Rules of Court arts. 57, 64, 65.

66. Certain Activities and Construction of a Road at ¶ 30.

67. *Id.*

68. *See* Quintana, *supra* note 4, at 156 (offering a list of cases in which the appointment of experts was suggested but was not endorsed by the Court).

69. Costa Rica v. Nicar., Judgment, 2015 I.C.J. ¶ 32.

evidence presented by them in several passages of the Judgment, particularly, the agreement between party-appointed experts, which was referred to on two occasions.[70] In referring to the agreement between the party-appointed experts, the Court seemed to reiterate the criterion adopted in *Whaling in the Antarctic*, which consisted of attributing evidential weight to the *consensus* emerging between the parties through the expert opinions. On one hand, the agreement between the experts was relevant in determining the existence of some sediment eroding from the road to the river. On the other hand, the disagreement between experts was also noted by the Court, which stated "that there is considerable disagreement amongst the experts on key data such as the areas subject to erosion and the appropriate erosion rates, which led them to reach different conclusions as to the total amount of sediment contributed by the road."[71]

The Court preferred to avoid reaching a conclusion on the relative value of the conflicting expert opinions by observing that:

> The Court sees no need to go into a detailed examination of the scientific and technical validity of the different estimates put forward by the Parties' experts. Suffice it to note here that the amount of sediment in the river due to the construction of the road represents at most 2 per cent of the river's total load, according to Costa Rica's calculations based on the figures provided by Nicaragua's experts and uncontested by the latter.[72]

In the last part of this passage, the Court referred once more to the criterion that takes into account uncontested expert evidence, which was also used in *Whaling in the Antarctic*. One can argue that the main open question concerns those situations when there is disagreement between the party-appointed experts. This question was not resolved by the Court in the *Certain Activities* and *Construction of a Road* cases. However, it does not appear that the problem of conflicting expert opinions was a central issue in these cases. In examining the quantity of sediment added to the river, the Court concluded that, on the ground that the construction of the road was contributing at most to two percent of the river's total load, "*significant harm cannot be inferred therefrom.*"[73] While the experts disagreed over many issues, there was

70. Firstly, the Court gave weight to the agreement between party-appointed experts in order to determine the existence of a certain factual situation with relation to the use of one of the caños, or artificial channels. The Court's exact words were: "The Court notes that the existence over a significant span of time of a navigable caño in the location claimed by Nicaragua is put into question by the fact that in the bed of the channel there were trees of considerable size and age which had been cleared by Nicaragua in 2010. Moreover, as was noted by Costa Rica's main expert, if the channel had been a distributary of the San Juan River, 'sediment would have filled in, or at a minimum partially-filled, the southern part of the lagoon'. Furthermore, the fact that, as the Parties' experts agree, the caño dredged in 2010 no longer connected the river with the lagoon by mid-summer 2011 casts doubt on the existence over a number of years of a navigable channel following the same course before Nicaragua carried out its dredging activities. This caño could hardly have been the navigable outlet of commerce referred to above." *Id.* ¶ 90. Secondly, experts were used to confirm that the activities carried out by Nicaragua "would not have a significant impact on the flow of the Colorado River." Indeed, the Court observed that "this conclusion was later confirmed by both Parties' experts." *Id.* ¶ 105.

71. *Id.* ¶ 186.

72. *Id.*

73. *Id.* ¶ 194 (emphasis added).

no disagreement that the road contributed at most two percent of the load.[74] Once again, the Court did not resolve any disagreements between the experts but did rely on limited areas of agreement, which was sufficient for the Court to reach the legal conclusion that the road was not the cause of significant harm.

In sum, in the *Certain Activities* and *Construction of a Road* cases, it is possible to verify the Court's increasing willingness to engage with technical issues, indicating the kind of evidence it is interested in having before it. At the same time, the Court's engagement with the scientific background of a dispute remains slightly ambiguous. On the one hand, the Court is increasingly willing to accept "facts" or "evidence" on which there is agreement. Nonetheless, it is still not willing to resolve conflicts in the evidence. There appears to exist some division among scholars in reaction to the evidentiary assessment in this case, especially in relation to the environmental background of this dispute.[75] This approach and the ensuing criticism certainly raises the question of whether this strategy can work properly in every future situation. At the same time that the group interests of the Court seem to be partially protected, parties and scholars might show some dissatisfaction in relation to the general approach to scientific evidence.

D. Back to Ex Curia: The Maritime Delimitation and the Land Boundary Cases.

The 2018 judgment in the joint cases between Costa Rica and Nicaragua casts new light on the appointment of independent experts by the ICJ: For the first time since the *Corfu Channel* case, the Court availed itself of the powers granted by Article 50 and nominated two experts, who specialized in geography and geomorphology, to carry out site visits and participate in the *Maritime Delimitation in the Caribbean Sea and the Pacific Ocean* (*Maritime Delimitation*) and the dispute over the *Land Boundary in the Northern Part of Isla Portillos* (*Land Boundary*).[76] Three issues appear of particular importance in relation to this novel practice. The first regards the role of the parties in the process of experts' nomination. The second issue involves the function experts were tasked to perform and how the Court weighed the evidence produced by them. Lastly, the final issue involves the impact of such nomination on the Court's budget.

Firstly, the Registry of the Court informed the parties that "the Court was considering arranging for an expert opinion in accordance with Articles 48 and 50

74. *Id.* ¶ 186.

75. *See generally* Diane Desierto, *Evidence but Not Empiricism? Environmental Impact Assessments at the International Court of Justice in Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica Along the San Juan River (Nicaragua v. Costa Rica)*, EJIL: TALK! (Feb. 26, 2016), https://www.ejiltalk.org/evidence-but-not-empiricism-environmental-impact-assessments-at-the-international-court-of-justice-in-certain-activities-carried-out-by-nicaragua-in-the-border-area-costa-rica-v-nicaragua-and-con/; Jason Rudall, *Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)*, 112 AM. J. INT'L L. 288 (2018).

76. *See generally* Maritime Delimitation in the Caribbean Sea and the Pacific Ocean (Costa Rica v. Nicar.) and Land Boundary in the Northern Part of Isla Portillos (Costa Rica v. Nicar.), Judgment, 2018 I.C.J. 139 (Feb. 2).

of its Statute . . . ."[77] While in the past, when one of the parties did not agree with the appointment of the experts, the Court preferred not to appoint them. In *Maritime Delimitation* and *Land Boundary* the Court appointed experts even when one of the parties objected that "there was no need to carry out a site visit, asserting that . . . the determination of the starting-point of the maritime boundary between the Parties was a mere technical and legal task that did not require a site visit."[78]

Maritime Delimitation shows how the decision to appoint experts is independent of the agreement of the parties and, therefore, that neither party has a "veto" over the decision to appoint experts. In its Order, the Court, having referred to this disagreement, observed that

> [T]here are certain factual matters relating to the state of the coast which may be relevant for the purpose of settling the dispute submitted to it, which concerns in particular the delimitation of the maritime boundary between the Parties in the Caribbean Sea, and that, with regard to such matters, it would benefit from an expert opinion.[79]

Therefore, even if the Court considers it important to hear the parties regarding the appointment of experts and take note of their positions, the recourse to Article 50—to make an on-site visit—lies within the discretion of the Court. In other words, the Court is indicating that having its own expert would be more useful than having party-appointed experts. At the same time, once the Court decided to appoint experts, it is telling that they encouraged parties' exchanges in relation to the visit. In fact, "several exchanges of correspondence took place between the experts, the Registrar and the Parties concerning the organization of the site visits."[80] The absence of agreement in relation to the visit of experts to sovereign territories of a state can raise practical problems that are not easy to overcome. In this sense, it is interesting that the Court recalled the obligation of the parties to stand "ready to provide any necessary assistance to the expert mission."[81] It is therefore a matter of guaranteeing, through an obligation of cooperation, the performance of the functions of the experts and, consequently, of the judicial function of the Court.

The use of experts seems to have been particularly important to the Court in its judgment. The Court made several references to the facts gathered by the experts *in situ*, especially in relation to the thorny points contested by the parties. The Court observed that "[t]he assessment made by the Court-appointed experts, which was not challenged by the Parties, dispels all uncertainty about the present configuration of the coast."[82] This excerpt, as well as others,[83] is notably interesting because it

77. Maritime Delimitation in the Caribbean Sea and the Pacific Ocean (Costa Rica v. Nicar.), Order, 2016 I.C.J. 235, ¶ 4 (May 31).

78. *Id.* ¶ 12.

79. *Id.* ¶ 8.

80. Costa Rica v. Nicar., Judgment, 2018 I.C.J. ¶19.

81. Costa Rica v. Nicar., Order, 2016 I.C.J. at 241.

82. Maritime Delimitation in the Caribbean Sea and the Pacific Ocean (Costa Rica v. Nicar.), Judgment, 2018 I.C.J. 138, ¶ 71 (Feb. 2).

83. "According to the Court-appointed experts, 'Los Portillos/ Harbor Head Lagoon is commonly separated from the sea by [a] sand barrier', although there may be 'temporary channels in the barrier.' This assessment, which implies that the barrier is above water even at high tide, was

reveals the Court's special attention in employing experts for the identification of the agreement of the parties in relation to a certain fact. Again, one might read all of this as the Court avoiding engagement with scientific facts, as it is relying on the party agreement, not making any independent assessment. Court-appointed experts proved to be useful because they stimulate the exchange of evidence between the parties ("[d]uring the visit, the Parties exchanged documents, photographs and video recordings and provided them to the experts."[84]). The weight put by the Court on the agreement of the parties in relation to the expert's opinion signifies that the Court is facilitating compliance and acceptance of the final outcome of the judgment.

While this article's focus is on relations among different social groups, it is important to acknowledge the practicalities of court-appointed experts, including the financial implications of this practice. In this respect, it is significant that the President of the ICJ reserved part of his annual speech before the United Nations General Assembly to state that "although the additional cost of this operation is relatively modest—it amounts to US$120,000—it cannot be absorbed by the Court's current budget, which has been reduced by 10 per cent in comparison with the appropriations for the biennium 2014-2015."[85] These financial realities place substantial limits on the Court's ability to appoint its own experts. At the same time, it should be noted that there is a clear contrast between the impact of the use of experts on the Court's budget and the costs associated with party-appointed experts. Just to give an example, in the case of the *Certain Activities*, the experts had cost Colombia $691,495, while more than $4 million was paid to foreign lawyers.[86] While the employment costs of experts (or witnesses) in the parties' teams seem lower compared to the amount paid for lawyers, the cost of this expertise seems to have a higher impact on the Court's annual budget (the total ICJ budget of 2014 to 2015 for experts was $51,403,100). This data helps to explain why the Court has not previously made more frequent use of Article 50 and rather preferred to rely on the expertise presented by the parties.

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not challenged by the Parties. The Court therefore considers that the Parties agree that both Harbor Head Lagoon and the sandbar separating it from the Caribbean Sea are under Nicaragua's sovereignty." *Id.* ¶ 73.

84. *Id.* ¶ 31.

85. Ronny Abraham, President of the Int'l Court of the Justice, On the Occasion of the Seventy-First Session of the United Nations General Assembly (Oct. 27, 2016), at 7.

86. Alina Miron, *Le coût de la justice internationale: Enquête sur les aspects financiers du contentieux interétatique* [*The Cost of International Justice: Investigations of the Financial Aspects of Interstate Litigation*], 60 A.F.D.I. 241, 273 (2014) (Fr.).

III. THE SOCIO-PROFESSIONAL GROUPS ENGAGED IN THE DEBATE: WHAT CORE VALUES TO PROTECT?

From *Pulp Mills* to the *Maritime Delimitation* cases, it is possible to verify that the ICJ moved from a more cautious attitude towards a more flexible and engaging one. The Court refined its procedure, directly offered indications to the parties, and tried to grapple with scientific evidence in a legitimate way that facilitates compliance. A first conclusion from the analysis conducted above is the fact that different social factors contributed to changing the established procedure regarding the appearance of experts before the ICJ. As the President of the Court observed, "Since that case, the Court has started to send to the parties, before the oral hearings, letters asking to hear the expert testimony quoted in their written memorials."[87] Although it is not possible to identify precisely what the factors leading to this change were and to what extent they were influential, it is submitted that the open criticism unchained after the *Pulp Mills* case led the Court to pay greater attention to the issue of how to deal with scientific disputes.

Two facts seem to confirm that the question was in the judges' minds. In January 2015, a delegation of judges from the ICJ visited Hamburg to hold a meeting with their counterparts of the International Tribunal from the Law of the Sea (ITLOS), which was focused on "legal and practical issues involved in the handling of law-of-the-sea cases."[88] One of the topics of this meeting was the handling of evidence in technical disputes. The meeting suggestively coincides with the audiences for hearing and testing experts in the *Certain Activities* and *Construction of a Road* cases, held in April of that year. Equally telling is the fact that in the occasion of the celebration of the seventieth anniversary of the ICJ, a wide group of *legal* experts, scholars, judges, and practitioners gathered together in the Great Hall of Justice and one of the themes discussed was precisely fact-finding, "notably in scientific-related disputes."[89] While ICJ judges have been attentive to the debate, other debaters have also engaged in it.

There are at least four different socio-professional groups involved in the aforementioned debate, each possessing different perspectives pulling, with different strengths, towards different directions: judges, parties (defined here as: state officials, counsels, and professionals involved in litigation before the ICJ),[90]

87. These words are a translation as the speech was originally delivered in French. Abdulqawi A. Yusuf, President of the Int'l Court of Justice, Address Before the Sixth Comm. of the General Assembly (Oct. 26, 2019), ¶ 16.

88. Press Release No. 223, Int'l Tribunal for the Law of the Sea, President Golitsyn Welcomes Delegation of Judges of the International Court of Justice to Hamburg 1 (Jan. 27, 2015), *available at* https://www.itlos.org/fileadmin/itlos/documents/press_releases_english/PR_223_EN.pdf.

89. *See* Loretta Malintoppi, *Fact Finding and Evidence Before the International Court of Justice (Notably in Scientific-Related Disputes)*, 7 J. INT'L DISP. SETTLEMENT 421, 444 (2016) (concluding that the International Court of Justice needs to enhance its role in guiding parties through the fact-finding process, especially in scientific matters).

90. The methodological choice of placing "parties" and "counsel" in the same category recognizes their divergent positions on the use of experts. For example, states (particularly developing states) may prefer the Court to name experts, meaning that the expense falls on the Court, not the parties. But counsel, who may get paid by the hour, may prefer to name their own experts. Although parties' and counsels' interests may occasionally diverge, they are sufficiently

scholars, and experts. The identification of their positions is important because it reveals not only how they shaped the debate, but also because it ultimately indicates what interests are at stake in the evolving practices of the Court.

Different social groups were influenced by different values. Such values are understood here as a social element that a given group "considers good, desirable, right, or important."[91] Drawing upon sociological theory, it is possible to identify distinct values being advanced or defended by each social group. The first is functional. Each social group discharges a specific function embedded in its social background that defines and determines their positions. A second factor relates not to the function itself but to the perception by specific audiences and local constituencies that the social group is performing its functions well and can adequately continue to perform them.

From the outset, it is important to highlight as a methodological remark that these communities are not completely homogeneous in their opinions and a number of socio-cultural factors interfere in shaping their internal positions. For example, the debate started within the ICJ in *Pulp Mills* between two groups of judges that held different views on the role of the Court in relation to the marshalling of evidence in that case.[92] Moreover, one is certainly aware that the analysis of the behavior of social actors may be altered by a certain situation since "such behaviour is often influenced by more than one sociological factor" and that "individuals are frequently members of two or more social groups, and sociological factors are often entangled with non-sociological factors (e.g., psychological considerations)."[93] Nonetheless, it is also true that the four different social groups mentioned above, though not homogeneous, display significant similarities that allow one to gather them under the same umbrella without loose precision.

The following sections address, in turn, the values prioritized by each social group, that is judges, parties, experts, and scholars.[94] They analyze how these values played an important role in the debate about the use of experts in scientific disputes, while also trying to explain and justify the positions upheld by some of its representatives when experts appear in the proceedings.

A. Views from the Bench: Assuring the Control of the Decision-Making Process

It is a truism that an appropriate use of experts may enhance the authority of a judgment by increasing the perception that the assessment of the facts underlying the dispute was conducted accurately and diligently.[95] Given that "a decision which

aligned for the purposes of this article; it is appropriate to treat them together.

91. HIRSCH, *supra* note 7, at 6; George Ritzer, INTRODUCTION TO SOCIOLOGY 111 (2015).

92. Pulp Mills on River Uruguay (Arg. v. Uru.), Judgment, 2010 I.C.J. 14, 107 (Apr. 20) (listing all judges who appended separate dissenting opinions to the Judgment of the Court).

93. HIRSCH, *supra* note 7, at 186.

94. See *infra* Parts II.A—II.D for a discussion on the views of judges, parties, experts and scholars, respectively.

95. *See* ROBERT HOWSE ET AL., THE LEGITIMACY OF INTERNATIONAL TRADE COURTS AND TRIBUNALS 6 (2018) (discussing how one of the legitimating factors for judicial bodies is its role in fact-finding). *See generally* Tullio Treves, *Aspects of Legitimacy of Decisions of International Courts and Tribunals*, *in* LEGITIMACY IN INTERNATIONAL LAW (Rüdiger Wolfrum & Volker

is not convincingly reasoned . . . will lack authority in the eyes of the parties,"[96] it could be equally argued that a decision that is not convincingly rooted in an accurate factual or scientific analysis would be perceived by the parties as lacking authority. The manner whereby judges employ experts in the proceedings can be perceived, ultimately, as a justification of its power and influences its social acceptance.[97]

The ICJ has actively participated in the debate by dialoguing with the parties and other actors and stakeholders, trying to reassert its adequacy to deal with disputes involving highly complex backgrounds. In this respect it is notable that, immediately after the judgment in the *Whaling in the Antarctic* dispute, the President of the Court went out of his way to declare that the case illustrated that "the Court can deal with vast amounts of highly technical scientific evidence in a cogent and methodical fashion, invariably delivering judgments of rigour characterized by their analytical clarity."[98]

Although judges come from different backgrounds, possess distinct legal education and, as a consequence, diverse conceptions regarding the management of evidence, it is undeniable that a certain *esprit de corps* can be identified when it comes to the general socio-professional values at stake for those responsible for resolving international disputes.[99] Since the primary function of the ICJ may be perceived as the settling of disputes between sovereign States, it is tenable to sustain that the necessity of experts in the proceedings guarantee the settling of international disputes with sufficient scientific precision, thus also guaranteeing the quality of judgment from a technical point of view. Judge Yusuf aptly made this point in his opinion in the *Pulp Mills* case when he observed that "[t]he Court, in order to exercise its function of resolving disputes, needs to ensure not only to be in possession of all the available facts relevant to the issues before it, but also to understand fully their actual meaning for the proper application of the law to those facts."[100]

This wording shall hardly find much disagreement. In sum, it is possible to affirm that the first (and perhaps the foremost) important core value to be protected is the Court's judicial function, which is primarily perceived here as the settlement of legal disputes between States.

Röben eds., 2008); Daniel Bodansky, *Legitimacy in International Law and International Relations*, *in* INTERDISCIPLINARY PERSPECTIVES ON INTERNATIONAL LAW AND INTERNATIONAL RELATIONS (Jeffrey L. Dunoff & Mark A. Pollack eds., 2013); NIENKE GROSSMAN ET AL., LEGITIMACY AND INTERNATIONAL COURTS (2018); THOMAS FRANCK, THE POWER OF LEGITIMACY AMONG NATIONS (1990).

96. JOHN G. MERRILLS, INTERNATIONAL DISPUTE SETTLEMENT 293 (2011).

97. *See generally* MAX WEBER, ECONOMY AND SOCIETY (2019). For an interesting view on the balances struck by judges in the whole judicial process, see Jeffrey L. Dunoff & Mark A. Pollack, *The Judicial Trilemma*, 111 AM. J. INT'L L. 225 (2017).

98. Tomka, *supra* note 40, at 2.

99. *See* Shai Dothan, *The Motivations of Individual Judges and How They Act as a Group*, 19 GER. L. J. 2166, 2172 (2018) (outlining three different groups of models to explain the behavior of national judges).

100. Pulp Mills on the River Uruguay (Arg. v. Uru.), Declaration of Judge Yusuf, 2010 I.C.J. 216, ¶ 5 (Apr. 20); Pulp Mills on River Uruguay (Arg. v. Uru.), Judgment, 2010 I.C.J. 14, ¶¶ 62–63 (Apr. 20).

The divergence among ICJ judges starts with the question of what would be the best method for ensuring factual precision and, consequently, the Court's judicial function. While the aforementioned opinion of Judges Simma and Al-Khasawneh asserted a greater use of Court-appointed experts, there are judges who seem particularly satisfied with the common law-oriented, party-appointed expert dynamic favored by the Court's adversarial logic. Other judges suggested that the Court employ a different methodology, such as recourse to assessors under the ICJ Rule Article 30.[101] A potential sociological explanation for these diverging views may lie in the judges' willingness not to give excessive influence to a third element, which is not part of the bench.[102] As a hallmark of a proceeding that incorporates expertise, there is an inherent risk of judges losing control of the decision-making process if the final question to be decided is not a legal but a scientific problem. International judges are well aware that, under certain circumstances, experts "may wield excessive influence on the adjudicatory outcome."[103]

The Court has in the past stated that "the purpose of the expert opinion must be to assist the Court in giving judgment upon the issues submitted to it for decision."[104] This view resonates in the opinions of some judges, who addressed the concern over loss of judicial power or authority by reaffirming that "it is not for the expert to weigh the probative value of the facts, but to elucidate them and to clarify the scientific validity of the methods used to establish certain facts or to collect data."[105] These views demonstrate a reassertion of the Court's general stance of not being active when it comes to scientific research. The Court's passivity was also expressed in the view of Judge Bennouna, which reinforced the need of persuasion in order to exercise its powers, observing that "the Court must be convinced of the need for such expert assistance in the first place. The Court must also be convinced that the evidence and the adversarial approach of the parties have not allowed it to rule on the relevant issues in the circumstances of the case."[106] This passage reveals a certain trend of overreliance on the adversarial approach.

Other judges assumed a more reticent view about the need for Court-appointed experts, reaffirming that "increased scientific fact-finding by [International Courts and Tribunals] should not be an objective in its own right."[107] These views seem

101. Gaja, *supra* note 42, at 417–18; *see* Laurence Boisson de Chazournes et al., *One Size Does Not Fit All—Uses of Experts Before International Courts and Tribunals: An Insight into the Practice*, 9 J. INT'L DISP. SETTLEMENT 477, 489–90 (2018) (discussing how the International Tribunal for the Law of the Sea has not made use of assessors).

102. *See generally* 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 (2011); José E. Alvarez, *Are International Judges Afraid of Science?: A Comment on Mbengue*, 34 LOY. L.A. INT'L & COMP. L. REV. 81 (2011).

103. Mohamed Bennouna, *Experts Before the International Court of Justice: What for?*, 9 J. INT'L DISP. SETTLEMENT 345, 349 (2018).

104. Application for Revision and Interpretation of the Judgment of 24 February 1982 in the Case Concerning the Continental Shelf (Tunis. v. Libyan Arab Jamahiriya) (Tunis. v. Libyan Arab Jamahiriya), Judgment, 1985 I.C.J. 192, ¶ 65 (Dec. 10).

105. Arg. v. Uru., Declaration of Judge Yusuf, 2010 I.C.J. ¶ 10.

106. Bennouna, *supra* note 103, at 348.

107. Donoghue, *supra* note 46, at 380.

rooted in the idea that it is the ultimate task of the Court to solve the specific dispute between States submitted to it, keeping away from "scientific disputes." It appears that when judges are faced with the difficult choice between two core social values—solving a scientific uncertainty and adequately rectifying an international dispute—there is an inclination towards the second. A possible illustration of this attitude can be the Court's approach in the *Whaling in the Antarctic* case. Certainly, this is not surprising regarding the ICJ.

What professor (and sometimes judge) Abi-Saab once called "*justice transactionnelle*"[108] describes the Court's tendency, on certain occasions, to attempt to accommodate different interests within the same outcome. That attempt to reach solutions that are at least minimally acceptable to both sides explains the Court's propensity to evaluate the agreement of the parties positively, either in relation to the methodology to use experts in a certain case or the positive evaluation of the evidence that is introduced. The Court's stance in endorsing party-experts' agreements seems to confirm the fact that the Court is not particularly interested in identifying an objective "scientific truth" but rather the science commonly agreed upon by the parties. This strategy is certainly focusing on the future acceptance of the judgment and how it will work for the parties. The Court's approach to expertise does not lose sight of its goal of party-compliance.

Another important element concerns the Court's own perception of its leading role among international courts. In a context of potential competition among international courts, the Court should perform a guiding role. As observed by one author, "[t]he ICJ, to keep its place at the forefront of the international legal system, must act decisively and with deftness to find a solution to the challenge presented by [scientific] cases."[109] Since interstate international tribunals are significantly dependent upon their "clients" to file cases that enable courts to perform their functions, the debate over the use of experts has a potential impact on the Court's docket.

There is another—and no less important—factor that may prove to be influential in the Court's decision to appoint its own experts. As the *Land Boundary* and *Maritime Delimitation* cases reveal, the appointment of experts has an impact on the Court's budget.[110] While the typical cost of experts is a relatively minor expense for the parties, it is a significant one for the Court due to its small allowance for unforeseen expenses; moreover, the triennial nature of the U.N. budgetary process inhibits the Court's ability flexibly to respond to circumstances as they arise in each case.

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108. GEORGES ABI-SAAB, COURS GÉNÉRAL DE DROIT INTERNATIONAL PUBLIC [GENERAL COURSE ON PUBLIC INTERNATIONAL LAW] 261–72 (1987); *see* Mohammed Bedjaoui, *The "Manufacture" of Judgments at the International Court of Justice*, 3 PACE Y.B. INT'L L. 29 (1991) (discussing the judicial process at the ICJ from a Judge's perspective).

109. Daniel Peat, *The Use of Court-Appointed Experts by the International Court of Justice*, 84 BRIT. Y.B. INT'L L. 271, 272 (2014); *see* Kate Parlett, *Parties' Engagement with Experts in International Litigation*, 9 J. INT'L DISP. SETTLEMENT 440 (2018) (discussing the use of expert witnesses, particularly during the preparation of expert reports for use in international litigation).

110. *See* Miron, *supra* note 86, at 273 (stating the costs of experts and cartography for the Land Boundary and Maritime Delimitation cases from Columbia).

B. Remarks from the Podium: Information and Participation

Since the parties are decisive in relation to the presentation of evidence, agents and counsels have a primary responsibility in determining how to present expertise before the ICJ.[111] In discharging this responsibility, parties seem to keep their eyes on two particular social audiences: the Court, which will resolve the dispute, and the national audiences, which will pass judgment on the success or failure of the legal team. A first balance to be struck by parties is between presenting a well-founded claim before the Court but at the same time taking into consideration national issues. Local authorities and the public in general might follow the outcomes of a judgment and evaluate it through local standards. At the end of the day, parties want an international dispute settler that convincingly deals with science. When experts appear in proceedings before the ICJ, the debate regarding experts before the ICJ reveals that there are essentially two core values of particular importance for parties and counsels when they are involved in the debate: transparency and participation.

The legal system of origin seems to be a less important factor in determining the preferences of parties regarding the presentation of scientific evidence. By way of example, Latin-American countries favored an Anglo-Saxon methodology of cross-examination in the *Construction of a Road* and *Certain Activities* cases. This situation can be tentatively explained by the fact that most of the teams are composed of lawyers from different legal traditions and tend to complement one another's abilities.[112] It is not surprising that the counsels conducting the cross-examination of experts before the ICJ are counsels trained in countries pertaining to the common law system.

As to the transparency value, agents and counsels appear to be eager to identify which factors influence the Court in its deliberation. At the same time, they seem interested in receiving indications on what the rules guiding the appearance of experts are.[113] This is particularly true if one considers that the present rules governing experts' activities display "a relative absence of guidance on most aspects of expert use."[114] If a certain scientific evidentiary issue arises, parties would like to know how the Court disentangled that knot. Identifying the value of transparency explains the sharp criticism associated with the Court's use of invisible experts. Since the content of the advice of the invisible experts is not known, the parties are not materially allowed to offer any answer or give input on the experts' advice. Additionally, only by identifying the origins of the scientific input received by the

111. *See generally* Gregory Messenger, *The Practice of Litigation at the ICJ: The Role of Counsel in the Development of International Law*, *in* RESEARCH HANDBOOK ON THE SOCIOLOGY OF INTERNATIONAL LAW 208 (Hirsch and Lang eds., 2017); Malcolm N. Shaw, *The International Court of Justice: A Practical Perspective*, 46 INT'L & COMP. L.Q. 831 (1997).

112. *See* James Crawford et al., *Anglo-American and Continental Traditions in Advocacy Before International Courts and Tribunals*, 2 CAMBRIDGE J. INT'L & COMP. L. 715, 718 (2013) (arguing that a legal team should have a balance of different legal cultures among its members).

113. *See* Boisson de Chazournes et al., *supra* note 101, at 483 ("[Counsels] consider it advisable or a least possible, to receive more guidance from the bench, as to the expected content of expert reports.").

114. Makane Moïse Mbengue & Rukmini Das, *Rules Governing the Use of Experts in International Disputes*, 17 LAW & PRAC. INT'L CTS. & TRIBUNALS 414, 452 (2018).

Court is it possible to identify any kind of bias, potential methodological problems, or threats to impartiality and independence. In sum, parties want to be fully aware of the factors that may influence the Court's decision-making process.

Transparency is closely related to a further value: participation. Parties seem keen on being heard and taken into account in the determination of the procedure, which will require experts. This obviously does not mean that they alone should determine the architecture of the proceedings, but they should at least have a say in the process of defining the use of experts. Moreover, this choice can impact their financial expenses in the case. The second unfolding consequence of participation regards the testing of evidence and the assurance of the principle of due process.

The principle that assures to the parties the right to comment upon the evidence presented seems to become more influential when it comes to technical or scientific evidence. Given the theoretical assumption that judges are not ideally trained to determine complex scientific or technical matters, it is arguable that assuring greater participation to the parties does not only serve to protect their procedural rights, it also adds to the correctness of the judgment. It allows the testing of the evidentiary material put before the Court by the parties through the method of cross-examination. Participation might prove also to be important in situations requiring cooperation and collaboration from the parties, such as when Court-appointed experts participate in the proceedings and conduct required site visits. In this vein, the recent practice of the Court regarding party-appointed and Court-appointed-experts seems to meet both criteria.

C. Experts: Reputation and "Scientific Truth"

The third important socio-professional group involved in the debate is the group formed by the professionals that appear before the ICJ to present their knowledge. Although it is rare to find personal testimonies or written papers from those experts involved directly in the adjudication before the ICJ, from the growing literature, it is not impossible to delineate some of the views and values that guide this social group.[115] There appear to be two main social values to be conserved when they serve as experts before the ICJ, either in the party-appointed or in the Court-appointed form: maintaining their reputation as scientists and experts and a commitment to their own research fields, which can be here labeled as a commitment to the "scientific truth" available.

A cursory perusal on the curricula of the experts that appeared before the Court

115. *See, e.g.*, Joseph Sanders, *Expert Witness Ethics*, 76 FORDHAM L. REV. 1539 (2007) (discussing how there should be additional measures taken to enforce ethical behavior among expert witnesses); Geoffrey Senogles, *Some Views from the Crucible: The Perspective of an Expert Witness on the Adversarial Principle*, 9 J. INT'L DISP. SETTLEMENT 361, 362–63 (2018) (discussing views and values from an accounting expert witness). See also the interesting research and interviews conducted in Boisson de Chazournes et al., *supra* note 101, at 485, stating that "[t]o different extents, collaboration between opposing parties' experts is favoured, since they help in narrowing the points of disagreement, which is helpful for the judges. The prevailing opinion is also in favour of new techniques and procedures developed in other spheres of international dispute settlement, not yet used by the ICJ, which also have the same effect of narrowing down the issues in dispute."

demonstrates that every expert appearing before the Court possesses a distinguished scientific career in their own national systems—this is one of the added values of their expertise. Thus, the content of the evidence presented by an expert shall be in accordance with their previous views in order to preserve their professional coherence. Incoherent positions, negligence, or discrepant errors might be harmful to the expert's reputation. Although the "scientific truth" cannot always be reached, especially in situations in which there seems to exist considerable uncertainty in the field, the transparency of the expert's methods and conclusions in relation to a specific situation can be assessed by their peers. At the end of the day, it was their reputation as an expert, which qualified them to undertake these functions. Conversely, it is possible to expect that participation in an international proceeding can have a positive social impact on its curriculum and prestige. Additionally, as practice shows, international tribunals tend to repeat the experts called to assist them in performing their technical functions.

One of the most evident examples involves an expert who was nominated to assist three arbitrations related to maritime and boundary delimitation: *Arbitral Awards*,[116] *Maritime Delimitation Between Guinea-Bissau and Senegal*,[117] and *Delimitation of Maritime Areas Between Canada and France*.[118] Interestingly, the same expert acted as an expert in the *Gulf of Maine*[119] case before the ICJ. A possible reason for such an appointment lies in the fact that in those arbitrations several judges of the ICJ acted as arbitrators (President Lachs, President Bedjaoui twice, and Judge Gros), and in one of the cases, the arbitral tribunal had the same Registrar as the Court (Torres Bernárdez). It is equally interesting that the same expert acted previously as an expert counsel for the United Kingdom in an arbitration, in which the later Judge and President Jennings acted as counsel.[120] More recently, a hydrographic expert who had acted as an expert-counsel for Canada in *Delimitation of Maritime Boundary in Gulf of Maine Area* arbitration,[121] was appointed to assist the arbitral tribunal in three arbitrations: *Delimitation of the Exclusive Economic Zone and the Continental Shelf Between Barbados and the Republic of Trinidad and Tobago*,[122] *Delimitation of the Maritime Boundary Between Guyana and*

116. *See generally* Arbitral Award of 31 July 1989 (Guinea-Bissau v. Sen.), Judgment, 1991 I.C.J. 53 (Nov. 12).

117. *See generally* Maritime Delimitation Between Guinea-Bissau and Senegal (Guinea-Bissau v. Sen.), Order, 1995 I.C.J. 423 (Nov. 8).

118. *See generally* Delimitation of Maritime Areas Between Canada and France (Can. v. Fr.), 11 R.I.A.A. 265 (1992).

119. *See generally* Delimitation of Maritime Boundary in Gulf of Maine Area (Can. v. U.S.), Judgment, 1984 I.C.J. 246 (Oct. 12) [hereinafter Can. v. U.S., Judgement].

120. *See* Delimitation of the Continental Shelf Between the United Kingdom of Great Britain and Northern Ireland, and the French Republic (U.K. v. Fr.), 18 R.I.A.A. 3, 8 (1978) (stating that Commander Beazley and Jennings served as an Expert Adviser, and Counsel, respectively, on behalf of the Government of the United Kingdom).

121. *See generally* Can. v. U.S., Judgment, 1984 I.C.J.

122. Arbitration Between Barbados and the Republic of Trinidad and Tobago, Relating to the Delimitation of the Exclusive Economic Zone and the Continental Shelf Between Them (Barb. v. Trin. & Tobago), Decision, 27 R.I.A.A. 147 (2006).

Suriname,[123] and *The Bay of Bengal Maritime Boundary Arbitration*.[124] In that instance, considering that the arbitrators were not the same in those cases, it appears that the institution that constitutes these arbitrations has an important role in suggesting the name of the experts.

The existence of an 'invisible college' of independent experts does not seem to be particularly problematic in principle. As a matter of fact, if one considers that the same person is appointed to draft charters and maps, conduct site visits, and assess the evidence presented by the parties, the logical conclusion appears to be that their work is satisfactory and their technical qualifications are unimpeachable.

One could trace a parallel between the practice of counsels who become judges with expert counsel who become tribunal-experts. It is true that, given the technical nature of the task to be performed by an expert, such a problem tends to be minimized. Moreover, the fact that parties are usually heard with regards to the nomination of experts also attenuates this potential problem. If the parties do not object to the choice of a certain expert, their impartiality and independence hardly could be tainted by the previous participation. Be that as it may, this fact reinforces the importance of knowing the identity of the expert who assists the tribunal.

D. Reflections from Academia: Strengthening Values and Improving the Procedure

The number of scholars engaging directly or indirectly in the debate about the use of experts before the ICJ is particularly meaningful if one considers that only a limited number of cases have dealt with the question. Different approaches were employed to analyze the question, from a purely procedural point of view to a more epistemic perspective. A potential explanation for this phenomenon can be formulated in light of the broadness of the topic, the different range of interests at stake, and the thought-provoking theme of the relationship between law and science. If one accepts that one function of legal scholarship is to critically analyze a certain phenomenon and offer insight on the improvement of a certain object of research, the opportunity to write and comment on the debate regarding the expert evidence before the ICJ seems to be particularly riveting.

The voices of scholars are particularly telling because they can be initially perceived as less interested in the outcome of a particular dispute than other social actors. Their criticism comes from academia, and they engage in the discussion testing the solutions and choices made by the Court. Additionally, they can, at least theoretically, engage in the discussion with more freedom in their criticism and can be bolder in relation to reform proposals. For instance, the International Law Association (ILA) committee on Procedure of International Courts and Tribunals, which consists s of independent experts and academics, in dealing with the question, "opine[d] that the practice of *experts fantômes* should not continue, as the fact that the parties are unaware of their use contravenes the procedures set out in the Statute

123. Award in the Arbitration Regarding the Delimitation of the Maritime Boundary Between Guyana and Suriname (Guy. v. Surin.), Award, 30 R.I.A.A. 1 (2007).

124. The Bay of Bengal Maritime Boundary Arbitration (Bangl. v. India), Award, 32 R.I.A.A. 1 (Perm. Ct. Arb. 2014).

and the Rules."[125] At the same time, that very committee made proposals to the adoption of the procedure such as the suggestion "that the Court could consider appointing experts as assessors to assist in deliberations without the right to vote."[126] It is perhaps easier for this social group to offer such suggestions than other relevant social groups for at least two reasons. The first is that it is expected for that such a group of scholars, especially in accordance with the mandate of the study group, to make suggestions and elaborate on potential new procedural avenues. They are fulfilling a specific function and mandate expected from the ILA study group. The second potential reason lies in the fact that, acting collegiately, their suggestions gain force as a common idea shared by prominent scholars.

While it is not easy to amalgamate the different ranges of opinions advanced on the issue, there appears to be in the academic works published between 2010 and 2020 a general trend to side with a *civil law* approach. Those works have generally suggested that the Court should use its powers under Article 50 to nominate ex curia experts and have even adopted more innovative techniques for contrasting scientific views. This can be explained scholars' tendency to privilege value-oriented choices. An interesting illustration can be taken from the researchers guiding a lead empirical project on the subject who concluded their research by stressing that "[e]very expert process should be imbued with the following elements: transparency, adversarial character, independence, impartiality and equality of arms."[127] To these values, others might be added, such as objectivity, flexibility, fairness, and *scientific due process*. Not rarely does the exercise of testing the Court's solutions to these values and to the Court's own rules (from a purely normative perspective) constitute an opportunity for scholars to have some impact in their respective fields of scholarship.

In advancing new potential solutions, scholars interestingly bring experience from other courts and tribunals, as well as from international arbitration. By devising alternatives to the Court's current procedure and testing them by the Court's rules, this adds to the Court's legitimacy and paves the way for potential adoptions in future cases. It is, of course, not possible to entirely affirm the extent to which the positions in academia may have influenced the change of course by the Court in the use of experts. It is, however, possible to verify that some judges, in their academic works and public speeches, made references to the scholarship and criticism regarding the use of experts, especially in relation to the appointment of experts pursuant to Article 50. A telling phenomenon is that there was a decline in the prevalence of discussion on that issue after 2018, since the Court has finally nominated ex curia experts. This quietness can be elucidated also by the fact that no other divisive cases dealing with scientific or technical questions were brought before the Court. The *Maritime Delimitation in the Indian Ocean*,[128] the *Dispute*

125. Int'l Law Ass'n Sydney Conference (2018), *Procedure of International Courts and Tribunals* at 26.

126. *Id.*

127. Boisson de Chazournes et al., *supra* note 101, at 505.

128. *See generally* Maritime Delimitation in the Indian Ocean (Som. v. Kenya), Preliminary Objections, Judgement, 2017 I.C.J. 3 (Feb. 2).

over the Status and Use of the Waters of the Silala,[129] the *Question of the Delimitation of the Continental Shelf between Nicaragua and Colombia beyond 200 nautical miles from the Nicaraguan Coast*,[130] and *Guatemala's Territorial, Insular and Maritime Claim*[131] might offer some contribution in the future.

IV. CONCLUSION

Within the dynamics of international adjudication, the incorporation of expertise adds, in different ways, to the process of legitimization of certain courts or tribunals, and the examination of the expert issue before the ICJ does not lead to a different conclusion. If legitimacy can be described as a pull towards compliance,[132] a well-founded management of experts in the Court's decision-making process involving different social groups nudges states into compliance and social audiences toward validation. This analysis demonstrated that the interactions among different social groups and the competition between their values resulted in an adaptation of the procedure, and the proneness of the ICJ to engage with scientific evidence through an optimal use of party-appointed and court-appointed experts. It remains to be seen whether the Court amends its Rules in relation to any question regarding experts in the present reform.

The current methodology devised by the Court for testing party-appointed experts and engaging the parties in the presence of Court-appointed experts seems to have reached an optimal balance of core social values selected by each group. However, there appears to exist two possibilities in which adaptation might prove to be necessary. The first is a situation in which the divergence in the findings of party-appointed experts cross-examined cannot be solved by the Court framing the legal question differently. In this case, the Court's inclination to skirt scientific divergence will require innovative solutions, such as the appointment of assessors or the use of new methodologies of scientific engagement. The second situation concerns a case in which the Court-appointed expert does not enjoy a significant degree of collaboration from the parties in evidentiary matters. Both situations will require solutions that touch directly upon the core values of the socio-professional groups concerned.

The identification of the socio-cultural values of each social group favors might help find solutions in the future practice of the Court. Understating these values in a

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129. *See generally* Dispute over the Status and Use of the Waters of the Silala (Chile v. Bol.), Order, 2016 I.C.J. 243 (July 1).

130. *See generally* Question of the Delimitation of the Continental Shelf Between Nicaragua and Colombia Beyond 200 Nautical Miles from the Nicaraguan Coast (Nicar. v. Colom.), Preliminary Objections, Judgment, 2016 I.C.J. 100 (Mar. 17).

131. *See generally* Guatemala's Territorial, Insular and Maritime Claim (Guat. v. Belize), Order, 2019 I.C.J. 177 (June 18).

132. To employ Thomas Franck's concept, delineated at, FRANCK, *supra* note 95, at 24: "Legitimacy is a property of a rule or rulemaking institution which itself exerts a pull toward compliance on those addressed normatively because those addressed believe that the rule or institution has come into being and operates in accordance with generally accepted principles of right process."

given moment does not mean that they are immutable or cannot change amid a dispute with distinct contours. Should the Court change its method for appointing and testing experts and incorporate new trends, it might be interesting to take into account a proper way to preserve the core values of each social group involved in the debate.