https://doi.org/10.18800/derechopucp.202201.009 DERECHO PUCP

N° 88, 2022
june-november
pp. 255-301

REVISTA
DE LA FACULTAD
DE DERECHO

Epistemic Balance in the Face of the Environmental Crisis: A Study of the *Southern Bluefin Tuna Cases* in the International Tribunal for the Law of the Sea on the Eve of the 40th Anniversary of its Creation

Equilibrios epistémicos frente a la crisis ambiental: un estudio a partir del *Caso del Atún Rojo del Sur* del Tribunal del Mar en la antesala de sus cuarenta años de creación

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Abstract: This paper seeks to demonstrate that the ITLOS decision in the *Southern Bluefin Tuna Cases*, although epistemically superior to one which would have involved only considering the opinions presented by the experts advising each of the opposing parties, was nonetheless suboptimal. This was due to the fact that the Tribunal judges did not consult with independent experts on the issue submitted for their consideration, despite the provisions of Article 289 of the United Nations Convention on the Law of the Sea. A direct implication of this was that the Tribunal was unable to facilitate a process in which the parties could truly examine—in terms other than those they used when presenting their arguments—the foundations of their claims. Consequently, the Tribunal made no meaningful contribution towards a resolution of the conflict independently of the ruling of the Arbitral Tribunal. This paper seeks to demonstrate that a strict causal relationship existed between the Tribunal's failure to overcome the problems of alterity and its epistemically flawed decisions.

Keywords: Epistemology of judicial arguments, International Tribunal for the Law of the Sea, United Nations Convention on the Law of the Sea, incommensurability of paradigms, alterity.

Resumen: El presente trabajo intenta acreditar que la solución dada por el Tribunal del Mar en el *Caso del Atún Rojo del Sur*, si bien resultó ser epistémicamente superadora a aquella que hubiera supuesto atenerse a considerar únicamente el *dictum* de los expertos que asesoraran a cada una de las partes enfrentadas, sería de todos modos subóptima. Ello desde que los magistrados de tal foro, pese a las provisiones en tal sentido del artículo 289 de la Convención de las Naciones Unidas sobre el Derecho del Mar, se

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I would like to express my gratitude to Dr. Chiara Ragni for assisting me, despite not knowing me at all. I am also grateful to Dr. Leopoldo Godio, who helped me expand my knowledge of the literature on the law of the sea. In addition, I would like to thank the reviewers for their valuable suggestions.

abstendrían de consultar y debatir con los expertos la naturaleza de la cuestión sometida a su examen. Cual implicancia directa de ello, el Tribunal del Mar no podría haber contribuido a que las propias partes enfrentadas conocieran los fundamentos de sus pretensiones, trascendentalmente a los términos en los que estas los plantearan. En consecuencia, el Tribunal del Mar se privó de realizar un aporte veraderamente consistente a la solución del conflicto, independientemente de lo que en tal sentido dictara el Tribunal Arbitral. En esa línea, este trabajo intenta acreditar la relación de estricta causalidad existente entre dejar de considerar el *dictum* de la alteridad y tomar decisiones epistémicamente deficientes.

Palabras clave: Epistemología de la argumentación judicial, Tribunal del Mar, Convención de las Naciones Unidas sobre el Derecho del Mar, inconmensurabilidad de paradigmas, alteridad

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I. INTRODUCTION

It seems appropriate to begin this paper with a brief overview of Kuhn's (2004, p. 240) idea of *gestalt*. According to Kuhn, it is impractical to attempt to understand a given universe of meanings by analyzing it based exclusively on a conceptual schema other than that which underpins the universe in question. Indeed, according to the gestalt theory, successfully understanding the rationality inherent to one paradigm based on the conceptual schemata of another is only possible if the latter was part of or contributed to the development of the former[1]. An extension of this

1 "Kuhn likened moving [from one paradigm to another to] a gestalt shift, thus raising questions about the relationship between our world and our theories [...] after a scientific revolution, scientists not only work with a new theory, they seem to work in a *new world*" (Wray, 2011, p. 2).

thesis implies the notion according to which if an epistemic community[2] was abruptly inserted into a new paradigm, the concurrence of other interpretations of reality (stemming from outside paradigms) would make it impossible for such corporation to even contrast the new *logos* with their own since the latter may not even be heuristically intelligible. Specifically, according to this thesis, the existence of a fact and of a set of propositions which enable it to be known ultimately depends on the pre-existence of a particular normative schemata which allows this reality representation to be intelligible to those which operate within it.

As such, according to Kuhn (2004), the conditions of possibility for an understanding of an empirical or ideal universe do not necessarily depend on the selection of a certain explanatory model in our approach. On the contrary, even if different people adopt similar positions concerning how they hope to understand the relationships of causality, connection and imputation within a given reality, different—perhaps even opposite—hermeneutic schemata may be chosen by those subjects, schemata which may be based on dissimilar interpretative paradigms vis-à-vis those formerly embraced by the individual called upon to interpret said reality (pp. 218-225). To take this thesis to the extreme, it could even be argued that it is not necessary to adopt a system of representation of the world that may be opposite to that of another community to make it impossible to engage in a meaningful debate or reflection with said community.

Of course, the aforementioned incompatibility between a hermeneutic position and the preferences of a cognizant subject does not always develop in this way. As will be explained below, the conflicting interests of the states involved in the litigation under discussion seem not only to have influenced the formulation of the different paradigms which such litigants would endorse when presenting their legal arguments; those paradigms also ended up influencing the viewpoint of the experts upon whom the respective states would later rely. For this reason—as we will

2 As Peter Haas (1992) himself states, the term "'epistemic community' has been defined or used in a variety of ways, most frequently to refer to 'scientific communities'" (p. 3), a synonymy related to Kuhn's view of science as "a system of practices [which] conceives of [science] as the activities carried out by epistemic communities" (Díaz, 2011, p. 254).
Haas (1992) himself defines an "epistemic community" as "a network of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area" (p. 3). This definition is certainly appropriate for this paper; however, I will use the term "epistemic communities' both in this sense and in the sense of 'scientific communities."
This is not merely a semantic or methodological decision taken without due consideration. On the contrary, as Haas (1992) acknowledged, his own definition of "epistemic community" is similar to that of the "paradigm" which Kuhn refers to in discussing his ideas concerning the sociological, axiological and cultural unity of "scientific communities." Haas himself quotes the latter, which seems to validate my decision, stating that "our notion of 'epistemic community' [...] somewhat resembles Kuhn's broader sociological definition of a paradigm, which is 'an entire constellation of beliefs, values, techniques, and so on shared by members of a given community' and which governs 'not a subject matter but a group of practitioners'" (p. 3).

discuss below—the opinions of and investigations carried out by said experts were not only inconsistent but also, in the worst-case scenario, unintelligible from the perspective of their counterparts.

Indeed, the different systems of representation of reality of the opposing parties (Australia and New Zealand on one side, and Japan on the other) to the dispute meant that the respective positions could never have been reconciled based solely on their heuristic strength. In concrete terms, in its response to the submissions of both Australia and New Zealand, Japan repeatedly asserted that the dispute concerning the usefulness and possible harmlessness of its Southern Bluefin Tuna (hereinafter SBT) Experimental Fishing Program (hereinafter the EFP) concerned scientific criteria, and that as such ITLOS should not have declared itself to have jurisdiction to settle the dispute (Response of the Government of Japan to Request for Provisional Measures, 1999, p. 175).

The particularity of the case thus stems from the fact that due to their conflicting approaches to analyzing reality (which finally resulted in the intervention of ITLOS) the parties to the dispute asserted that the controversy could only be resolved either by legal (Australia and New Zealand) or non-legal (Japan) means. As is evident, these assertions are ostensibly incompatible[3]. At this point, it may be useful to invoke the words of Huerta Ochoa (2003), according to whom "concepts may contradict each other, which implies that they are mutually exclusive, but not that accepting one means holding that the other is impossible" (p. 51). In cases such as the one under discussion, the assertion that subscribing to a certain schema of representation of reality does not necessarily imply holding that the opposite is, therefore "impossible", does not negate the fact that the conflicting paradigms necessarily deem the other implausible.

Under such an assumption, each community of meaning, in its doxa, would exclusively support the truth content of the theses that represent it, a n that would imply the epistemic need to question other schemes of representation of reality. Such a premise supposes severe practical consequences. Take for granted the position adopted by Japan, (Response of the Government of Japan to Request for Provisional Measures, 1999, p. 175), according to which the dispute did not fall under the jurisdiction of ITLOS. In contrast, both Australia (Request for the prescription of provisional measures submitted by Australia, 1999,

3 The incompatibility of the respective positions was masterfully summarized by Judge *ad hoc* Shearer in his opinion: "All three parties were agreed that the southern bluefin tuna stocks were at historically low levels. However, they differed markedly on whether the scientific data available showed an upward trend from that level. In Japan's view the scientific evidence showed a recovery of stocks and thus supported a higher Total Annual Catch [within the framework of the EFP]. In the view of Australia and New Zealand, the scientific evidence did not show any such recovery and thus would not support any increase in the TAC for the present." (Provisional Measures, Order of 27 August 1999, Declaration of Judge Shearer, 1999, p. 325).

p. 76) and New Zealand (Request for the prescription of provisional measures submitted by New Zealand, 1999, p. 5) maintained that the resolution of the case required a legal interpretation and that as such the Tribunal did have jurisdiction.

Against this background, this paper will analyze the work of ITLOS as an adjudicatory forum in cases in which the parties to the dispute subscribe to radically dissimilar paradigms or ways of understanding reality. To this end, it will be analyzed the rhetoric employed by each of the parties to the conflict in question in presenting their theses on the viability and potential harm of the EFP in relation to SBT, the conditions of possibility necessary to judge the merits of the EFP in exclusively scientific versus exclusively legal terms, the effect of certain juridical issues on the content of the ruling, and, finally, the virtues and shortcomings of the Tribunal as a facilitator of an epistemically optimal solution. This last consideration is of particular relevance to this paper since, in the Second Section of this article it will be argued that, strictly speaking, the Tribunal itself indulged in the same flawed reasoning that it sought to prevent. Indeed, the categorical refusal of the judges of the Tribunal to consult with experts, as provided for in Article 289 of the United Nations Convention on the Law of the Sea (hereinafter UNCLOS), replicated the insular and solipsistic dialectic of the states involved in the dispute in question, a rhetoric that amounted to eliminate any possibility of debate with other epistemic communities.

To summarize, in this paper it will be contended that the work of ITLOS in the case under discussion, although it did contribute to overcoming the problem of the irreconcilable rhetoric employed by the respective parties which caused the original disagreement (by calling upon them to fulfill their duty to cooperate in order to reach an amicable solution), nevertheless resulted in an epistemically suboptimal (at best) or inherently deficient (at worst) remedy. In this sense, it will be asserted that so as to arrive at a decision that could have contributed to a definitive resolution of the differences (by shedding light on the true state of affairs concerning the EFP's effect on the genetic variability of SBT, regardless of whether the necessary inquiry was carried out under the framework of the Order on Provisional Measures or not), the judges of the Tribunal should have discuss with and deliberated on the testimony of experts such as those which the states separately consulted when preparing their submissions, as provided for in the aforementioned Article 289 of UNCLOS.

II. CONDITIONS OF POSSIBILITY FOR AN EPISTEMIC HEURISTICS IN THE LEGAL ADJUDICATION BY ITLOS IN THE SOUTHERN BLUEFIN TUNA CASE

It is certainly reasonable to believe that the perceived scientific nature of our systems of reality representation may have serious consequences on our hermeneutic conception of the world. That is to say, given two opposed paradigms, it is to be hoped that the one that succeeds in presenting its thesis in scientific terms would dialectically prevail (Kuhn, 2004, pp. 240-256). Such a condition, naturally, depends on the cognizant participants being part of a scientific or scientistic culture. However, the case under discussion may, at least in principle, represent an interesting exception to this rule. An examination of the rhetoric employed by Japan in its arguments before ITLOS regarding the viability, usefulness and harmlessness of its EFP suggests that Kuhn's assertion will not always prevail.

This is due to the fact that, during the conflict at hand, the paradigms each party referred to when outlining their respective systems of representing their arguments were not only radically dissimilar, but also, at least in the case of Japan, misguided from a legal perspective, insofar as they were not conducive to the achievement of such State objectives. Take, for example, Japan's frequent reference to the usefulness and harmlessness of its EFP with regard to the genetic variability of SBT when seeking to legally justify its acts (Response of the Government of Japan to Request for Provisional Measures, 1999, p. 173). As mentioned above, Japan argued that ITLOS should have declared that it lacked jurisdiction, as the matter under examination could only be evaluated in terms of a scientific debate[4]. This argument was clearly at odds with that put forward by Australia and New Zealand, who consistently argued throughout the hearings that the dispute was fundamentally a legal one.

Specifically, in their submissions to ITLOS, the plaintiffs (both Australia and New Zealand) argued that continuing the EFP put the very survival of SBT species at risk, and therefore Japan's unilateral EFP was in violation of the precautionary principle. For Australia (Request for the prescription of provisional measures submitted by Australia, 1999, p. 80) and New Zealand (Request for the prescription of provisional measures submitted by New Zealand, 1999, pp. 11-12), to comply with such precautionary principle was an obligation obligation under customary international law, given such State fish stocks conservation and management duties according to Articles 64, 116, 117, 118, 119 and 300 of UNCLOS (an assertion that Japan argued against in its

4 Such a consideration is of paradigmatic importance for Japan, since that State has been customarily in favor of "resolving technical disputes concerning the determination of total and national SBT fishing quotas by implementing [...] solutions based on examination of particular technical elements" (Hayashi, 2001, p. 511).

counter-request.) According to Australia and New Zealand, the abovementioned Japan breach of customary international law was grounded on the fact that the latter had launched a program that undermined the provisions of the 1993 Convention for the Conservation of Southern Bluefin Tuna (hereinafter the CCSBT), under which Japan, Australia and New Zealand had initially agreed to establish both national and total fishing quotas for the SBT.

Japan further argued in its response to the submissions of Australia and New Zealand, as commented above, that there was no dispute on matters of law, since the disagreement between the parties concerning the results of its EFP and its impact on SBT fishing was of a scientific nature. Japan also contended that the program did not endanger the population of the species; on the contrary, it was an effective and suitable method for its conservation. Finally, Japan asserted that Australia and New Zealand had acted in bad faith by refusing to negotiate a solution according to the provisions of Article 300 of UNCLOS (Response of the Government of Japan to Request for Provisional Measures, 1999, p. 182).

Given the implications of these scientific assertions for ITLOS's decision, the following sections of this paper will focus on an analysis of each.

III. THE INFLUENCE OF SCIENTIFIC CONSIDERATIONS ON THE RULING

After establishing its effective jurisdiction[5], the most significant act of the Tribunal was to issue an Order of Provisional Measures to ensure that the genetic variability of the SBT population would not be put at risk by the EFP continuation before the Arbitral Tribunal[6] could issue its judgment. The most important consideration which influenced said Order was the judge's view of the specific merits of the scientific arguments presented by the parties, which, by this point, the Tribunal had (implicitly) divided into two broad units of meaning:

1. First, as the Tribunal itself attested, "there is no disagreement between the parties that the stock of southern bluefin tuna is severely depleted and is at its historically lowest levels and that this is a cause for serious biological concern" (Provisional Measures, Order of 27 August 1999, p. 295).

5 ITLOS relied on two arguments when declaring it had jurisdiction in the case. Firstly, it held that —contrary to Japan's claim—the disagreement underpinning the dispute was not merely scientific; since questions of fact and law were being debated, the contention could reasonably be understood as a "controversy", as defined by the Permanent Court of International Justice in the *Mavrommatis* case (1924). Secondly, the Tribunal affirmed the binding nature—in this case—of the provisions set forth in articles 64, 116, 117, 118, 119 and 300 of UNCLOS (Provisional Measures, 1999, p. 293).

6 With the exception of express references to the "Arbitral Tribunal," any use of the term "Tribunal" herein should be taken to refer to ITLOS.

2. Despite the ostensible agreement between the states regarding the preceding point, they had not been able to reach any consensus[7] on ways to remedy this state of affairs. Australia and New Zealand's argument that Japan's implementation of the EFP was risky and over-adventurous was the basis of its appeal to ITLOS, while Japan's evaluation on this point was radically different:

> The data obtained from the 1998 pilot EFP demonstrated that such a program could be designed properly to obtain useful information [...] It also showed variations in densities [of SBT population] over time and space that warranted full-scale investigation (Response of the Government of Japan to Request for Provisional Measures, p. 165).

We can postulate, then, that the ruling (in which the Tribunal ordered the states, among other provisions, to offer guarantees that they would not implement any measure which would aggravate or extend the dispute, or which would prejudice the execution of any ruling on the object of the dispute, until the Arbitral Tribunal was established) was simply a logical consequence of the judges' evaluation that the arguments put forward by the parties to the conflict concerning the dangers and virtues of the EFP with regard to the SBT population were completely irreconcilable. Even so, and despite the apparent paradox, the Tribunal could not categorically and definitively establish this irreconcilability since it did not seek to facilitate (through a consultation process, as provided for in Article 289 of UNCLOS) a broad debate on the conditions which underpinned the core dispute. I will return to this point in a later section.

IV. THE ITLOS RULING AS A MEANS OF (PARTIALLY) MOVING PAST THE INCOMMENSURABILITY OF THE PARTIES' RESEPCTIVE PARADIGMS

Based on the fact that the level of depletion of SBT was, as both parties agreed, of serious concern, and that they had not been able to reach any agreement on means of mitigating or preventing the potentially negative consequences of the EFP[8] continuing in its current guise, the Tribunal

7 As Foster (2001) expressly argues, it would have been materially impracticable to establish a common standard for the EFP in relation to the SBT that would have been reputed by all interested parties as capable of being called "sustainable." This is because, according to Foster, the presentations of each of the parties interested in such an agreement contained "fundamental differences on the initial design of the program, differences that added to the fact that the acceptable catch level for the program depended on the stipulation of those allowable catch standards, would have prevented for the three countries to reach a consensus" (p. 577).

8 It bears repeating that "Although the essence of the disagreement between the parties was a fundamental divergence of views as to the status of the SBT stock, Japan's unilateral EFP proved to be the catalyst for, and the subject of, the litigation." (Stephens, 2004, p. 181).

concluded that its only reasonable course of action was to issue an order seeking to maintain the *status quo* until the Arbitral Tribunal could rule on the legality of the EFP, the matter at the heart of the dispute.

Indeed, the close causal relationship between ITLOS's evaluation of Considerations 1 and 2 mentioned above and the content of its ruling can be explained by the fact that the judges had decided, as Romano (2010) argues, that the parties should not only halt the EFP, but also refrain from conducting "any experimental fishing program" (p. 326). The ruling declared that this should remain the case unless the parties were able to reach an agreement regarding a potential future implementation of the program, and provided that the SBT fishing quotas agreed as part of any new program counted against the national annual allocations already provided for in the CCSBT (Provisional Measures, Order of 27 August 1999, p. 299).

The reasons why the judges decided against gathering a larger body of scientific evidence during the proceedings will be explored in a later section. For the time being, what is important to note is that the judges nevertheless believed that, in the absence of certainty regarding the harmlessness of the SBT fishing carried out within the framework of the EFP in excess of what was initially stipulated in the CCSBT, the only possible judicial solution was to rule (as detailed in the abovementioned Order for Provisional Measures) that the parties should seek to come to an agreement among themselves.

In this sense, it is also relevant to recall that a condition of possibility for any such agreement regarding the feasibility of modifying the quotas was that they be subject to the provisions of the CCSBT. However, it is important to note that such convention was itself the result of a negotiation and subsequent agreement between the parties to the litigation at hand. Ultimately, as Jon Elster (2000) argued, although a state might benefit from particular restrictions in certain cases, it is unreasonable to expect it to impose them on itself (p. 157). Therefore, the Norwegian philosopher argued, unless such limits are imposed by a third party, "the normatively desirable self-binding may not, in fact, take place" (p. 157).

As such, this paper suggests the idea that ITLOS, as an adjudicating body faced with insurmountable disagreements, acted just as Ulysses once did. Specifically, the Tribunal ordered the parties to confront their differences in a more peaceful and considered manner such as that which they had embraced in the past. In this regard, as Ezquerra Gómez (2007) argues, citing Spinoza,

> The law represents both a failure and a triumph of human rationality. A failure because men are enslaved by passions 'which often contradict

> each other and thus pull them in different directions, this discrepancy revealing that they display a behavior sometimes contradictory to reason […] and a triumph, because concord and mutual aid are guaranteed by the law, albeit 'not through reason but through threats' (p. 221).

Thus, the overwhelming lack of agreement between the states regarding the possibility of determining fishing quotas which did not affect the genetic variability of SBT explains the decision of the Court to urge the parties to revive the circumstances under which an agreement was in place and was complied with, and whose legally binding nature was reinforced by the scientific consensus, therefore being their provisions peacefully respected. In fact, all parties to the dispute had considered that the regulations on fishing quotas provided for in the CCSBT assured the genetic variability of the SBT[9].

It can be seen, then, that in the absence of scientific criteria unanimously endorsed by the parties that may have allow some determination regarding the correctness or even the reasonableness of their arguments, the Tribunal declared it was left with no option but to stipulate that the proponents of these mutually incompatible and eventually incommensurable paradigms should make their best efforts to leave behind their previous assertions and endeavor once more to come to a mutual understanding.

In practical terms, in order to move beyond this state of affairs, ITLOS resorted to the following procedural *iter. At first,* it issued an Order for Provisional Measures which sought to prevent the dispute from advancing further (*i.e.*, that Japan continue with its EFP despite Australia and New Zealand's objection), a circumstance which could in theory lead to the dispute itself being rendered moot. Indeed, if the genetic variability which ensured the survival of SBT was lost then the object of the litigation would become abstract. In addressing this point, ITLOS took into consideration

> the failed attempts by the parties to negotiate an agreement and the parties' consensus that the tuna's stock was severely depleted, and that its numbers were at a historical low. Although Japan's current year's experimental fishing was almost over, Japan had made no guarantees as far as its future programs (Sturtz, 2001, p. 472).

As Romano (2001) argues, the judges seem to have accepted the validity of the reasons cited by both Australia and New Zealand as justification for their requests for provisional measures since, "while the

9 The CCSBT formalized the three nations' cooperative relationship and had as its goal the conservation and optimum utilization of the SBT. UNCLOS established a Commission, which was to facilitate UNCLOS's goals through consensus. All three nations had to agree before the Commission could take action (Response of the Government of Japan to Request for Provisional Measures, 1999, p. 161).

EFP season was to end on August 31 [1999], normal fishing [of SBT] would continue beyond then" (p. 326). This suggests, Romano argues, that the ultimate goal of the Provisional Measures was to reduce the catch of the species; it can reasonably be concluded that the fishing ban was conceived by ITLOS as an SBT conservation measure, at least until the Arbitral Tribunal issued a ruling on the merits of the case[10].

Finally, it is important to note that, in addition to ordering the Provisional Measures, ITLOS stipulated that the parties should renegotiate the relevant quotas as soon as possible, in order to reach an agreement which would ensure the conservation and sustainable exploitation of SBT.

In light of what has been discussed so far, it can be concluded that the provisional measures proved more satisfactory from an epistemological perspective than a ruling based solely on the opinions of the different expert groups cited separately by the parties in their respective submissions would have been. However, such measures would prove suboptimal, from the same epistemological perspective, as they meant that the judges ruled out the possibility of discussing and questioning the opinions and findings of said experts during the hearings.

In other words, the Tribunal made important contributions to reconciling the differences between the states in conflict positions. Nevertheless the procedural and hermeneutical traditions of the court itself prevented these contributions from being, by virtue of an extensive and unrestricted debate, sufficiently effective and conclusive, so as to transcend the conflicting knowledge sets and opinions that the parties held at the outset of the dispute. After the brief discussion in the following section, the subsequent sections will explore both these issues.

V. AN OVERVIEW OF THE RELATIONSHIP BETWEEN THE PRECAUTIONARY PRINCIPLE, THE PROVISIONAL MEASURES AND THE TRIBUNAL'S RECOURSE TO THE PARTIES THEMSELVES AS REASONS FOR THE DECISION NOT TO CONSULT WITH EXPERTS AS PROVIDED FOR IN ARTICLE 289 OF THE UNCLOS

It could be argued that the fishing quotas limitation established in the CCSBT were also explained by the fact that, as Judge *ad hoc* Shearer

10 On this point, Judge Vukas, in his dissenting opinion, held that there was no justification for granting the request for provisional measures submitted by Australia and New Zealand (especially given that the current year's EFP period was just days away from its end), but also that, in any case, had those states truly considered it urgent to take action to protect the genetic variability floor of SBT, they could have reduced the volume of their own catches of that species (Provisional Measures, Order of 27 August 1999, Dissenting Opinion of Judge Vukas, p. 330). The reference to Judge Vukas' opinion is intended to show that, regardless of his statements, States themselves are not always able to collaborate autonomously and spontaneously with regard to the objectives of a multilateral agreement such as the CCSBT.

argued, the Tribunal did not have the power to act *ultra petita*, and as such the magistrates were prevented from prescribing measures to reduce the catch allocation beyond the terms of said Convention (Provisional Measures, Order of 27 August 1999, Declaration of Judge Shearer, p. 327). This would explain, Judge Shearer argued, why the Tribunal chose to apply the precautionary principle only implicitly, since, despite ordering said Provisional Measures, it had not elaborated on whether or not they were issued in accordance with it (p. 327).

The concealed nature—as understood by Judge Shearer—of the application of the precautionary principle in prescribing the Provisional Measures was not the only timid position adopted by ITLOS with regard to such a standard. In addition, as Judge Treves argued, in its majority opinion the Tribunal avoided taking a position as to whether the precautionary principle was a binding rule of customary international law that should guide the decision on whether or not to prescribe the measures requested by Australia and New Zealand in the case (Order of 27 August 1999, Separate Opinion of Judge Treves, p. 318). Judge Treves relinquish to elaborate on this point, simply arguing that given that the principle was inherent to the very notion of provisional measures, any analysis of its legal nature was, by itself, unnecessary (p. 318).

However, even if we accept the premise according to which "there is obvious conceptual affinity between the precautionary principle and […] the provisional measures procedure" (Stephens, 2009, p. 45), it shall be noted that the fact that the Tribunal was steadfastly taciturn about explicitly identifying the abovementioned principle as the basis for prescribing the measures, and that it did not offer an opinion on its legal nature, is not insignificant. Indeed, this circumstance could explain the fact that such Tribunal adopted an equally conservative position regarding the justification of its decision, since such a forum avoided considering, at the moment of dictating those Provisional Measures, the experts' opinion, therefore disregarding the procedure regulated by Article 289 of UNCLOS.

This consideration should not be understood as unreasonable or implausible. Judge Laing, in a Separate Opinion, held that since there was no conclusive or clear scientific evidence of damage being done to the SBT population by the EFP, ITLOS's powers related to the conservation of marine resources should be exercised with caution (Provisional Measures, Order of 27 August 1999, Separate Opinion of Judge Laing, p. 305). This explained, according to Laing, why the Tribunal adopted a "precautionary approach" instead of applying the "precautionary principle" (p. 305); the latter being a criterion that is certainly more lax than the first one in its requirements in order to justify the imposition of such Provisional Measures.

In light of the opinions of the judges outlined above, this paper postulates that there was a causal relationship between tempering the justification for prescribing Provisional Measures (whether by not accepting that the precautionary principle was binding in customary public international law, by replacing it with the "precautionary approach", or by asserting that the Tribunal was not empowered to make *ultra petita* decisions) and avoiding a broad, extensive and consistent debate on the scope of such measures. Judge Laing's suggestion that, in the absence of a scientific deliberation in the Tribunal on the implications of the EFP for the SBT, Japan should be required to prove—a kind of implicit reversal of the burden of proof—that there were no harmful consequences to its program (Provisional Measures, Order of 27 August 1999, Separate Opinion of Judge Laing, pp. 314-315) is significant in this regard. Scenarios such as this—even without considering the other issues discussed in this paper—help to explain why the judges asked the parties to show initiative and reach an agreement among themselves on means of resolving the dispute instead of considering the opinions of outside epistemic communities (such as those of the experts referred to in Article 289 of UNCLOS).

VI. ITLOS AND THE DUTY OF COOPERATION BETWEEN THE PARTIES IN RELATION TO THEIR EPISTEMIC SOLIPSISM

At this point, it is worth reconsidering the role of ITLOS in the face of the vastly divergent criteria the parties applied when interpreting the purely scientific issues of the case (specifically with regard to the usefulness and, more importantly, the potential risk posed by the EFP to the genetic variability of the SBT).

Indeed, in this paper it will be argued that the role of ITLOS, insofar as conceived as a forum for legal regulation tributary to an epistemically constructivist logos—in that it facilitates thorough examination of the positions and ideas under discussion in a dispute—will be more conducive to the analysis and comparison of scientific considerations than the procedures customarily employed by the respective expert communities in conflict, whose *telos* should ideally be ontologically favorable to such an end[11]. We refer, of course, to the groups of specialists and scholars who supported the assertions of the parties, presenting their arguments for and against[12], respectively, the viability and harmlessness of Japan's

11 "The process of developing and making use of expert knowledge needs to be more transparent and involve an ongoing dialogue between experts, the public and decision makers in public affairs" (Alonso & Galán, 2004, pp. 80-81).

12 Take, for example, the Japanese side's own acknowledgement of the point: "In 1996 [...] the [CCSBT] Scientific Committee invited independent scientific experts [...] to join with the parties in assessing the likelihood of recovery of the SBT parental spawning stock to its 1980 level by 2020 [...] Japan assessed the prospects of recovery as 75%. The independent scientists assessed the likelihood

EFP. An examination of the submissions of Australia and New Zealand, and particularly of Japan's response to these, shows that not only these experts did not contribute to reducing the scale of disagreement, but, on the contrary, that the dialectic they engaged in actually resulted in the parties becoming more entrenched in their respective views regarding the viability and harmlessness of the EFP[13].

In the antipodes of such a course of action and, to a large extent, due to the Tribunal's order to the litigants according to which they shall renegotiate on the matter as soon as possible, in April 2001, Australia, New Zealand and Japan agreed to halt their SBT fishing programs under the EFP. Such outcome may be explained by the fact that the parties, by virtue of this requirement, accepted the *dictum* of an "independent" panel of scientists, who concluded that the EFP had no positive or beneficial effect as regards the objective of conservation of the species in question (Romano, 2001, p. 334).

As such, the order that the states fulfill their duty to cooperate in good faith was epistemically superior to a ruling which would have relied on the insular and solipsistic opinions of the experts called on by each side regarding the potential harmlessness of the EFP in relation to the genetic variability of the SBT. This would not preclude to say, however, that the solution arrived at by the Tribunal was perfectible from an epistemic point of view to that which may have resulted from a process involving experts discussing their premises, findings and conclusions with the judges, in accordance with the provisions of Article 289 of UNCLOS. The next sections will analyze the rationale for the need for such deliberation and the consistent reluctance of the ITLOS to engage in the aforementioned exercise.

VII. SCIENTIFIC DISPUTES VS. LEGAL DISPUTES: AN ANALYSIS OF THE RELUCTANCE OF ITLOS TO APPLY THE PROVISIONS OF ARTICLE 289 OF UNCLOS IN THE *SOUTHERN BLUEFIN TUNA CASES*

Given the clear differences in the modes of analysis of the evidence regarding the usefulness and harmlessness of the EFP in relation to

as 67%. Australia and New Zealand considered the likelihood to be much lower" (Response of the Government of Japan to Request for Provisional Measures, 1999, p. 163).

13 Consider the vehement rhetoric employed by a number of the scientists who questioned the reasonableness and plausibility of the arguments put forward by experts who held opposite views: "The lack of imminent risk [from the implementation of the EFP] to the SBT stock also is supported by the testimony of eminent scientists. Professor Douglas S. Butterworth, who has intimate familiarity with SBT and with the scientific discussions that have taken place over the EFP, takes strong issue with the scientific report submitted by Australia, finding it both selective and open to question in a number of areas of content and interpretation." (Response of the Government of Japan to Request for Provisional Measures, 1999, p. 187).

SBT as presented by Australia and New Zealand, on the one hand, and Japan, on the other, it is worth discussing what legal adjudication by courts of this kind should ideally consist of when they are called upon to rule on disagreements of this kind. This is because, as mentioned above, both Japan's and Australia's and New Zealand paradigms were largely refractory to the possibility of considering the arguments and elements of conviction of the otherness. This situation explains the somewhat counter-intuitive fact that the presentation of scientific evidence prepared by each of the parties to the litigation was not the most appropriate means of considering and seeking to balance the claims of each side.

It becomes evident, therefore, that regardless of the rhetoric with which a particular set of experts could be identified (whether it was the one promoted by the Australian and New Zealand position, on the one hand, or the one advocated by the Japanese perspective, on the other), there would be in this case considerable limitations that would hinder a non-commercial, economically or politically mediated examination of the aforementioned issues that in the process itself are presented as supposedly "technical". Consider, in the present case, the fact that Japan argued that

> the 1998 EFP operated at a substantial loss, and a similar loss is anticipated for 1999. This loss is tolerated only because it is a scientific, not a commercial, operation, as alleged. (Public sitting held on Thursday, 19 August 1999, at 10.00 a.m., p. 9).

Despite this consideration, consistent reasons could be invoked to support a thesis contrary to the Japanese one. In this sense, it is appropriate to appeal to the presentation of the Australian agent Crawford before the magistrates, summarized by Lee (2000), who recalled that:

> Since it was common ground that tuna stocks were at record low levels, Japan's EFP was commercial fishing in disguise. [Thus, the] Tribunal did not have to discuss the merits of the rival scientific data furnished (p. 245).

In other words, even if communities of technicians and experts declare that they embrace the values which underpin the most stringent definition of scientific praxis[14], commercial, political or economic objectives can have a negative impact on the realization of such a *telos*. Consider, again, the changes in the opinions of the "independent scientific panels" referred to above. Given the apparent malleability of such scientist's standpoint, it is reasonable to suggest that such stance

14 Kuhn (1982) himself referred to "Normal science, the puzzle-solving activity we have just examined, is a highly cumulative enterprise, eminently successful in its aim, the steady extension of the scope and precision of scientific knowledge" (p. 52).

was initially a reflection of the opposing interests of the respective states, and an *a posteriori* outcome of ITLOS's order that the parties enter into negotiations. As Resnik (2008) puts it, "Scientific norms prescribe, but do not necessarily describe, scientific conduct: they are ideal standards that individual researchers or research communities sometimes fail to live up to" (p. 222).

Given the complexity of the discussion on the effects of the EFP on SBT population, it would have been reasonable and appropriate for the Tribunal, in this case, to take the necessary steps to ensure that the scientific presentations adhered as closely as possible to the standards referred to by Resnik (2008). In this way, the ostensible bias exhibited by both the experts from Australia and New Zealand and those from Japan in their respective opinions might have been mitigated, at least to a certain extent[15]. Paradoxically, even though the Tribunal was empowered to take this step, which is explicitly provided for in Article 289 of UNCLOS, it decided not to do so throughout the debate prior to its ruling. In accordance with the aforementioned precept,

> In any dispute involving scientific or technical matters, a court or tribunal exercising jurisdiction under this section may, at the request of a party or proprio motu, select in consultation with the parties no fewer than two scientific or technical experts chosen preferably from the relevant list prepared in accordance with Annex VIII, article 2, to sit with the court or tribunal but without the right to vote.

However, despite the epistemic possibilities inherent to such a consultation process, prior to the case *sub examine* ITLOS had already shown itself to be disinclined to call on specialists to participate in the process. In the proceedings brought by Malaysia against Singapore in *Case concerning Land Reclamation by Singapore* (2003), the Tribunal judges refused the option of consulting with experts in their deliberations. On the contrary, they explicitly delegated the duty to deliberate with expert researchers to the parties themselves, ordering Singapore and Malaysia to set up a working group of independent experts to carry out a study to determine the effects of Singapore's land reclamation (Order of 8 October 2003, p. 27). I will further discuss elements of this case below.

15 As Treves (2012) argues, the fact that Article 289 of UNCLOS stipulates that at least two experts, selected in consultation with the parties, must be heard from will eventually give rise to each developing some kind of bias towards the position of the party which put them forward (p. 485). It is nonetheless important to note that the fact that the experts are not chosen directly, but rather in consultation with the parties, and that they must participate in the deliberations of the Tribunal (discussing their reasoning and being questioned on their views), as opposed to simply making direct presentations on behalf of the respective States, should result in them exhibiting less bias. Furthermore, as Article 15, paragraph 3 of the Rules of the Tribunal itself provides, "Experts shall be independent and shall enjoy the highest reputation for fairness, competence and integrity" (International Tribunal for the Law of the Sea, 2009, p. 6), and must solemnly declare to perform their duties "honourably, impartially, and conscientiously" (p. 6).

For the moment, it is sufficient to bear in mind that in this dispute between Asian states, recourse to the opinions of experts, as ordered by the Tribunal, was not ineffective or worthless. On the contrary, on the basis of these opinions the parties reached an agreement which settled the dispute, and in the end the Arbitral Tribunal appointed by ITLOS was only required to ratify this understanding. It could be argued that this demonstrated—even though such scientists were not called by ITLOS itself—"the value of bringing experts from the two sides together and of appointing a single joint expert to produce a joint report on technical or scientific questions" (Anderson, 2007, p. 595).

In this sense, it's worth mentioning that the possibility of states finding common ground through joint consultation with specialists is not irrelevant: it gives an idea of the procedural route Japan may have followed had its stance that ITLOS lacked jurisdiction been accepted. Japan had argued, as explained above, that final resolution of the dispute did not require the intervention of the Tribunal since the claims of Australia and New Zealand did not relate to questions of law, but to questions of scientific interpretation.

In this point it´s relevant to consider, in addition, that several international tribunals had already adopt such stance, a circumstance that implied that, in short, Japan's strategy was not implausible or unworkable. Take, for instance, the Comprehensive Peace Agreement between the Government of The Republic of The Sudan and the Sudan People's Liberation Movement signed on January 9, 2005. Under this settlement, a commission of experts in history, geography and anthropology was to be formed, which would issue an exclusively scientific opinion with the aim of delimiting a border between the lands of the two parties. According to Ragni (2020), "the Commission of Experts were required only to carry out a qualified assessment of the facts; their evaluation should have been sufficient for a decision to be reached without the need to resort to legal means of resolution" (p. 130). At this point, it's necessary to point out that the circumstances which led to such resolution being challenged before an Arbitral Tribunal created under the auspices of the Permanent Court of Arbitration are not relevant here; it is, however, worth recalling that this tribunal "clarified the difference between the legal and the scientific dispute, highlighting the contrasting methods which should be employed in each case to reach a decision" (p. 127).

Thus, the fact that Japan's argument was not accepted by ITLOS does not mean it was not logical and within the realms of any legal possibility. Indeed, there is no inconsistency between the claim that the dispute could be resolved through recourse to legal means and the fact that the scientific evidence was relevant to adjudication on the matter. It seems beyond doubt, therefore, that scientific considerations would necessarily

play a part in the resolution of the SBT case, and, in this sense, it may have been wise for the Tribunal to seek the opinions of diverse experts, following the procedure outlined in Article 289 of UNCLOS.

Nevertheless, despite Australia and New Zealand's contention that the case should be decided based on legal rather than scientific considerations, these states had not only contributed to the scientific debate through the reports issued by their specialists, they had in addition allowed the expertise of these specialists to be examined by Japan under the practice of *voir dire.* Australia and New Zealand's invitation that Japan assesses "both the credibility and the capability of [the expert presenting on behalf of those States, Professor Beddington] to offer specialized expertise on the matters relevant to the case before the court" (Minutes of the Public Hearings held from 18 to 20 August 1999, p. 39) was not inconsistent with those states' decisions to base their submissions on legal rather than scientific assertions. Given these procedures, which suggested all parties openness to the idea of broadening the scientific aspect of the debate, the Tribunal's reluctance to consult with such experts is difficult to understand. This issue will be expanded upon below.

VIII. HEURISTIC PRIVILEGE AND EPISTEMIC COMMUNITIES: BEYOND THE LEGAL DEBATE CONCERNING THE RELUCTANCE OF ITLOS TO APPLY THE PROVISIONS OF ARTICLE 289 OF UNCLOS IN THE SOUTHERN BLUEFIN TUNA CASES

As mentioned above, throughout the process, the conduct of the litigants itself constituted a precedent consistent with a possible request by the Tribunal to seek the testimony of experts, as provided for in Article 289 of UNCLOS, in order to undertake a thorough scientific analysis of the merits of the opposing claims. The need for recourse to such experts became even more apparent when the Tribunal explicitly acknowledged its epistemic limitations regarding the subject matter: indeed, the judges themselves admitted that they were not in a position to "conclusively assess the scientific evidence presented by the parties" (Award on Jurisdiction and Admissibility, Decision of 4 August 2000, p. 20). This admission, in the context of the proceedings, is even more noteworthy in the light of the statement which immediately followed; as the Tribunal nonetheless neglected to prescribe further scientific studies, instead ordering simply that "measures should be taken [...] to preserve the rights of the parties and to avert further deterioration of the SBT stock" (p. 20).

Despite the above, the fact that the Tribunal declined to address, even elliptically, scientific positions other than those put forward by the

parties themselves should not necessarily be read as a revolutionary or rebellious stance vis-a-vis their jurisprudential tradition.In fact, according to Treves (2012), the Tribunal judges had historically felt "uncomfortable" (p. 485) about calling scientists who would necessarily have high levels of not only technical but also legal expertise to deliberate alongside them, since these would be, for the magistrates "too close to being judges or arbitrators" (p. 486). The reasoning outlined by Treves is certainly thought-provoking and seems feasible, as it may explain using simple logic that, customarily, "scientific information was never used by ITLOS as the decisive argument in a case in favor of one party" (p. 486). It goes without saying that the judges conduct, as described by the Italian jurisconsult, should not necessarily be viewed as arbitrary or, worse still, unlawful. Indeed, there is no inconsistency between asserting that neglecting certain evidentiary elements can be explained (as Treves does) through psychological analysis and understanding that the resulting decision was consistent with the law. According to Ragni (2021),

> The fact that certain elements of the dispute between the parties could only be verified by incorporating evaluation of technical and/or scientific information and/or expertise—i.e., that the prerequisites for the disagreement to be deemed a scientific one were met in principle—does not per se negate the legal nature of the dispute [...] if the outcome of the case depended on the application of a rule of international law on which one of the parties' claims were based (p. 125).

As stated by Ragni (2021), there is no antimony in maintaining that a case should be decided exclusively on the basis of legal arguments even if the dispute can, to a large extent, be explained empirically using scientific language and reasoning. Even so, from a legal perspective (as opposed to the psychological one presented by Treves), this assertion sheds no light on the reasons why the judges of the case in question decided, at their discretion, against seeking further scientific evidence and developing a fuller understanding of the situation which led the parties to bring their dispute before the Tribunal.

The contrary would mean to maintain that, for the purposes of a ruling in the present case, such scientific elements should not only not have been considered substantially, but even elliptically, when it came to providing a more thoughtful and measured decision by the judges. Had this been the case, the present discussion in this paper would be merely an abstract one, as would the very *telos* of the consultation with experts referred to in Article 289 of UNCLOS. However, the judges' hermeneutical reference to the universe of the views and opinions of such specialists supports this paper thesis, since the "While scientific information made available to the Tribunal has never been used as a

decisive argument, it has been considered sufficient to determine that there was 'scientific uncertainty' regarding the matter submitted to the Tribunal." (Treves, 2012, p. 486).

At this point in our discussion of the heuristic aspects of the case, it seems appropriate to mention a methodological consideration. It is true that, for the sake of consistency, that

> it is up to the judge to establish the criteria for evaluating the evidence, which, especially with regard to proving scientific facts, will not be used to guide the examination of the content of the evidence, but, given the judge's powers in this regard, simply to verify that the requirements to apply the rule in question are fulfilled (Ragni, 2021, p. 125).

As such, the decisions of the Tribunal judges cannot be said to have been intrinsically flawed. Indeed, there seems to be no logical contradiction between asserting that they did not gather sufficient scientific evidence to thoroughly evaluate the reliability of the (similarly) scientific information provided by the parties and accepting that they were nonetheless capable of establishing whether the case met the requirements of the rule based on which they ordered the provisional measures. In fact, as discussed above, the evaluation criteria employed by the judges in seeking to determine whether Japan's EFP met the requirements of the rule governing its legality related to the unilateral nature of the program. Indeed, "the Tribunal affirmed that the request submitted by Australia and New Zealand sufficiently demonstrated an urgent need to consider the possibility of issuing a Provisional Measures Order" (Villarreal, 2021, p. 86), given Japan's violation of its duty of cooperation (regulated in Articles 64, 116, 117, 118, 199 and 300 of UNCLOS) with regard to "the economic exploitation and conservation of migratory species" (p. 86) such as the SBT.

In other words, the Tribunal implicitly concluded that a decision on whether the case met the criteria required to apply such rule could be come to without examining the scientific considerations. Otherwise, the judges would have applied the provisions of Article 289 of UNCLOS to justify their decision to dictate the Provisional Measures under discussion, thereby avoiding examining the scientific information simply to conclude that it was ambiguous (Treves, 2012, p. 487). It would seem, therefore, that the position of the judges of the Tribunal was similar to that held by a number of jurists, according to which

> the issue of how to interpret the concept of "scientific research" [...] should be dealt with in greater depth [so that the judges can, rather than merely evaluating the exclusively scientific aspects of a case,] invoke the hermeneutic canons of international law as enshrined in treaties (Ragni, 2021, p. 146).

The work of the judges of the Tribunal in the SBT case can be understood, from the aforementioned perspective, as an intellectual exercise intended to extend the frontiers of knowledge in the discipline. Indeed, the fact that the magistrates invoked the aforementioned hermeneutic canons, which the scientific community they would question were unfamiliar with, could be read as an act which sought to "uncover new classes of evidence and enhance its relevant body of knowledge without extending any kind of privilege to the heuristics of the reality to be analyzed" (Bachelard, 1966, p. 58). In this sense, it's methodologically relevant to note that the judges prescribed that even in the face of a clear deficit of technical information it was not necessary to seek the opinions of a group of experts in order to remedy this situation, since the Court—as Mbengue (2011) argues, citing the *dictum* of the International Court of Justice in the *North Sea Continental Shelf Cases* of 1969—limited itself to "'find[ing]' scientific facts 'only so far as required for the application of international law'" (p. 56). As a consequence of such standing, it could be said that the magistratessought to develop new "criteria and methods of reasoning that they could then employ in assessing the reliability and relevance" (Ragni, 2021, p. 152) of the scientific material under examination. In conclusion, it can be argued that such heuristic scientific reasoning was not granted any kind of privilege, a benefit that may in the past have prevented it from being evaluated and questioned by outside epistemic communities.

However, my argument is that, contrary to the aforementioned hypothesis, if a heuristic prerogative did emerge in the SBT and similar cases, it seems to have been confined to the legal domain. This would explain, in particular, why the judges of the Tribunal, even in the face of an admitted lack of knowledge on a subject as complex as the effects of EFP on the genetic variability of SBT, did not appeal to the opinion of the experts in the same field. Consider, in this regard, the words of Mbengue (2011), who argued that:

> Scientific fact-finding may be understood as a method to uncover the "non-fact" (the uncertain fact), whereas traditional fact-finding processes before international courts and tribunals are orientated toward the "freezing" of "facts" (p. 59).

Evidently, the predicates formulated by the scientific community as a whole do not meet, for the legal community, the epistemic standards or occupy the same place in the epistemic hierarchy as those set forth by the legal community itself. Indeed, in addition to the fact that the former are characterized by their inherent "volatility, their circularity, their paucity, their impalpability" (Mbengue, 2011, p. 62), it should be added the consideration according to which "international courts and tribunals pay no heed to the most doubtful factual elements" (p. 60).

Here we are not witnessing, therefore, a problem related to not extending certain hermeneutic privileges to the otherness, but rather to preserving them for the very epistemic community from which a certain system of representation of reality is formulated—and legitimized. In this sense, it is worth remembering that, as Latour (1987) points out, “since the settlement of a controversy is the *cause* of Nature’s representation, not its consequence, we can never use this consequence, Nature, to explain how and why a controversy has been settled” (p. 258).

If we accept Latour’s (1987) reasoning, the perception of a system of representation of reality as true does not, therefore, have a causal relationship with the conditions which transcend the manner in which such schema is analyzed within a given community. Ultimately, the epistemic status of a particular system of analysis and representation of reality is not a property which is intrinsic to it, but rather stems from and is causally dependent on the *doxa* of the cognizant individual or collective which ascribes that epistemic status to it.

Given this assertion, and setting aside for a moment our analysis of the *praxis* of ITLOS itself, the fact that judges as distinguished as those of the International Court of Justice (in the *Pulp Mills on River Uruguay* [2010] case) should, without input from technical specialists, “set [themselves] the task of choosing what scientific evidence is best, discarding other evidence, and evaluating and weighing raw data” (Dissenting opinion of Judge ad hoc Vinuesa, 2010, p. 285), should not be viewed as an analytical heresy, much less a professional one. This is because, regardless of the intrinsic soundness or validity of particular scientific predicates and their relevance to an assessment of the evidence which could decide a case, the epistemic community of judges in courts such as the ICJ should, whenever possible, decide upon a heuristic method that is related to their own (in this case, legal) system of representation of reality. This is because, in general, individuals display a certain “categorial conservatism [an attitude that leads them to] display a preference for ‘entrenched’ categories. [As a consequence, those individuals…] do not lightly supplement or revise their categorial schemes” (Goldman, 1993, pp. 279-280). Goldman’s idea reflects the fact that the limitations inherent to such “entrenched” structures in the cognitive and hermeneutic praxis of international tribunals transcend the constraints that the particular universe of skills, knowledge and prior experiences imposes on each of the members of such forum. In this sense, the criteria for determining the validity, relevance and truth of the work and research undertaken within a particular community is dictated by its *doxa*. This is because, within each of such communities:

> All “logical” and “methodological” properties of [any cognitive and reflexive] action, every feature of activity’s sense, of its facticity, of its

> objectivity, of its accountability, of its communality, without exception is to be treated as a contingent accomplishment of socially organized common practices (Garfinkel, 1972, p. 323).

Two conclusions can be drawn from the arguments developed thus far. First, the very content and perceived legitimacy of any system of representation of reality will not be left to a more or less deliberative and epistemically free and unconditioned process, but, on the contrary, it will be professionally determined by the allegiances, practices and values of such a community. Secondly, that as long as the reality hermeneutics developed within a particular community are an implication of a set of premises, perspectives and axioms which are originated exclusively within that collective, said hermeneutics may be insurmountably alien to the analytical universe of other epistemic corporations. It is therefore profoundly irrelevant for any court if, for example, any plaintiff would "react to a breach of an agreement by relying on moral standards by invoking concepts of justice or by pointing to the lack of political wisdom of such a course of action" (Schreuer, 2008, p. 966). Indeed, such a forum would most likely only intervene in the dispute if "legal rules contained, for example, in treaties or legislation are relied upon and if legal remedies such as restitution or damages are sought" (p. 966).

Consequently, and strictly in the context of the debate in the case under examination, the fact that ITLOS declined to seek the input of the relevant scientific community in accordance with the provisions of Article 289 of UNCLOS meant that it not only eliminated the option of evaluating the pertinence—and, ultimately, the verisimilitude—of the opinions of that community, but also that it denied itself the opportunity to examine the empirical evidence presented by said community (in this case, that related to the effects of the EFP on the genetic variability of SBT).

Therefore, and in strict relation to the debate of the case under examination, the fact that the ITLOS refused to hear the opinion of the scientific community to which it could have appealed, in accordance with the provisions of article 289 of the UNCLOS, not only implies that the magistrates relinquished to consider the pertinence—and, ultimately, plausibility—of the opinions of that corporation, but also, in short, that they also denied themselves the opportunity to examine the empirical evidence presented by said community (in this case, that related to the effects of the EFP on the genetic variability of SBT). Consequently, the fact that the judges, despite acknowledging their lack of technical competence in the case, declined to analyze the views of relevant experts in the field demonstrates that their legal ruling was underpinned by other epistemic considerations. As such, factual issues would be defined solely as the product of methodological decisions,

while the practical consequences of the application of such decisions would thus be excluded from any kind of reflection (Habermas, 1971).

So, what should we understand by the "practical consequences" which Habermas refers to? In particular, and if we were to examine the latter from a legal *doxa*, what sense would the analysis of such consequences have if, ultimately, what a judge of an international court would lead to pronounce would be nothing but the legal exegesis of the case? In the light of this last consideration, any type of answer can be intrinsically unattractive, futile or even non conducive; since it could be said that this would not provide, in principle, any information that we did not previously had. This premise is grounded on the fact that inquiring into the "practical consequences" related to the use of strictly legal categories—from such an exclusive perspective—can only give us answers that will be superfluous (for example, those already outlined and explained by such judges in their decisions) or that, inasmuch as tributary to a legal *sensus*, could already have been foreseen or taken for granted or probable of adjudication.

According to Habermas (1971), this understanding is sufficient to conclude that certain methodological decisions (in this case, those made by the members of ITLOS) prevented reflection about the very practical consequences that their adoption would *per se* entail. This is because this type of decision "results in consensus definitions of both problems and solutions" (Schugurensky, 1998, p. 126), a circumstance which would imply, in this sense, that "once a particular frame of reference has been developed and consolidated, it is difficult to imagine other alternatives" (p. 126).

In other words, the impossibility of identifying the epistemic consequences of those decisions is due to a praxis of symbolic generalization which depends, to a greater or lesser extent, of two considerations. The first concerns the delimitation of one or a series of matters; in this case, those which the Tribunal deemed to be the only ones worthy of addressing, thereby completely disregarding the opinions of any outside epistemic community (in this case, the scientific one). The reference is, of course, to those of a legal nature. The second is related to the resolution of these issues: as mentioned, if there were a possibility that the case could be resolved based on purely legal considerations, that would be the ultimate dialectic to which, unconditionally, the court would appeal when making a decision. This is to say that the experience by means of which an epistemic community examines the reasons why it considers only one set of problems and solutions (in this case, those of a "legal" nature) and disregards others (in this case, those of a "scientific" nature) may not imply a conscious, deliberate or even intelligible exercise on the part of its members. In this sense, according to Kuhn (2004),

> What a man sees depends both upon what he looks at and also upon what his previous visual-conceptual experience has taught him to see. In the absence of such training there can only be, in William James's phrase, "a bloomin' buzzin' confusion" (p. 113).

This circumstance has serious implications which even transcend the abilities and means of resolution of such problems employed by a particular epistemic community. Indeed, it is this delimitation of dilemmas and, ultimately, their solutions—or, in Kuhn's terms (2004), "puzzles"—which determines, by defining the "content" of a paradigm, the identity of the epistemic community which adhere to said paradigm. This is because problem-solution pairings constitute the necessary presuppositions on the basis of which every community member who adheres to that particular schema of representation of reality develops his or her reading of it. According to Enrique Marí (1991), every field of expertise "is a statute that includes [...] within its practice, its very conditions of application. Thus, the classical division between theory and applications of theory shall be rejected, with the practice incorporating its conditions of application" (p. 326).

At this point, to redirect the discussion to the reasons why ITLOS did not seek out the opinions of experts in accordance with the provisions of Article 289 of UNCLOS, would certainly seem to be a simpler matter than *ab initio*. The above assumption is based on the fact that the decision on whether or not to call on such experts did not ultimately depend on the judges' view of the relevance or even the objective epistemic necessity of hearing their opinions, but rather on the fact that those specialists dialectic would be tributary to the very doxa to which, inevitably, the judges, as a socio-political community adhered. Such doxa, therefore, will determine the professional and hermeneutical affiliation to which the magistrates of the Tribunal del Mar would have to appeal, transcendently to their own conscious volition. Therefore, as mentioned, any dispute between the parties that could be evaluated and, eventually, settled through a legal solution would exclude third other logic, semantics or dialectics.

Specifically, the present work argued that even in those cases where legal regulations provide for recourse to the *dictum* of other epistemic communities and semiotics, ITLOS, regardless of the objective necessity in this regard, would tend to decide not to embark upon this exercise. Indeed, in cases such as the one under discussion, in which considering the opinions of the alterity (in this instance, the scientific community concerning the legal corporation) appears to be crucial for the judges to hand down a well-founded juridical decision (such as an Order for Provisional Measures), the Tribunal would nonetheless tend to be loath to engage in "what ought to be a purely uninvolved examination of, or

look at, the other" (Tatman, 2001, p. 112). Consequently, and given their reluctance to consider the opinions of experts—in a matter on which solely the latter could feasibly make authoritative statements—the only option available to the judges was to legally justify the epistemic loss employing a rhetoric that only they could articulate: such structured on juridical terms.

In fact, Judge Warioba (Provisional Measures, Order of 27 August 1999, Declaration of Judge Warioba, p. 303), argued in his opinion that since the Tribunal itself had acknowledged that it could not definitively and conclusively evaluate the scientific evidence presented by the parties, it would not be reasonable for it to establish, even provisionally, fixed SBT fishing quotas. Given this situation, according to Warioba, a decision on the matter could only be made by the Arbitral Tribunal itself, as requested by the states, since the Arbitral Tribunal would have access to a sufficient body of evidence so as to issue a well-founded ruling in that sense. Warioba's rhetoric is telling and reflects the persistent and customary reluctance of ITLOS to consider recourse to the opinions of the technical communities at its disposal (Warioba himself did not refer, even elliptically, to the possibility of applying the provisions of Article 289 of the UNCLOS). This overly cautious reasoning on the part of the judges also helps explain why, in cases such as the one under discussion, the role played by the Tribunal may be considered as sub-optimal from an epistemic perspective.

Furthermore, although the legal validity of the Provisional Measures Order issued by ITLOS stemmed from the unilateral nature of the decision taken by Japan to initiate its EFP, it does not follow from such circumstance that consultation and deliberation procedures such as those referred to in Article 289 of UNCLOS are not intrinsically conducive to the purpose of encouraging the parties themselves to reconsider the reasonableness and implications of the decisions which ultimately led to the dispute. In fact, any chance of litigants achieving a fuller understanding not only of the true cause and nature of their dispute, but also of the positions held by the opposing party, depends on both sides having access to precisely the same evidence and expert judgments. As discussed in this paper, the fact that each side exclusively relied on the insulated scientific community represented by their own experts, far from consolidating those epistemic standards, was conducive (as happened in the SBT case) to distort them. In contrast, a procedure which facilitates a dialogically horizontal praxis, where specialists appointed by the respective parties in an equitable manner could not only debate and eventually falsify their respective theses among themselves but also respond to the questions posed by the Tribunal judges is more likely to result in a mutually acceptable solution to any disagreement

than a procedure which results in the judges limiting themselves to generically invoking the states' duty of cooperation.

Of course, it can also be argued that the abovementioned epistemic loss was not necessarily as detrimental as it has been suggested in this paper. As a number of researchers, such as Koskenniemi (1991), have argued, it may be the case that international tribunals are simply not the ideal forum for resolving conflicts which have serious scientific implications for ecological issues.

According to Koskenniemi (1991), rather than a judicial remedy, settling such disputes requires a political solution. The rationale of such thesis is grounded on the fact that each of the confronting States would practice a particular reading of the controverse according to the dissimilar standards of their own environmental regimes (pp. 74-75). As the Finnish jurist contends, "what the law protects is not the nature but what is reflected of nature in the eye of the sovereign beholder" (p. 75). Under such a premise, appealing to diplomatic and political channels would be a meta-legal resource that could amalgamate and finally dilute, by means of a negotiation conducted by the parties themselves, the normative inconsistencies that had previously conduced the parties to the conflict. The shortcomings inherent to judicial intervention when it comes to compelling states to reconsider their own environmental standards may help explain the particular procedural decisions taken by ITLOS in the SBT case, as well as those taken by the International Court of Justice in the *Nuclear Tests* (1974) case (Stephens, 2009, p. 98).

However, conceiving recourse to international *fora* as a means solely limited to calling on these States to cooperate may possibly suppose, rather than a procedural solution, a perpetuation of the pre-existing cognitive differences between them. In fact, although ordering states to cooperate may be more valuable epistemically than issuing a ruling which would necessarily perpetuate the insularism and solipsism of the communities of experts advising the respective states, such an order not only cannot guarantee that the parties will effectively reach an agreement[16], but, even worse, it would make it more difficult for them to access to the same information as a premise for reaching any legal solution. Ordering scientific communities to engage in a given debate

16 The position of *ad hoc* judge Shearer in the SBT case is particularly interesting in this regard; in his opinion he essentially condemns what Koskenniemi (1991) saw as a virtue, *i.e.*, calls by international courts for parties to limit themselves to fulfilling the duty to cooperate when a dispute related to environmental issues develops. When referring to the Order for Provisional Measures issued by ITLOS, Judge Shearer argued that these measures should have been laid out in stronger terms than those finally adopted. According to Shearer, the Tribunal behaved "less as a court of law and more as an agency of diplomacy." He believed that in continuing unilaterally with its EFP Japan was in breach of its obligations under the UNCLOS, the CCSBT and customary international law, and that it was *ipso facto* incumbent upon the Tribunal to order Japan to cancel its program (Provisional Measures, Order of 27 August 1999, Declaration of Judge Shearer, p. 324).

does not guarantee that they will move closer to consensus, and less still that they will do so by following a democratic and open-minded process.

Actually Koskenniemi itself (1991) ends by acknowledging that when a particular innovative behavior by a state challenges the *status quo*, if the dispute cannot be settled through negotiation, "Nevertheless, in the absence of more detailed standards of environmental conduct of a binding character, there probably is no alternative to falling back on the old reasonableness standard." (p. 74). Although Koskenniemi avoids any (even tangential) mention of similar cases, the relevance of his arguments to the ITLOS ruling in the SBT case is plainly apparent. It is worth remembering that in this case the Tribunal ruled that the states should refrain from continuing with any experimental fishing program, unless—and this is the most relevant consideration—they were able to reach a consensus on the issue, and provided that the SBT fishing quotas agreed in any new program counted against the national annual allocations already provided for in the CCSBT. In other words, the Tribunal ordered the litigants to follow standards of conduct that would be developed through debate and agreed upon by both the parties and their respective scientific communities.

It seems clear, then, that regardless of the political will of the actors involved, recourse to the most epistemically effective means of conflict resolution available (in the best case scenario, to an international judicial institution whose remit is to gather all of the relevant existing scientific information in an open and straight manner, irrespective of whether this happens by virtue of an Order for Provisional Measures or through a decision based on the merits of the arguments presented) is intrinsically more conducive to the parties finding a way past their conflict than any debate shackled by their respective solipsism.

In summary, issuing an Order for Provisional Measures without considering and unveiling the evidence and expert judgments to all the actors, alongside a direction that the parties fulfill their duty to cooperate, cannot guarantee that the latter does not end up being victims not only of their normative or political, but fundamentally cognitive conditioning, that led them to such controversy. In this sense, this paper argued that the most valuable contribution ITLOS is empowered to make through an Order for Provisional Measures does not lie in the legal consequences of such injunction (in terms of directing the parties to cooperate in good faith), but in the capacity to compel the states to reexamine the standpoint which guides their conduct. The process of consulting with scientific experts as provided for in Article 289 of UNCLOS before issuing an Order for Provisional Measures necessarily implies that a greater epistemic body of knowledge would be made available not only

to the judges but also to the parties themselves, thereby enabling them to engage in an eminently reflective exercise that

> [is] not performed to advance a player to a better state in the external task environment, but rather performed to advance a player to a better state in his or her internal, cognitive environment. Epistemic actions are actions designed to change the input to an agent's information-processing system [in this case, the information previously made available by the state's experts] by modifying the external environment (Kirsh & Maglio, 1994, pp. 541-542).

IX. CONCLUSION

Based on the reasoning laid out in this paper, it may be concluded that the procedural decisions of the ITLOS judges in the *Southern Bluefin Tuna Cases*—primarily the order that the parties fulfil their duty to cooperate in an attempt to move beyond the differences and disagreements which were the initial reason for the dispute—did make an epistemic contribution to the resolution of the conflict. However, it is also true that this contribution was not as decisive as it could have been, as the judges chose not to call on experts in the matter to aid in their deliberations despite such a consultation process being provided for in UNCLOS. Had the judges decided to invoke the provision and facilitate a comprehensive debate, this may have helped the parties to the litigation realize that their epistemically insular and solipsistic practices were the root cause of the conflict and that they contributed to aggravate it.

Regardless of whether the Court had compelled the parties to question their respective theses regarding the implications of continuation of the EFP on the genetic variability of SBT by invoking their duty to cooperate, or by calling on experts to participate in its deliberations on the matter, a close causal relationship existed between considering the alterity viewpoint[17] and the possibility of developing a clearer understanding of the true nature of the dispute, thus enabling an effective means of resolution to be identified. Whether such alterity was represented by the opposing State or by a particular outside community (in this case, the scientific corporation, which, as discussed, ITLOS has traditionally declined to call upon), is irrelevant. What is important is that considering the opinions of third parties necessarily gives rise to

> communicative interactions through which participants coordinate their plans of action, by arguing for or against different claims of

17 In the case of the respective states, this would imply giving consideration to the opinions of the opposing party conflict; in the case of the judges, it would involve examining the testimony of the scientists referred to in Article 289 of UNCLOS.

> validity in order to arrive at some kind of consensus. The 'bridge' which facilitates consensus building and which should guide the debate is the principle of universalization, which does not concern merely grammar or consistency, but also impartiality (Nino, 1988, p. 95).

In the epistemically constructivist reading of the ITLOS work that was practiced in this paper, the act of being able to attend, by each of the parties in conflict, to the otherness reasons and contentions would promote such a requirement of impartiality. However, as mentioned above, this requisite did not only apply to the states and their respective scientific communities.

Indeed, Article 289 of UNCLOS (although it does not express this directly) may be understood as a tool which aims to encourage the judges to fulfil this requirement, at least in cases like the present. As mentioned above, there seems to have been a close link between the Tribunal neglecting to consult with experts and ITLOS inability to provide a solution that was legally and epistemically sound enough to issue an Order for Provisional Measures that, as such, could account for the true state of affairs of the SBT in relation to the continuity of the EFP. As mentioned above, before issuing such an order, the Tribunal should have gathered the necessary information to justify it; otherwise, it ran the risk of committing certain errors in its adjudication, as pointed out by Judge Warioba (notwithstanding his own opinion that the court should delegate the decision on an Order for Provisional Measures to the Arbitral Tribunal).

It is in this instance that it is appropriate to make an eminently practical consideration, alien even to the ways in which we articulate our debates regarding what can be understood by an "epistemic loss". It is of course unreasonable for cognizant participants in any debate to choose to deprive themselves of the possibility of considering the opinions of experts or scientists on a given field, especially in cases in which said participants acknowledge—for instance, in decidedly categorical terms as in the case of ITLOS—their severe epistemic limitations with regard to the subject under discussion. But this would not explain, in any case, the eminently intersubjective and universal evaluation of our possibilities of overcoming our disagreements.

In fact, transcendently to formulas such as those that postulate, perhaps somewhat dogmatically, that "the search for truth has become a goal of science, of knowledge, of wisdom, and also of judges and the justice system" (Muñoz Basaez, 2012, p. 1), the very normative value of such a "truth" should mean a tribunal would not be able to opt for a less (such as the one that, without consulting the experts in the field, the ITLOS dictated through its Measures Provisional) or more epistemically

efficient (such as the one that, as suggested, could be instituted from the recourse to the prescriptions of Article 289 of UNCLOS) decision.

If we accept the assertion, as described by Velasco Castro and Alonso de González (2009), that the practical resolution of disputes "depends entirely on dialogue, since our experience of the world is dialogical, our experience of knowing is dialogical and our experience of interaction is also, necessarily, dialogical" (p. 104), a satisfactory resolution of the case could only have been arrived at by virtue of the type of debate to which Article 289 of UNCLOS refers. Indeed, the "perfect agreement between mental structures [the *doxa* of the community of the international judges, reluctant as they were to seek the help of scientists] and objective structures [the expression of this *doxa* in the judges' rulings]" (Bourdieu, 1997, p. 50) was precisely what—by way of the judges' decision to issue an Order for Provisional Measures—prevented the states from impartially examining the validity and legality of their own claims. Here, at least in terms of providing an effective solution to the parties, the matter does not seem debatable.

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Received: 09/08/2021
Approved: 30/03/2022