A coherence framework for fact-finding before the International Court of Justice

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Introduction

It is the task of the International Court of Justice ('the ICJ', or 'the Court') to establish the operative facts from which to draw normative conclusions in all contentious cases that come before it.[1] This task, however, is complicated where those facts necessitate engagement with specialised epistemic fields other than law such as science. Significant academic attention has focussed on the particular challenges that science poses to international adjudication in recent years.[2] This paper presents a fresh take on the debate but also has a broader focus. While the difficulties posed by cases that require the ICJ to engage with science are clear, science is just one example of a different epistemic field which presents challenges for the Court. Others are equally challenging. For instance, the Court's task of establishing the facts is no less demanding

[1] In other words to facilitate the operation of the legal syllogism, something which has been described as so central as to be 'the framework of all legal reasoning that involves applying law', N. MacCormick, *Rhetoric and the Rule of Law: A Theory of Legal Reasoning* (2005) 38, at 43. To elaborate, legal reasoning, as a special case of practical reasoning, is typically set out in the form of a general proposition about the law, a specific finding of law or fact in support of a final decision; Walker, 'The Theory of Relevancy' (1951) 63 *Juridical Review* at 3. Put differently, and perhaps in a more familiar formulation, whenever the operative facts (OF) obtain, then a normative conclusion (NC) follows. Assuming that I am right about the role of the syllogism, and following MacCormick, this means that there are only four possibilities for how the legal syllogism can fail:

1. OF not established ('problem of proof'),
2. Whatever alleged cannot be characterised as 'OF' ('problem of classification'),
3. There is a more acceptable interpretation of 'OF' or 'NC' than the one established ('problem of interpretation'),

in cases that involve contested or complex economic[3] or historical facts[4] for example.[5] Such fields by definition require 'specialized training in order for a person to attain sufficient epistemic competence to understand its aims and methods, and to be able critically to deploy those methods, in service of these aims, to produce the judgments that issue from its distinctive point of view.'[6]

It is for this reason that this article considers 'factually complex' cases more broadly, these being those cases which necessarily involve engagement with specialised epistemic fields other than law.[7] In such cases the Court's judges must make sense of methods and subject-matter in which they do not necessarily have the requisite training or expertise.[8] The Court's experience in the *Pulp Mills* and *Whaling in the Antarctic* cases are good examples in this regard.[9] This

4. Success of the claim depends on norm 'if OF then NC' but no such norm exists ('problem of relevancy').

It is the first of these steps, the problem of proof, that this article focuses on.

[2] K. Sulyok, *Science and Judicial Reasoning* (2020) at 21-22; Malintoppi, 'Fact Finding and Evidence Before the International Court of Justice (Notably in Scientific-Related Disputes' (2018) *Journal of International Dispute Settlement (JIDS)* at 421; Richmond, 'Towards a Normative Assessment of Probative Value in International Criminal Adjudication'*, iCourts Working Paper Series*, no. 263, (2021); Mbengue, 'Scientific Fact-finding by International Courts and Tribunals' (2012) 3 *JIDS* at 509; C. Foster, *Science and the Precautionary Principle in International Courts and Tribunals: Expert Evidence, Burden of Proof and Finality* (2011) at 10; D'Aspremont and Mbengue, 'Strategies of Engagement with Scientific Fact-Finding in International Adjudication', (2014) 5 *JIDS* at 247; Alvarez, 'Are International Judges Afraid of Science?: A Comment on Mbengue' (2012) 34 *Loyola of Los Angeles International and Comparative Law Review* 12, at 86;

article takes the challenges the Court has faced in such cases as its starting point and attempts to move the debate forward by proposing a fresh framework for such cases.

Drawing on legal theory and epistemology I propose a coherence framework for the establishment of the facts in cases that come before the Court. In short, when faced with the task of establishing the operative facts in cases that come before the Court, I argue that employing such a coherence framework is the best way for the Court to show that its determinations are justified. In essence, this means that the Court need not show that its factual

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see also Orford, 'Scientific Reason and the Discipline of International Law' in J. D'Aspremont et al (eds.) *International Law as a Profession* (CUP 2017).

[3] See Thomas, 'Of Facts and Phantoms: Economics, Epistemic Legitimacy and WTO Dispute Settlement', (2011) *Journal of International Economic Law* (*JIEL)*, 14(2), at 295-328.

[4] See the criticisms of the use of historical evidence in relation to the South China Sea dispute in Hayton 'When Good Lawyers Write Bad History: Unreliable Evidence and the South China Sea Territorial Dispute,' (2017) *Ocean Development & International Law*, 48:1,at 17-34.

[5] A related, but no less challenging, question in this regard is; what exactly is 'scientific' evidence? In the context of the U.S. Supreme Court, major difficulties have arisen with regard to defining purely 'scientific' knowledge in implementing the Daubert admissibility test which is intended to exclude so-called 'junk science' from proceedings (*Daubert v. Merrel Dow Pharmaceuticals*, Inc., 509 U.S. 579 (1993)). In practice, despite the fact the 'Daubert test' was designed to apply narrowly to scientific evidence, the Supreme Court was subsequently forced to expand the test to include 'technical' and 'other specialized' forms of knowledge, in the *Kumho Tyre* case. In this case Justice Breyer conceded that: [I]t would prove difficult, if not impossible, for judges to administer evidentiary rules under which a gatekeeping obligation depended upon a distinction between 'scientific' knowledge and 'technical' or 'other specialized' knowledge. There is no clear line that divides the one from the others.' *Kumho Tire Co. v. Carmichael*, 119 S. Ct. at 1174.

[6] Brewer, 'Scientific Expert Testimony and Intellectual Due Process' (1998) 107 *Yale Law Journal,* 1589. For instance, it is unclear why extremely complex International Centre for Settlement of Investment Dispute

determinations have been established beyond all doubt, nor even that they satisfy a certain standard of probability. Rather, what the Court must show is that a factual determination it has made has been arrived at through a rational process and that it is coherent (the contested notions of rationality and coherence are discussed further at section 4.D). In this sense, what the Court strives to achieve is the best (most coherent) factual determination.

One of the main contributions of this coherence framework is that, unlike proposals which only address how the Court deals with specific types of facts such as scientific facts, it can be used to explain a whole range of different factually complex cases.[10] The coherence framework also has both descriptive and normative value as it both maps neatly on to the current (best) practice of the Court and provides a normative justification for why it should operate this way in the future.

In defending this coherence framework I address a number of potential objections including (a) its operation in the context of international law (and more specifically in the context of the ICJ), (b) its utility when compared with alternative approaches, (c) its ability to normatively

(ICSID) awards dealing with injury to investors, or World Trade Organization (WTO) cases dealing with countervailing duties or zeroing should be any less complicated for the average international judge or arbitrator to deal with than scientific issues; Alvarez *supra* note 2.

[7] ibid., 86.

[8] Sulyok *supra* note 2 at 21-22.

[9] *Pulp Mills on the River Uruguay (Argentina* v. *Uruguay), Judgment, I.C.J. Reports 2010*, p. 14; *Whaling in the Antarctic (Australia* v. *Japan: New Zealand intervening), Judgment, I.C.J. Reports 2014*, p. 226.

[10] Indeed, in accordance with the coherence principles set out below at 3.1.1., we should prefer the theory which explains a greater number of things over that which explains fewer.

ground the Court's practice, and (d) critical challenges to coherence as a notion. I show that each of these objections can be met and that a coherence framework for the establishment of the facts before the ICJ is both normatively and practically appealing. While the present article focuses primarily on the ICJ and the challenges it has faced in this regard, these are challenges that arise before all courts, national and international alike. In this regard, while the examples explored in this article are drawn from the practice of the ICJ, I do not see any reason why my argument about how a court should address these issues should not have relevance beyond this particular court and this particular context. For instance, the framework could be particularly useful in the context of investor-state dispute settlement or human rights litigation whose fact-finding processes have not received anywhere near the kind of attention that evidence scholars have paid to those of domestic courts.

Overall, this article makes three distinct contributions to legal scholarship. First, it takes seriously the theoretical aspects of fact-finding that have received less attention compared to other procedural issues in international adjudication. Second, whereas scholarship on evidence has been largely dedicated to national courts to date, this article presents a theoretical framework for fact-finding specifically in international law. And third, it is also one of the first attempts to apply a coherentist theory of legal justification to international law.

1. Playing fields: epistemic competence and differing methods

A prime example of the ICJ having to engage with epistemic fields other than law is the *Pulp Mills* case.[11] In this case the Court was faced with complex and contested claim about science relating to Argentina's claims that, inter alia, the construction of two pulp mills by Uruguay violated a 1975 treaty between the two states and was harmful to the River Uruguay and the surrounding environment. Judges Simma and Al-Khasawneh in their Joint Dissenting Opinion spelled out the challenge facing the Court:

> The Court on its own is not in a position adequately to assess and weigh complex scientific evidence of the type presented by the Parties… a court of justice cannot assess, without the assistance of experts, […] the implications of various substances for the health of various organisms which exist in the River Uruguay. This is surely uncontroversial: the task of a court of justice is not to give a scientific assessment of what has happened, but to evaluate the claims of parties before it and whether such claims are *sufficiently well-founded* so as to constitute evidence of a breach of a legal obligation.[12]

[11] For example, in the *Pulp Mills* case, *supra* note 9, in order to determine whether there had been a breach of international legal obligations, the Court had to engage with a number of complex scientific issues.

[12] Joint dissenting op. Judges Simma/Al-Khasawneh in *Pulp Mills* (*supra* note 9), at para 4. For another, doctrinal, attempt to bring clarity to standards of proof applied by the Court see G.M. Farnelli, 'Consistency in the ICJ's Approach to the Standard of Proof: An Appraisal of the Court's Flexibility', (2022) 21 The Law and Practice of International Courts and Tribunals, 98.

This passage frames the issue succinctly. Science and law are distinct epistemic fields,[13] each requiring significant training in order to acquire epistemic competence.[14] While these two fields share a number of features, such as the use of logic as a system for justifying claims,[15] they have markedly different methods and standards for evaluating evidence.[16] There are at least three significant divergences, namely the goals that each seeks to achieve,[17] the degree of certainty required to consider a claim sufficiently well-established,[18] and the defeasibility of factual claims in these particular contexts. On this latter issue I mean to say that while scientific knowledge is defeasible and always open to revision, once determined as part of the adjudicative process, findings of fact in law become formal legal facts which are not generally open to revision.[19]

[13] Or 'distinct cultures', perhaps, Jasanoff, 'In a constitutional moment: science and social order at the millennium' in B. Joerges and H. Nowotny (eds.), *Social Studies of Science and Technology: Looking Back, Ahead* (2003) at 164.

[14] Brewer *supra* note 6 at 1589; Haack, 'Truth and Justice, Inquiry, Advocacy, Science and Law' (2004) 17 *Ratio Juris* 1, at 15; Walton and Zhang, 'An Argumentation Interface for Expert Opinion Evidence' (2016) 29 *Ratio Juris* 1, at 59.

[15] Hepburn and Andersen, 'Scientific Method', *Stanford Encyclopedia of Philosophy*, available at: https://plato.stanford.edu/entries/scientific-method/; Klabbers, 'Changing Futures? Science and International Law' (2009) *Finnish Yearbook of International Law* at 211.

[16] For a recent account of the relationship between law and science see Sulyok *supra* note 2, at chapter 2.

[17] Hepburn and Andersen, *supra* note 15. Broadly speaking, the goal of science is the attainment of knowledge and its methods reflect this, being those which facilitate the generation of scientific knowledge. While the attainment of knowledge is also one of the goals of law, it is just one of several, and it is constrained by the highly institutionalised nature of law. It is more accurate to say that the adjudicative process seeks to attain knowledge in order to establish the operative facts to facilitate the legal syllogism.

These divergences raise the question which is at the heart of this paper: given that a legal decision-maker must show that their factual determinations are justified by reasons[20] - how can they properly do so when such determinations involve epistemic fields other than law.

Judges Simma and Al-Khasawneh's position that it is the task of the judge to evaluate the claims of the parties and to make an assessment as to whether these claims are 'sufficiently well-founded so as to constitute evidence of a breach of a legal obligation' may hold some instinctive appeal. However, when one considers this statement a little more deeply it becomes more challenging. What exactly does it mean that a claim is sufficiently well-founded so as to constitute evidence of a breach of a legal obligation? And when these claims relate to factually complex claims, how can the average ICJ judge assess when such a thing is sufficiently well-founded?

In the following sections I defend two main claims: firstly that in such situations ICJ judges need not become scientists, mathematicians or economists on the bench. Rather, what the ICJ as a legal decision-making body must do is show that its factual determinations can be rationally justified. And second, the coherence framework set out in the following section is the best path to such rational justification. Each of these claims will be considered in turn.

[18] Hepburn and Andersen, *supra* note 15; while scientific knowledge is defeasible, standards of justification across science and the law are far from uniform and highly context-dependent.

[19] ibid.

[20] See section 2. This creates the possibility of legal decision-makers facing 'quandaries' in the epistemological sense; see Walton and Zhang *supra* note 14.

2. The ICJ's duty to show that its factual determinations are justified by reasons

My first claim, that the ICJ must show that its factual determinations are justified by reasons, follows from the nature of legal reasoning. I take legal reasoning to be a 'special case' (Sonderfall) of practical reasoning.[21] This is due to the fact that (1) legal reasoning is concerned with practical questions i.e. what should or should not be done, (2) these questions involve a claim to correctness,[22] (3) and it is a 'special case' because it is subject to the constraints of the legal context.[23] As such, my enquiry presupposes certain criteria of rationality carried over from practical reason. I take the establishment of the facts to be an integral part of the adjudicative process and of legal reasoning, and this is the basis for my normative claim that the Court must show that its factual determinations are justified by reasons. In addition, the law itself requires that the factual determinations are justified by reasons.[24] The duty to give reasons is one which applies to most legal decisions with very few exceptions, such as jury decisions in certain domestic proceedings.

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[21] R. Alexy, *A Theory of Legal Argumentation* (2009) at 214.

[22] Alexy, ibid: 'The claim to correctness involved in legal discourses is clearly distinguishable from that involved in general practical discourses. There is no claim that the normative statement asserted, proposed, or pronounced in judgments is absolutely rational, but only a claim that it can be rationally justified *within the framework of the prevailing legal* order. Precisely what this means has to be elucidated in the framework of the theory of legal discourse.' (emphasis added).

[23] Alexy, *A Theory of Legal Argumentation, supra* note 21*;* MacCormick, *Legal Reasoning and Legal Theory* (1978).

[24] See, purely for the sake of example, Art 53(2) Statute of the International Court of Justice, '2. The Court must, before doing so, satisfy itself, not only that it has jurisdiction in accordance with Articles 36 and 37, but also that the claim is well founded in fact and law…' or the consistent statements of the Court and its judges such as those mentioned *supra* note 12.

3. A coherence framework as a route to rational justification

As mentioned above, I argue that employing a coherence framework is the best way for the Court to show that its determinations are justified. In essence, this means that what the Court must show is that a factual determination it has made has been arrived at through a rational process and that it is coherent. In this sense, what the Court strives to achieve is the best (most coherent) factual determination. To be clear, what I am advancing here is a coherentist theory of *justification*, not a coherentist theory of truth. As such, it is entirely possible for one to advance a coherentist theory of justification while still advocating the need or the desirability to make factual determinations which are true in the sense that they correspond with reality. And indeed the notions of epistemic responsibility and the contextualised nature of this framework ensure that it has a role to pay, as will be shown at sections 3.2. and 3.3. It is time to set out the framework, which has been adapted for the international legal context, in some detail. In accordance with this framework, a factual determination made by the Court is justified if it is (1) coherent, (2) the result of an epistemically responsible process, (3) in the context of adjudication before the ICJ.

3.A. Coherence

The first element of the framework for justification of factual determinations made by the Court is that the finding of fact must be coherent. Before proceeding any further, it is necessary to say a word about coherence as a central concept. Coherence theories can be found in a range of epistemic fields, including morality,[25] epistemic justification,[26] truth[27] and even the interpretation of art.[28] What unites coherence theories is the aim of turning complex issues into simpler ones favouring the most coherent alternative (as opposed to, say, the most probable).[29] As such, the idea is not to attain absolute certainty or objective truth, but rather to arrive at the 'best explanation' through a rational process.[30] A coherence approach to reasoning involves

[25] See, for example, Rawls's notion of 'reflective equilibrium' in J. Rawls, *A Theory of Justice* (Harvard University Press 1999); *Justice as Fairness: A Restatement* (Harvard University Press 2001); see also DePaul 'Reflective Equilibrium and Foundationalism' (1986) 23 *American Philosophical Quarterly*; Goldman, 'Legal Reasoning as a Model for Moral Reasoning' (1989) 8 *Law and Philosophy*; Goldman, *Practical Rules: When we Need them and when we Don't* (2002); P. Thagard, *Coherence in Thought and Action* (2000); Engel, 'Coherentism and the Epistemic Justification of Moral Beliefs: A Case Study in How to Do Practical Ethics without Appeal to a Moral Theory' (2012) 50 *The Southern Journal of Philosophy*.

[26] K. Lehrer, *Theory of Knowledge* (2nd ed., 2000).

[27] JYoung, 'The Coherence Theory of Truth', Stanford Encyclopedia of Philosophy, <https://plato.stanford.edu/entries/truth-coherence/> accessed 18 July 2022.

[28] See, for example, K. Aschenbrenner, *The Concept of Coherence in Art* (1985); N. Goodman, *Languages of Art* (1985).

[29] Amaya, 'Coherence, Evidence, and Legal Proof', (2013) *Legal Theory* 19(1) 24.

restructuring the 'diverse and conflicting considerations that provide equivocal support for different decision alternatives…until they fit into a "coherent" representation'.[31]

In the legal context coherence has been advocated as a response to dissatisfaction with the traditional positivist approach to law which locates the justification of legal claims in the sources of law itself.[32] Much has been written on, for instance, moral facts in the traditional positivistic concept of law, including by proponents of coherence theories of law as a means of providing 'a non-sceptical account of legal reasoning and rationality broader than the one defended by classical version of legal positivism.[33] Prominent coherence theories of law have been advocated by scholars such as Dworkin and MacCormick, with the latter for example relying on the notion of (normative) coherence to show how the ethical, moral and value

[30] Amaya, *The Tapestry of Reason* (2013) 110.

[31] Amaya, *The Tapestry of Reason, ibid. at* 110. Thagard defines coherence as relating to the satisfaction of what are known as positive and negative 'constraints'. This essentially involves setting out the factual claims (or 'elements') that are relevant in the present case and then assessing the 'coherence relations' between them by considering a range of coherence principles (which contain the constraints and elements) that are specific to the type of coherence in question. The factual claims that can be considered as most coherent as those which satisfy the positive and negative constraints as contained within the coherence principles, see Thagard and Verbeurgt, *Coherence as Constraint Satisfaction*, (1998) 22 *Cognitive Science*, at 12; Thagard, *Coherence in Thought and Action* (2000) at chapter 2; Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 6.

[32] Amaya, *The Tapestry of Reason, supra* note 35, at 12; for other coherence approaches to the law see, inter alia, R. Dworkin, *Law's Empire* (1986); N. MacCormick, *Legal Reasoning and Legal Theory, supra* note 23 (1994); Sartorious, 'The Justification of the Judicial Decision' (1968) 78 *Ethics*; Hoffmaster, 'A Holistic Approach to Judicial Justification' (1980) 15 *Erkenntnis.* ; Hage, 'Law and Coherence' (2004) 17 *Ratio Juris*.

[33] Amaya, *The Tapestry of Reason, supra* note 35, at 11-12.

choices that arise in the course of the selection of premises in law, despite not being rational in the strict sense, can still be rationally justified.[34]

Those coherence theories of law that have been proposed have focussed almost exclusively on normative coherence, coherence in terms of legal norms, and have not considered coherence related to the establishment of facts in the legal context to any meaningful extent.[35] While certain scholars have proposed 'holistic' approaches to the evaluation of evidence and the matter of proof,[36] these cannot be said to amount to a 'full-blown coherence theory of the justification of evidentiary judgments in law.'[37] The first to attempt to draw together scholarship on coherence relating to legal norms, interpretation, epistemology and beyond is by Amalia Amaya.[38] Her work is the starting point for my own inquiry which seeks to consider

[34] MacCormick, *Legal Reasoning and Legal Theory supra* note 23. For a more recent application of coherence to legal reasoning in the field of international investment law see: C. Giannakopoulos, *Manifestations of Coherence and Investor-State Arbitration* (CUP 2022).

[35] See further MacCormick, *'Coherence in Legal Justification',* in W. Krawietz et al (eds), *Theorie Der Normen* (1984) at 37 ; A. Aarnio at al, *On Coherence Theory of Law* (1998); Alexy and Peczenik, '*The Concept of Coherence and Its Relevance for Discursive Rationality'*, (1990) 3 *Ratio Juris,* at 130.

[36] See for example N. MacCormick, *Rhetoric and the Rule of Law,* (2005); N. MacCormick, 'The Coherence of a case and the Reasonableness of Doubt', 2 *Liverpool Law Review* (1980), at 45; Pardo, 'Juridical Proof, Evidence, and Pragmatic Meaning: Towards Evidentiary Holism', 95 *Northwestern University Law Review* (2000); Allen, 'The Nature of Juridical Proof' (1991) 13 *Cardozo Law Review*, at 373.

[37] Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 1; Amaya, *The Tapestry of Reason, supra* note 35.

[38] Amalia Amaya, 'Coherence, Evidence, and Legal Proof', *supra* note 35 at 1; Amalia Amaya, *The Tapestry of Reason, supra* note 35; Amaya's argument in a nutshell is that 'a belief about the facts under dispute is justified if and only if an epistemically responsible fact finder might hold that belief by virtue of its coherence in like

whether a coherence framework can assist the International Court of Justice specifically in addressing some of the difficulties it has faced when dealing with factually-complex cases.

All of this is relatively esoteric without an example, so let us consider what such a coherence approach to the establishment of the facts would look like before the ICJ. In practical terms, this would require the ICJ judge, as legal fact-finder, to first of all, (1) specify the parties competing factual claims, before (2) evaluating the coherence of the competing claims against relevant coherence principles before (3) selecting as justified the most coherent of the claims.[39]

The first of these steps is relatively straightforward in the context of the ICJ. While it may be otherwise before domestic courts with different legal and procedural traditions, the Court's fact-finding process is one which is primarily driven by the parties. Settled practice shows that the Court has traditionally been happy for the parties as sovereign states to have the initiative in terms of putting whatever facts they believe to be relevant before the Court.[40] In accordance with this practice, the Court then typically assesses the probative weight of the evidence put

circumstances'. For an additional, although less well-developed coherence accounts, see: W.A. Wagenaar, P.J. Van Koppen and H.F.M. Crombag, *Anchored Narratives* (1993); P. Thagard, *Coherence in Thought and Action* (2000), F.J. Bex, *Arguments, Stories and Criminal Evidence: A Formal Hybrid Theory* (2011).

[39] This is a simplified description of coherence processes adapted to the (international) legal context. For a similar adaptation see Amaya, 'Coherence, Evidence, and Legal Proof', *supra* note 35, at 16.

[40] Devaney, 'Evidence: International Court of Justice', *Max Planck Enyclopedia of International Procedural Law*, available at: https://opil-ouplaw-com.ezproxy.lib.gla.ac.uk/view/10.1093/law-mpeipro/e3430.013.3430/law-mpeipro-e3430?print=pdf, MN 9; In this sense the Court operates more like a civil than a common law court, the latter placing significant emphasis on exclusionary rules of evidence; On exclusionary rules see: Devaney, ibid, MN 9; Twining, *Rethinking Evidence,* (2006) at 35.

before it by the parties,[41] evaluating the strength of their claims. Given the relative positions of the parties in terms of resources and proximity to available evidence, this is a sensible approach for the Court in the majority of cases.[42]

Of course, in cases of non or partial-appearance where parties refuse to participate in or withdraw from proceedings, the Court struggles to establish the operative facts from which to draw normative conclusions and may be forced to engage in its own fact-finding in order to satisfy itself in accordance with its Statute that its factual determinations are 'well-founded' in fact. Nevertheless, the coherence framework proposed can account for such cases in which the facts put before the Court by the parties are relatively scarce through the notion of epistemic responsibility. What is responsible for the Court varies from case to case, and in cases of non-appearance, for example, it may be that in order for the Court to have fulfilled its epistemic duties it is required to undertake its own fact-finding. These are all issues to which we will return below at section 3.2.

That said, in those cases in which I am interested for the purposes of the present article, namely cases involving the complex facts in which the Court must necessarily engage in epistemic fields other than law, the Court will have the various factual claims of the parties before it. It is then the task of the Court to establish what it believes to be the most convincing account of

[41] I take evidence to be 'the material submitted by a party to a dispute, on its own initiative or at the Court's request, to prove a fact alleged or a legal title claimed' see ICJ Registry, *A Dialogue at the Court* (2007) 25. This is often used in this article interchangeably with 'factual claims of the parties.' This is not to be confused with 'facts' which I take to be the factual determinations of the Court that are one of the results of the adjudicative process.

[42] J. Devaney, *Fact-Finding Before the International Court of Justice* (2016) at 27.

those facts. This leads us to the next stage of the coherence framework, namely the Court's evaluation of the competing factual claims against relevant coherence principles.

Given the Court's traditional preference to allow the parties as sovereign states to place before it whatever evidence they see fit, the assessment of this evidence has always been a highly significant part of the establishment of the facts before the Court.[43] In its jurisprudence over the years the Court has indicated on a number of occasions the types of evidence that it considers to be of '*prima facie* superior credibility'[44] but this approach has been criticised.[45]

Returning to the coherence framework, central to the role of the ICJ judge in assessing the factual claims made by parties in cases before it is the concept of inference to the best explanation (IBE);[46] 'the pattern of reasoning whereby explanatory hypotheses are generated

[43] See e.g. *Armed Activities*, in which the Court states that its task in assessing the facts put before it by the parties was to ''identify the documents relied on and make its own clear assessment of their weight, reliability and value', paras 58–59; see also *Land and Maritime Boundary between Cameroon and Nigeria*, Judgment (Dissenting Opinion of Judge Koroma), 2002, para 8; *Land and Maritime Boundary between Cameroon and Nigeria Case (Cameroon v Nigeria)*) in which the Court stated that its role was to categorize evidence under different headings then allocate 'probative value to them accordingly'; see further Halink, 'All Things Considered: How the International Court of Justice Delegated its Fact-Assessment to the United Nations in the Armed Activities Case' 40 New York University Journal of International Law & Politics (NYUJIntlL&Pol) (2007) at 21.

[44] See e.g. *Nicaragua*, paras 59–60, in which the Court expressed a preference for contemporaneous evidence of those with direct knowledge of the relevant factual scenario, or *Armed Activities,* in which the Court stated that it would give less weight to evidence from a source specifically prepared for the case or any evidence 'emanating from a single source' (*Armed Activities*, para 61); for further indications see *Bosnian Genocide*, para 223 and *Application of the International Convention on the Elimination of all Forms of Racial*

and evaluated.'[47] This is the move from the factual claims made by the parties to the selection by the Court of the hypothesis which explains the facts better than any other explanation.[48] It is this move, the selection of the best (most coherent) explanation, which provides the normative justification for the Court's factual determination.[49]

In considering which of the factual claims best explains the contested facts of the case it is for the Court in accordance with the coherence framework to have resort to those coherence principles that are relevant in relation to explanatory coherence (the pertinent form for the purposes of reasoning about legal facts).[50] Prominent epistemologist Thagard has identified seven coherence principles that are central to the evaluation of the explanatory coherence of claims.[51] These are symmetry,[52] explanation,[53] analogy,[54] data priority,[55] contradiction,[56]

Discrimination, 2011, Preliminary Objections (Separate Opinion of Judge Simma), para 20) A. Riddell and B. Plant, *Evidence before the International Court of Justice* (2009) at 192.

[45] See, e.g. Riddell and Plant, ibid.; Malintoppi *supra* note 2; Devaney, 'Fact-Finding…' *supra* note 47; Keene, 'Outcome Paper for the Seminar on the International Court of Justice at 70: In Retrospect and in Prospect' *JIDS* (2016) at 238; Keith, 'The Development of Rules of Procedure by the World Court Through Its Rule Making, Practice and Decisions', 49(4) *Victoria of Wellington Law Review*, (2018) at 511-532, Bennouna, 'Experts before the International Court of Justice: What For?', 9 JIDS (2018), at 345-351; Tams and Devaney, 'Article 50' in Andreas Zimmermann et al (ed) *The Statute of the International Court of Justice: A Commentary,* (2019) at 1118; Tams, 'Article 51' in Andreas Zimmermann et al (ed) *The Statute of the International Court of Justice: A Commentary,* (2019) at 1303.

[46] See Amaya, 'Inference to the Best Legal Explanation' in H. Prakken et al (eds), *Legal Evidence and Proof* (2009); see also Allen and Pardo, 'Juridical Proof and Best Explanation' (2008) 27 *Law and Philosophy* at 223.

[47] Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 14.

competition,[57] and acceptance.[58] Rather than explain each here in list form, which would be dry and abstract, I will use a real example to illustrate their meaning, namely the aforementioned dispute between Argentina and Uruguay regarding alleged breaches of the 1975 Statute of the River Uruguay related to the construction of pulp mills used for turning wood chips into fiber board used to make, among other things, paper. [59]

In contentious cases that come before the Court which require it to deal with contested or complex facts such as those requiring engagement with epistemic fields other than law, such

[48] Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 15; see further P. Lipton, *Inference to the Best Explanation* (2nd ed., 2004).

[49] A point to which we will return in section 4.2.

[50] Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 6.

[51] Amaya, *The Tapestry of Reason, supra* note 35, at 215, drawing on P. Thagard, *Conceptual Revolutions* (1992) at chapter 4.

[52] The first principle is that of symmetry. This means that two factual claims cohere with each other equally. This sets explanatory coherence apart from probability in the sense that is a symmetrical relation, Amaya, *The Tapestry of Reason, supra* note 35, at 215.

[53] In accordance with this principle a factual claim coheres with what it explains. Likewise, two factual claims which explain a certain hypothesis cohere with each other. Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35; Amaya, *The Tapestry of Reason , supra* note 35; Thagard, *Conceptual Revolutions, supra* note 56.

[54] The third principle deals with analogy, and deals with situations involving two analogous hypotheses. In accordance with this principle, if both the hypothesis and the factual claims which explain those hypotheses are analogous then they cohere with each other, Amaya, *The Tapestry of Reason , supra* note 35 at 216.

[55] The fourth principle is that of data priority, in accordance with which factual claims which explain the results of observation are given particular priority when considering the coherence of a hypothesis, Amaya, *The Tapestry of Reason, supra* note 35 at 216.

coherence principles guide the legal fact-finder when evaluating the coherence of factual claims. Once the ICJ judge has considered, for instance, whether the factual claim in question is coherent as it explains what is claimed, and that there are no competing claims which offer a better explanation, the judge can select the most coherent of the claims, and crucially that finding of fact can be *justified as the result of a rational process*.

Take our example, and one particular issue contested by the parties. Argentina claimed that Uruguay had breached Article 36 of the 1975 Statute which obligated the parties to co-ordinate through the Administrative Commission of the River Uruguay (CARU) to avoid changing the ecological balance of the river.[60] Argentina argued that discharges from the Orion pulp mill into the river had changed its ecological balance, citing as an example in this regard the algal bloom (or eutrophication, caused by the enrichment of water with minerals and nutrients) of 4 February 2009. This algal bloom was, in Argentina's opinion, a clear example of modified ecological balance of the river as a result of the operation of the Orion mill and the discharge

[56] The fifth principle is relatively straightforward, being the opposite of the second principle, namely that if two factual claims contradict each other than they do not cohere.

[57] Sixth, where two factual claims explain a hypothesis, but which are not connected in an explanatory manner, compete with one another and as such are incoherent. The only factual claims which are connected in an explanatory manner are those which explain the other or if together they explain some other hypothesis, Amaya, *The Tapestry of Reason, supra* note 35 at 216.

[58] The final principle relates to acceptability and holds that the acceptability of a hypothesis in a system depends on its coherence with the hypotheses in that system. This principle is designed to cover situations in which there are numerous pieces of evidence, and which only a few taken together explain the hypothesis. The acceptability of such a hypothesis would be reduced as a result. Amaya, *The Tapestry of Reason, supra* note 35 at 217.

[59] *Pulp Mills,* judgment, *supra* note 9.

[60] ibid, para. 181.

of toxins into the river.[61] Uruguay, for its part, denied that the algal bloom had been caused by the Orion mill, and instead suggested that it had originated upstream, most likely caused by an annual carnival held in Gualeyguaychú, and the resulting increase in sewage caused by visitors. Ultimately, Uruguay argued that the data (including that provided by Argentina) showed Orion mill had not added to the concentration of phosphorus in the river since its operations began.[62]

The Court's treatment of the issue is an example of the kind of factual determination for this the coherence framework would be helpful in guiding the Court to elaborate just exactly *why* it is not satisfied that Argentina had proved its claim. Both parties led expert evidence during the oral proceedings before the Court. In order to determine whether the algal bloom had been caused by effluence from the Orion mill as Argentina alleged the Court had to address questions regarding the level of phosphorous in the river and the link between this and the operation of the pulp mill. In order to do so the Court necessarily had to engage with epistemic fields other than law, in this case marine biology.

The Court, in an example of the type of cursory treatment of complicated scientific issues that was the subject of much criticism of the *Pulp Mills* judgment, (including by Judges Al-Khasawneh and Simma in their joint dissenting opinion[63]) addressed the contested issue of the algal bloom in one paragraph:

[61] ibid.

[62] ibid, para. 250.

[63] Joint dissenting op. Judges Simma/Al-Khasawneh in *Pulp Mills* (*supra* note 9) 4. '…a court of justice cannot assess, without the assistance of experts, claims as to whether two or three-dimensional modelling is the best or even appropriate practice in evaluating the hydrodynamics of a river, or what role an Acoustic Doppler Current Profiler can play in such an evaluation. Nor is the Court, indeed any court save a specialized one, well-placed,

> 250. The Parties are in agreement on several points regarding the algal bloom of 4 February 2009, including the fact that the concentrations of nutrients in the River Uruguay have been at high levels both before and after the bloom episode, and the fact that the bloom disappeared shortly after it had begun. The Parties also appear to agree on the interdependence between algae growth, higher temperatures, low and reverse flows, and presence of high levels of nutrients such as nitrogen and phosphorus in the river. It has not, however, been established to the satisfaction of the Court that the algal bloom episode of 4 February 2009 was caused by the nutrient discharges from the Orion (Botnia) mill.[64]

How could application of the coherence framework have improved matters? Applying this framework, in accordance with the practice of the Court, it fell to the parties first of all to make their respective factual claims and to produce evidence in an attempt to convince the Court that each has met the standard of proof. It was then for the Court to consider the factual claims of the parties and through inference to the best explanation, to select as justified the factual claim that is most coherent. In doing so, the coherence principles mentioned above provide guidance for the Court.

Not being composed of 15 or 17 highly career scientists, it was not for the Court to determine whether or not a link existed between the algal bloom and the operation of the Orion mill beyond all doubt, nor even to a certain standard of probability. As stated above, there are significant difference between the scientific and legal methods of proof, and the Court operates under a number of time and resource constraints which preclude open-ended scientific inquiry.

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without expert assistance, to consider the effects of the breakdown of nonylphenolethoxylates, the binding of sediments to phosphorus, the possible chain of causation which can lead to an algal bloom, or the implications of various substances for the health of various organisms which exist in the River Uruguay.'

[64] *Pulp Mills,* judgment, *supra* note 9, para. 250.

Rather, in accordance with the coherence framework, it only had to select as justified the most coherent claim using recognised coherence principles.

For instance, in accordance with the coherence **principle of explanation**, Argentina's claim that the algal bloom had been caused by effluence from the Orion mill was supported by the evidence it provided of the operation of the mill combined with '…effluent products in the blue-green algal bloom and […] various satellite images showing the concentration of chlorophyll in the water' it claimed 'are produced during the warm season by the explosive growth of algae, particularly cyanobacteria, responding to nutrient enrichment, mainly phosphate, among other compounds present in detergents and fertilizers'.[65] In such a situation Argentina's claim would *cohere* with what it explains, namely that the effluence from the Orion mill caused the algal bloom. The principle of explanation is the one that the Court will most often have to apply in practice since, according to Thagard, it is 'by far the most important for assessing explanatory coherence, since it establishes most of the coherence relations.'[66]

It is worth noting two implications of this principle. The greater the number of factual claims that it takes to explain a certain hypothesis then the lower the degree of coherence (in other words the degree of coherence is inversely proportional to the number of propositions that it takes to explain a hypothesis).[67] Further, the more a hypothesis explains the more coherent it is, and that hypotheses made up of compatible hypotheses are preferable to those that require

[65] *Pulp Mills,* judgment, *supra* note 9, para. 248.

[66] Thagard, *Conceptual Revolutions, supra* note 56 at 67.

[67] ibid.

unconnected or ad hoc theories.[68] In this sense, coherence provides a theoretical basis for the adage that the simplest explanation is often the best explanation.[69]

Further, according to the **principle of competition**, while Argentina's claim that the algal bloom had been caused by effluence from the Orion mill , and Uruguay's factual claim the algal bloom was most likely caused by an increase in people (and sewage) attending a carnival upstream, both independently explain why Uruguay has (not) breached its obligations under the relevant treaty, these explanations are not connected in an explanatory manner, and as such compete with each other, and cannot be considered to be coherent by the Court. Rather, the Court had to choose as justified the claim which best explains the disputed fact, in accordance with recognised coherence principles.

In contrast, in accordance with the coherence **principle of contradiction**, the emergence of evidence that showed that the level of phosphorous in the river had not been significantly altered by the operation of the Orion mill does not cohere with Argentina's claim that he algal bloom had been caused by effluence from it. It is also worth saying a word about **the principle of data priority**, in accordance with which a claim which describes the result of an observation has a degree of acceptability on its own. Coming back to our example, Argentina's claim that the algal bloom had been caused by effluence from the Orion mill coheres with our observation that increased levels of phosphorous in water can lead to eutrophication. Of course, this is not to say that that such claims are beyond challenge, but they do carry a certain weight, provided that they can be explanatorily connected to other claims, such as those that the result of

[68] Amaya, *The Tapestry of Reason, supra* note 35 at 214.

[69] See further P. Thagard, *Computational Philosophy of Science* (1988) at 78.

industrial practices have in the past had harmful effects on the environment when not properly regulated or mitigated.

Finally, the **principle of acceptance** provides that the acceptability of a claim that forms part of a system depends on its coherence with other claims in that system. So, for example, the acceptability of Argentina's claim that the algal bloom had been caused by effluence from the Orion mill depends on its coherence with other claims relating to what science tells us about the harmfulness of similar mills for the marine environment, acceptable levels of phosphate in water, the causal link between the operation of the pulp Orion mill and algal bloom, and so on. The acceptability of any claim which explains only some evidence is reduced, such as the claim that the pulp mills do not lead to dangerous increased in phosphorous in water (a claim which does not explain the effect of the such chemicals in analogous situations or shown in scientific studies).

All of this sounds rather neat in the abstract. But it is not difficult to anticipate a number of obvious objections. It is all well and good arguing that the ICJ judge must evaluate the coherence of the factual claims using the coherence principles set out above, but how is the average ICJ judge meant to understand what the 'best explanation' is when dealing with epistemic fields other than law? Are we not back where we started, asking the Court's judges to assess evidence in relation to which they lack epistemic competence, except just with the addition of some abstract theoretical framework?

3.B. Epistemic Responsibility

While the coherence framework may have both descriptive and normative appeal, in situations involving complex factual issues the problem of evaluating the coherence of parties' claims remains. The question posed at the beginning of this article was how ICJ judges could determine whether or not parties' factual claims were sufficiently well-founded. But even if we say that ICJ judges need not become scientists on the bench, but rather need only show that their factual determinations are rationally justified, and that rational justification can be achieved through the selection of the most coherent factual claim put forward, is the ICJ really any better placed to assess coherence?

The coherence principles set out in the previous section can scaffold the kind of thinking that judges undoubtedly already do when considering competing factual claims. But more than that, these principles provide a vocabulary for engaging with and expression the 'intimate conviction of the judge' in a way which fleshes out and demystifies the fact-finding process, allowing the Court to avoid the unsatisfactory kind of abbreviated reasoning such as its conclusion on the algal bloom issue in the *Pulp Mills* case.

It is here that the notion of epistemic responsibility becomes central. The coherence framework that I propose here demands an epistemically responsible process.[70] As Amaya has stated, since

[70] Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 24; Kornblith, 'Justified Belief and Epistemically Responsible Action', 92 *Philosophical Review* (1983) at 33; Feldman, 'Epistemological Duties' in P. Moser (ed) *The Oxford Handbook of Epistemology* (2002) at 367; Pryor, 'Highlights of Recent Epistemology' 52 *British Journal for the Philosophy of Science* (2001), at 95.

the coherence framework requires the specification, consideration and eventual selection of a factual hypothesis, 'how well legal fact finders behave' i.e. how 'responsible' they are, throughout this process is relevant to the extent to which they are justified in selecting a particular hypothesis.[71] Applying the notion of epistemic responsibility to the legal context, '…how well legal fact finders behave when generating and evaluating alternatives is relevant to determining how much reason they have for accepting as justified a theory of the case on the grounds that it is the most coherent one available.'[72] Accordingly, part of assessing the coherence of the relevant alternatives in the 'proper way' is adhering to a number of epistemic duties.[73]

Essentially, then, epistemic responsibility equates to fulfilling a number of epistemic duties.[74] It is widely accepted that people have epistemic duties.[75] I will define these duties as those duties that individuals have to fulfil in order to be considered rational believers.[76] To be clear, these are not legal duties. Nor are they even (or necessarily) moral duties. Rather, I argue that ICJ judges have a role-based duty to be rational believers, i.e. to believe evidence that has been arrived at through a rational process.[77] In other words, the source of the epistemological duty to be a rational believer is the judicial function. In defining this epistemic duty in this way I

[71] Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 24.

[72] ibid.

[73] ibid.

[74] See, most notably, R. M. Chisholm, *Theory of Knowledge* (2nd ed. 1977).

[75] Feldman, 'Epistemological Duties' in P. K. Moser, *The Oxford Handbook of Epistemology* (2005) at 362.

[76] ibid at 365.

[77] See Cambridge Dictionary of Philosophy, '[w]hat a person is obligated or required to do. Duties can be moral, legal, parental, occupational, etc.' R. Audi, *The Cambridge Dictionary of Philosophy* (2nd ed. 1999) at 248.

follow Feldman in arguing that 'certain kinds, simply in virtue of being that kind, have certain duties.'[78] Thus, ICJ judges, simply by virtue of the judicial function, have certain epistemic duties. That is not to say that ICJ judges are not subject to other duties, such as moral duties (they certainly are, in fact) but the epistemic duties in which I am interested in for present purposes are ones which have their basis in the occupation the judge has chosen for themselves.

What of the substance of these duties? First of all, and least controversially, ICJ judges have a duty to believe all (and only) claims that are supported by evidence.[79] A logical corollary of this duty is that ICJ judges are also obligated not to believe any claims which are not supported by evidence. Secondly, ICJ judges are subject to a further role-based duty, namely the obligation to seek further evidence when it is not clear which competing claim is better supported by evidence, (in order to fulfil their epistemic duty of only believing claims which are supported by evidence).[80] Of course, this duty is context-dependent,[81] as discussed at section 3.3., in the sense that the judicial fact-finding process is constrained in a number of ways by resource and procedural limitations. Nevertheless, in order for the Court's fact-finding

[78] Feldman *supra* note 76, at 367.

[79] Feldman *supra* note 76, at 368; Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 25.

[80] Hall and Johnson, 'The Epistemic Duty to Seek More Evidence', 35 *American Philosophical Quarterly* (1998), at 129; Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 25; Feldman, 'Epistemic Obligations' 2 *Philosophical Perspectives* (1988) at 236; Jackson, 'Analyzing the New Evidence Scholarship: Towards a New Conception of the Law of Evidence', *Oxford Journal of Legal Studies (OJLS)* (1996) at 326.

[81] Cohen, 'Contextualism defended' in M. Steup et al (eds) *Contemporary debates in epistemology* (2nd ed. 2013) 69; Greco, 'A Different Sort of Contextualism' 61 (2-3) *Erkenntnis* (2004) at 383; Greco, 'What's Wrong with Contextualism?' 58 *The Philosophical Quarterly* (2008), at 416.

process to be considered responsible it is my submission that its judges are subject to this second (and more burdensome) duty.

Thirdly, ICJ judges are subject to a group of further duties which are a sub-set of the first two, and which more often are discussed under the heading of 'epistemic virtues.' Extended engagement with the body of virtue epistemology scholarship which has been built up in preceding decades is orthogonal to our purposes, but a word does need to be said as to why I group these 'virtues' together as a sub-set of the epistemological duty to believe all and only claims that are supported by evidence and to seek further evidence where it is unclear which competing claim is best supported by evidence. If we accept that ICJ judges are subject to these duties, then it may well be the case that they also are subject to a sub-set of 'other epistemological duties that will help them achieve this end.'[82] This sub-set of duties I frame as follows, that ICJ judges have a duty to behave in ways that will maximise the number of justified beliefs and minimise their unjustified beliefs. I believe that those attributes usually described as 'epistemic virtues' neatly cover the sub-set of duties that, if displayed, would maximise the ICJ judge's justified beliefs in this way.[83]

It is necessary to elaborate. A virtue in epistemology can be defined as 'characteristics that promote intellectual flourishing, or which make for an excellent cognizer.'[84] Those epistemologists who take a responsibilist approach to virtues conceive these as 'trait-virtues'

[82] Feldman, *supra* note 76, at 372.

[83] See Amaya, *The Tapestry of Reason, supra* note 35, at 523

[84] Turri, Alfano, and Greco, 'Virtue Epistemology', Stanford Encyclopedia of Philosophy, <https://plato.stanford.edu/entries/epistemology-virtue/> accessed 18 July 2022.

in that they are cultivated character traits as opposed to innate or faculty virtues.[85] These virtues include rigour, perspicacity, open-mindedness, impartiality and intellectual autonomy.[86] In cases that come before the ICJ, where the parties maintain the initiative in putting the facts before the Court, such epistemic virtues would include impartiality in assessing the different factual claims made by the parties, a willingness to change their existing views when presented with new evidence and courage to think freely and not simply go along with the views of their fellow judges.[87] It is through demonstrating such epistemic virtues that the legal fact-finder has the greatest chance of fulfilling their duties of believing all (and only) those claims that are supported by evidence, as well as gathering additional evidence when it is not clear which claims are best supported by evidence.

In this respect the notion of epistemic responsibility also provides an important link to the value of truth, a value that the ICJ as part of the adjudicative process, strives to reflect. In other words, those epistemic duties that make up epistemic responsibility are truth-conducive, as they increase the chances of the ICJ judge arriving at a true belief.[88] In that sense, epistemic responsibility acts as a check against the creation of factual determinations that are coherent in

[85] See e.g. L. Code, *Epistemic Responsibility* (1987) J. A. Montmarquet, *Epistemic Virtue and Doxastic Responsibility* (1993); L. Trinkaus Zagzebski, *Virtues of the Mind: An Inquiry into the Nature of Virtue and the Ethical Foundations of Knowledge* (1996); Turri, Alfano, and Greco, 'Virtue Epistemology', Stanford Encyclopedia of Philosophy, <https://plato.stanford.edu/entries/epistemology-virtue/> accessed 18 July 2022.

[86] Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 25; Montmarquet, Code, ibid; Cooper, 'The Intellectual Virtues' 69 *Philosophy* (1994) at 459.

[87] Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 26.

[88] See E. Sosa, *Knowledge in Perspective* (1991); Greco, 'Virtues in Epistemology' in P. K. Moser, *The Oxford Handbook of Epistemology* (2005).

accordance with the relevant coherence principles, but which are a 'mere abstraction' which 'would address facts that are either moot or disconnected from a legal dispute…'[89] Any factual determinations which do not bear any relation to reality are of limited value (if any value at all) to the Court and may in fact be counterproductive to the achievements of the goals of the Court such as the settlement of the dispute before it, or the attainment of contextual justice. An example of this from the Court's practice is the *Cameroon v Nigeria* case concerning the delimitation of the land and maritime boundary between the two states.[90] Due to a number of technical errors the Court in its judgment indicated a boundary line the coordinates of which were so unclear as to prove impossible to implement by the parties. Consequently the parties were forced to work with the United Nations through a joint commission to try to understand and implement the Court's proposed boundary.[91]

Of course, saying that epistemic responsibility offers a path to justified belief is not the same as saying that it will always guarantee that the Court makes factual determinations which are true. As Amaya has stated,

> it cannot be shown that endorsing a coherence theory for the justification of factual and normative propositions in law will never misguide us, for it may certainly lead us to accept beliefs about the facts and the law as justified which are, nevertheless, false or

[89] Mbengue, 'International Courts and Tribunals as Fact-Finders: The Case of Scientific Fact-Finding in International Adjudication' 34 Loyola of Los Angeles International and Comparative Law Review (2011) at 53.

[90] Land and Maritime Boundary between Cameroon and Nigeria (Cameroon v. Nigeria: Equatorial Guinea intervening) Judgment, ICJ Reports 2002 303 para 102.

[91] For a fuller discussion see Devaney 'Fact-Finding before the ICJ' *supra* note 47, at 85.

> incorrect, [nevertheless] there are still good reasons for supporting the desirability of such methods from the perspective of advancing the goal of truth in law.

In other words, a factual determination which has been arrived at as the result of an epistemically responsible process is one which at the very least can be rationally justified, and at the most has a very good chance of being true due to the judge's epistemically responsible behaviour.

Of course, talk of epistemic responsibility, comprising various duties, raises the question of the lengths that the ICJ judge must go to in order to satisfy themselves that they have acted in an epistemically responsible manner. For instance, to what lengths is the ICJ judge expected to go to in conducting their own fact-finding in those situations in which they are unable to assess a factual claim against coherence principles? Is it enough that the judge asks a clarificatory question from the bench during oral proceedings, or is the onus on the judge to go much further, perhaps pushing for a visit to the site, or undertaking private study in order to gain a better understanding of the complex factual issues at the heart of the case? The answer to these questions, namely what counts as epistemically responsible behaviour, is shaped by the context in which the legal fact-finder is operating, namely adjudication in the context of law as a highly institutionalised specialised epistemic field.[92]

3.C. Coherence in context

[92] Amaya, 'Coherence, Evidence, and Legal Proof' *supra* note 35, at 27, arguing that contextual factors determine 'the appropriate level of epistemic responsibility that is required for legal justification.'

The coherence of a factual claim made by a party cannot be assessed in a vacuum, hermetically sealed from the context in which such it is made.[93] Context is crucially important, in that it is what provides the outer limits of the coherence framework, i.e. what can realistically be expected of any legal fact-finder, including ICJ judges. As Amaya has stated, a 'contextualized version of coherentism would take it that whether a belief is justified is a matter of coherence but that how severe this coherentist standard should be is a contextually variable matter.'[94]

The ICJ and its judges do not have unlimited time and resources to conduct fact-finding in fulfilment of their epistemic duties and in demonstration of their epistemic virtues. What's more, and perhaps more importantly, it is not the sole goal of the adjudicative process to attain knowledge. Rather, adjudication pursues a number of goals including the settlement of the dispute between the parties, the achievement of contextual justice, procedural fairness and perhaps even the progressive development of international law. The establishment of the facts of the case, in other words, is not an end in itself but rather a means to establishing the operative facts of the case from which to draw normative conclusions.

Accordingly, what can be said to be coherent, epistemically responsible and ultimately rationally justified in terms of facts before the Court depends on and is shaped by the context of adjudication before the ICJ. The contextual nature of coherence is significant in a number of ways, perhaps most prominently due to the fact that this ensures an element of realism, or of practicality, in terms of what we can and do expect from the Court. No one expects the Court's judges to become scientists on the bench nor the Court to spend millions upon millions

[93] ibid, at 28.

[94] ibid.

of the United Nations' budget to make site visits or to appoint expensive teams of experts to assist the Court in every case that comes before it. But it is nevertheless important that we are able to say *why* we do not expect this of the Court. If we wish the Court to establish the operative facts then why should it not move heaven and earth to do so?

The answer lies in the highly institutionalised nature of adjudication before the Court. For instance, the standard of proof applied by the Court from one case to another shapes not only when the Court can be said to have arrived at facts that are sufficiently well-founded but also influence the Court's assessment of coherence and justification.

Similarly, in cases where the Court feels that it is not in a position to assess the factual claims made by the parties as, for instance, each party's claims appear equally convincing without further expert assistance, the Court may decide that in order to conduct an epistemically responsible process it must utilise its own fact-finding powers.[95] The time limits that the Court operates under (themselves a reflection of one of the other goals of adjudication before the Court, namely the timely settlement of the dispute between the parties) constrain the options open to the Court in utilising those fact-finding powers. For instance, perhaps the Court will only have time for one site visit instead of two. Similarly, the fact that the Court operates in accordance with a budget that is not inexhaustible but rather set by the UN General Assembly, means that it may simply not be able to afford to appoint its own experts *and* travel to the site. The Court operates under these earthly constraints and any normative justification of the Court's fact-finding process worth its salt must recognise this and take it into account. This is

[95] See the practice of the Court in *Maritime Delimitation in the Caribbean Sea and the Pacific Ocean (Costa Rica v. Nicaragua),* Orders of 31 May 2016 and 16 June 2016.

exactly the role that contextualising coherence in the relation to adjudication before the ICJ plays.

3.D. The coherence framework summarised

The coherence framework set out in the preceding sections is offered as a path to rational justification of the Court's factual determinations. In accordance with the framework, the Court may consider that a factual claim is 'sufficiently well-founded' when it has considered the factual claims in cases before it, assessed them against relevant coherence principles, and chosen as justified the claim that explains the contested factual scenario better than any other. In doing so the Court aims for coherence through inference to the best explanation rather than any objective truth or probabilistic assessment. The coherence framework proposed, crucially, is also a responsibilist and contextualist one, in accordance with which the Court's judges must fulfil certain epistemic duties. Ensuring epistemic responsibility also helps to provide a crucial link to the value of truth. Finally, the lengths that the Court must go to in demonstrating coherence and responsibility and limited by the context of adjudication before the ICJ, a context which provides the outer limits of the coherence framework.

4. Potential objections to the coherence framework

Now that the coherence framework has been elaborated it is necessary to defend it against the most plausible objections. For the purposes of this article I have grouped the main objections under four main headings which I believe represent the most significant criticisms that could be made of this framework. That said, I do not pretend that these three groups of criticisms exhaust those that may be made of the framework, but I hope that by anticipating them I may go some way to convincing the reader that this is a path worth pursuing when thinking about the normative justification of the Court's fact-finding process. These objections, which I will explore in the following sections, are: (1) that the coherence framework does not describe or fit with the practice of the Court; (2) even if it does, the coherence framework does not provide normative justification for the Court's practice, (3) even if it does, it is not the only (or even the best) way to normatively ground the Court's practice, and (4) the critical challenge to coherence as a concept. Each objection can be met, and a coherence framework shown to be both a descriptively and normatively desirable way to conceptualise fact-finding before the ICJ.

4.A. Objection 1: the coherence framework does not describe the practice of the Court

The first objection that may be anticipated is that the coherence framework is not descriptively appealing or is somehow unsuited to be applied in the context of the ICJ. On the contrary, the coherence approach in fact describes to a large extent the Court's *best practice* in terms of fact-finding. By this I mean to say that the coherence framework I have set out in preceding sections fits comfortably with how the main parties to the adjudicative process go about making claims about, and ultimately establishing facts in cases before the Court. This holds true both in general and also in the specific context of the ICJ.

In short, the constitutive elements of the coherence framework, namely (1) specification of the parties competing factual claims, (2) evaluation of those claims and (3) the selection of the claims that are 'sufficiently well-founded' to use Judges Simma and Al-Khasawneh's words is what the Court has typically done in contentious cases that have come before it.[96] The settled practice of the Court in encouraging the parties to submit almost any evidence they so wish before focussing on assessing the probative weight of this evidence and utilising a variable standard of proof in making factual determinations is well-documented in this regard.[97] As such, the coherence framework does not require a drastic alteration of the Court's practice, but rather represents a justification of the Court's practice, as well as an argument in favour of reading 'well-founded' as coherent (with all that that entails) rather than 'true' or even 'most probable.'

Readers will have noted that I took care to speak of the Court's *best* practice and it is necessary to note that the Court's practice has been criticized by commentators and its own judges alike.[98] There is merit to many of the criticisms made of the Court such as its use of so-called *experts fantômes* or its previous practice of hitherto allowing experts to evade cross-examination by appearing as counsel, and it does seem that it is now taking steps towards remedying some of

[96] For detailed accounts of the fact-finding practice of the ICJ see Riddell and Plant *supra* note 49; Devaney *supra* note 47, at 15 et seq; Devaney, 'Evidence: International Court of Justice', Max Planck Enyclopedia of International Procedural Law, available at: https://opil-ouplaw-com.ezproxy.lib.gla.ac.uk/view/10.1093/law-mpeipro/e3430.013.3430/law-mpeipro-e3430?print=pdf.

[97] ibid.

[98] Devaney, 'Reappraising the Role of Experts in Recent Cases Before the International Court of Justice' 62 *German Yearbook of International Law* (2019) at 337.

the most significant issues.[99] That said, issues remain, and are always likely to remain given the rudimentary nature of the fact-finding provisions in the Court's constitutive instruments,[100] and the likelihood that factually complex cases will continue to come before it in the future. The ICJ is well-placed, however, to deal with factually complex cases. It has extensive fact-finding powers, its reputation remains high and it has control over many of the means to address the weaknesses in its fact-finding process. The coherence framework proposed in this paper has both descriptive and normative value in this regard, and points the way forward for the Court. It provides the answer to the question of what we can expect of ICJ judges and most importantly why.

More generally, experimental empirical research suggests that a coherence approach to the establishment of the facts in the legal process has descriptive appeal.[101] The constituent elements of the coherence framework, such as inference to the best explanation, are comparable to the way that individuals typically assess the establishment of the facts.[102] As Amaya has stated, empirical studies show coherence 'as a key criterion for assessing the relative plausibility of the representations that determine legal fact-finders' decisions about disputed

[99] ibid.

[100] ibid.

[101] Amaya, *The Tapestry of Reason, supra* note 35, at 111; citing Holyoak and Simon, 'Bidirectional reasoning in decision making by constraint satisfaction' 128 (1) *Journal of Experimental Psychology* (1999) at 3 and Simon et al, 'The emergence of coherence over the course of decision making' 27(5) *Journal of Experimental Psychology* (2001), at 1250; Simon, 'The Redux of Cognitive Consistency Theories: Evidence Judgments by Constraint Satisfaction' 86 *Journal of Personality and Social Psychology* (2004).

[102] ibid.

questions of fact.'[103] Not only this, studies have shown that legal decision-makers are more likely to evaluate facts in a holistic manner with reference to empirical evidence, in line with the holistic nature of the coherence framework.[104] In this regard it has more descriptive appeal than the mainstream probabilistic approach to the facts (that we will explore in the following section).

Of course, the fact that a coherence approach to evidence is closer to what we do as individuals or the Court does in practice does not necessarily mean that this is what we *should* do. In other words, the fact that the coherence framework provides support for holistic approaches to evidence such as coherence is not the same as saying that such an approach is normatively justified. A normative justification for the coherence approach is required and will be considered next.

4.B. Objection 2: the coherence framework does not provide normative justification for the Court's practice (as an alternative to formalistic and sceptical approaches)

Not only does the coherence framework describe what the Court does, it is also capable of providing a convincing argument as to why it should continue to do so. The normative claim

[103] Amaya, *The Tapestry of Reason, supra* note 35, at 116.

[104] Amaya, *The Tapestry of Reason, supra* note 35; at 115; see Hastie and Pennington, 'Evidence Evaluation in Complex Decision Making', 51 *Journal of Personality and Social Psychology* (1986); Hastie and Pennington, 'A Cognitive Theory of Juror Decision-Making: The Story Model' 13 *Cordozo Law Review* (1991); Simon, 'A Third View of the Black Box: Cognitive Coherence in Legal Decision-Making' 71 University of Chicago Law Review (2004).

at the beginning of this article is that the ICJ, when making a factual determination that it wishes others to accept, must show that such a claim is *justified by reasons.* The coherence framework laid out in the intervening pages provides such a route to rational justification. There is widespread agreement across disciplines that coherence plays an important role in justifying claims. This includes the justification of epistemic claims,[105] as well as moral claims, [106] not to mention those claims relating legal norms.[107] While critics have challenged the vagueness or circularity of coherence approaches or their link to truth as a value, it is widely accepted that coherence approaches of the kind laid out in this article, with their attendant coherence principles and so forth, amount to a rational process. As such, any factual determination made by the Court on, for instance, the legal status of the Silala river which is made on the basis that the factual claims of Chile or Bolivia are *most coherent* can be said to be rationally justified. Admittedly, this is not the end of the argument. Just because coherence provides a route to rational justification does not mean that it is the only, or even the most preferable route for the Court. This point still needs to be established, and it is to this that we now turn in the final section.

4.C. Objection 3: coherence not the only (or the best) way to normatively ground the Court's practice

[105] On coherence theories of epistemic justification see D. Davidson, *Subjective, Intersubjective, Objective* (2001) Chapter 10, at 137; L. BonJour, *The Structure of Empirical Knowledge* (1988).

[106] On coherence in moral justification see Rawls, *A Theory of Justice, supra* note 31, Goldman, *Moral Knowledge* (1988); Thagard and Millgram, 'Deliberative Coherence' 108 *Synthese* (1996) 63.

[107] MacCormick, *Legal Reasoning and Legal Theory, supra* note 23; R. Dworkin, *Law's Empire* (1986).

The coherence framework proposed in this article is not the only path to rational justification. Probabilistic methods or even methods based on artificial intelligence could be said to a greater or lesser extent to provide a rational basis for the Court's decisions. Due to limitations of space it is not possible to consider each potential route to rational justification so I will limit myself in this present article to considering the dominant, probabilistic approach to the justification of factual claims in the context of adjudication.

There is significant debate in the literature regarding the relationship between coherence approaches to the justification of factual claims and probabilistic ones,[108] and it is perhaps worth noting that certain prominent philosophers see coherence and probabilistic approaches as complementary rather than competing.[109] This is not the place to rehash such debates, but I will instead draw upon them where relevant in the following pages when advocating my coherence framework. In short, I believe there are a number of advantages that the coherence approach has over probabilistic approaches in the context of international adjudication and I will address each in turn.

[108] P. Lipton, *Inference to the Best Explanation* (2nd ed., 2004) 1; Dahlman and Mackor, 'Coherence and probability in legal evidence' *Law, Probability and Risk* (2019) 18; F. Schauer, *The Proof* (2022) at 31; Psillos, 'Inference to the Best Explanation and Bayesianism' in F. Stadler (ed), *Induction and Deduction in the Sciences,* (2004); Okasha, 'Van Fraasen's Critique of Inference to the Best Explanation', *Studies in the History and Philosophy of Science* (2000) at 691.

[109] See Dahlman and Mackor, ibid, at 292; 'It seems that they are not merely compatible but complementary approaches, and that they are not merely complementary in the context of generation and pursuit but also in the context of justification'; or Schauer, ibid. at 32. '[i]nference to the best explanation not only is compatible with Bayesian incrementalism in this way but also is compatible with a probabilistic approach.'

A common place to start when situating a coherence framework for evidence is with what Richard Lempert termed 'new evidence scholarship',[110] namely the increased interest in issues of evidence, and in particular in the process of proof, in Anglo-American scholarship.[111] New evidence scholarship can be characterised by its focus on reasoning and the process of proof rather than in the formulation or interrogation of particular rules of evidence.[112] Central to this interest in reasoning and the process of proof has been the role that probability should play in the determination of facts.[113]

The dominant theory in the context of legal reasoning about facts is a particular kind of Pascalian theory, [114] Bayes' Theorem. [115] It is as a response to this dominant model that coherence approaches such as the one proposed in the present article have gained traction in recent years. [116] Bayes' Theorem has played a prominent role in debates about evidence in more recent years, as it has been used by scholars arguing that a piece of evidence confirms a hypothesis if it increases the probability of the hypothesis.[117] Bayes' Theorem is designed to calculate the probability of a hypothesis relating to an event that has already taken place before

[110] Lempert, 'The New Evidence Scholarship: Analyzing the Process of Proof' 66 *Boston University Law Review* (1986), at 439.

[111] Amaya, *The Tapestry of Reason, supra* note 35, at 76, Twining, *Rethinking Evidence, supra* note 46, at 72.

[112] Amaya, *The Tapestry of Reason, supra* note 35, at *76*.

[113] ibid.

[114] ibid. at 77.

[115] P (h/e) = P (e/h) P (h) / P (e/h) P (h) + P (e/not-h) P (not-h).

[116] Amaya, *The Tapestry of Reason, supra* note 35, at 75; Richmond, *supra* note 2, at 19; Twining *supra* note 43, at 127; T. Anderson et al, *Analysis of Evidence* (2nd ed 2005) at 79.

[117] Amaya, *The Tapestry of Reason, supra* note 35, at 79.

and after the introduction of a particular piece of evidence, in order to determine whether such evidence increases the probability of a hypothesis or not.[118]

While Bayes' Theorem is an undoubtedly influential and important tool for the calculation of probabilities in certain situations, a number of important concerns have been raised about its appropriateness for the legal context. Some of the main criticisms of this theorem relate to the fact that it does not account for the assignment of a particular probability value (upon which everything else rests). Proponents of the theorem argue that even incorrect or absurd values assigned as the probability of a hypothesis will be corrected over time as more pieces of evidence are added into the calculation.[119] But this is problematic in the legal context due to the fact that both time and pieces of evidence are limited. Furthermore, and just as problematically, Bayes' theorem assumes that agreement will be found on the likelihood of the hypothesis in the end, even though no agreement could be found regarding the assignment of the initial value of the hypothesis in the first place.[120]

[118] Amaya, *The Tapestry of Reason, supra* note 35, at 79-80, see e.g. P. Tillers and E. Green, (eds) *Probability and Inference in the Law of Evidence* (1988); Allen and Redmayne, 'Bayesianism and Juridical Proof' 1 *International Journal of Evidence and Proof* (1997), D. Schum, *The Evidential Foundations of Probabilistic Reasoning* (2001). In very rough terms, according to this method, a legal fact-finder first assigns a value to the probability of a certain hypothesis being true. Next, the fact-finder assigns a value to a probability of a certain piece of evidence which suggests that the hypothesis is higher. The legal fact-finder then calculates the revised probability of the hypothesis being true taking into account the second piece of evidence considered. If that revised probability is higher than the standard of proof then this fact can be considered established as an operative fact for the purposes of the law.

[119] Amaya, *The Tapestry of Reason, supra* note 35, at 83; R. Foley, *Working Without a Net: A Study of Egocentric Epistemology* (1993).

[120] ibid.

In addition, the selection of particular pieces of evidence is a normative question, as is the assignment of a value of probability. Bayes' Theorem cannot account for such normative questions as it operates on the assumption that such actions are taken purely rationally for the purposes of mathematical calculation.[121] Additional problems, such as those relating to the lack of relevant evidence upon which to make the necessary calculations, or the fact that individuals do not seem to accord probability values in a predictable manner, all cast doubt on the utility of Bayes' Theorem in the legal context.[122]

Such are some of the shortcomings of the dominant probabilistic approach. I believe that the coherence framework set out above does not have the same drawbacks of the probabilistic approach. The coherence framework avoids the (at times seemingly arbitrary) assignment of numeric values to certain facts and is generally better suited to the context of adjudication where it is not possible for problematic values to be 'washed out' or corrected over time since the requirement to make factual determinations in a particular case does not afford such a luxury. Furthermore, the coherence framework is unashamedly normative. Accordingly, the framework can account for the normative decisions that are made regarding the evaluation of

[121] Amaya, *The Tapestry of Reason, supra* note 35, at 116; see further Sacks and Thompson, 'Assessing Evidence: Proving Facts' in D. Carson and R. Bulls (eds) *Handbook of Psychology in Legal Contexts* (2003).

[122] Amaya, *The Tapestry of Reason, supra* note 35, at 83-4; see also Hodgson, 'Probability: the Logic of the Law – A Response' (1995) *OJLS* 51; Allen, 'The Nature of Juridical Proof' *supra* note 42 373. Although it should be noted that proponents of Bayes' Theorem have attempted to respond, see e.g. Friedman, 'Answering the Bayesioskeptical Challenge' 1 *The International Journal of Evidence and Proof* (1997); Kaye, 'Clarifying the Burden of Persuasion: What Bayesian Decision Rules Do and Do Not Do' 3 International Journal of Evidence and Proof (1999).

evidence, while at the same time providing a means for the ICJ to show that its factual determinations are justified by reasons. This, in turn, is the basis for the normative value of the framework, the driving force behind the argument that the Court should continue to make factual determinations in this way and, most crucially, the explanation why.

4.D. Objection 4: Criticisms of coherence as a notion

It would be remiss of any author proposing a coherentist approach to anything not to acknowledge important and long-running critical approaches to concepts such as coherence. Here I focus on realist and critical scholarship which, over the course of the last century, has been spectacularly effective in, for instance, exposing the 'transcendental'[123] nature of certain legal concepts, and laying bare the power dynamics that are woven throughout and perpetuated by law. Such scholarship has fundamentally altered the way that both domestic and international lawyers think about the law and its role in society. By that I mean to say that, surely, any scholar today making the argument that the law and its structures operate in a neutral, dispassionate way, equally applicable to powerful and powerless alike, would be laughed out the room.

Realist scholars such as Cohen[124] and Llewellyn[125] clearly showed the indeterminacy of legal norms; how they can often support completely opposite conclusions. Not only is the law often

[123] F. Cohen, 'Transcendental Nonsense and the Functional Approach' (1935) 6 Columbia Law Review 809.

[124] F. Cohen, 'The Ethical Basis of Legal Criticism', (1931) 41(2) The Yale Law Journal 201.

[125] K. Llewelyn, *Common Law Tradition: Deciding Appeals* (1960), Appendix C, Cannons on Statutes; K. Llewelyn, *Bramble Bush: Some Lectures on Law and Its Study* (1930), at 65.

internally indeterminate in that it fails to produce determinate outcomes, it is also externally indeterminate in that one can never point to an objective justification for why one interpretation should be chosen over any other.[126]

Taking up this challenge to traditional legal doctrine, critical legal scholars such as Singer,[127] Kennedy,[128] Dalton,[129] Freeman,[130] and others[131] later extended the critique of law's indeterminacy. Perhaps most famously in relation to international law, Koskenniemi critiqued international law's objectivity and normativity, or rather highlighted the supposed

[126] See further on this distinction R. Dworkin, 'Objectivity and Truth: You'd Better Believe It', (1996) 25 Philosophy & Public Affairs 877.

[127] J.W. Singer, 'Catcher in the Rye Jurisprudence', (1983) 35 Rutgers Law Review 275; J.W. Singer, 'The Player and the Cards: Nihilism and Legal Theory', (1984) 94:1 Yale Law Journal 1, discussing how CLS raises the spectre of nihilism.

[128] D. Kennedy, 'Form and Substance in Private Law Adjudication', (1976) 89 Harvard Law Review 1685; D. Kennedy, 'A Left Phenomenological Alternative to the Hart/Kelsen Theory of Legal Interpretation' in Kennedy, *Legal Reasoning: Collected Essays* (Davies 2008); Kennedy, 'A Semiotics of Legal Argument' (1991) 42 *Syracuse Law Review*, at 77-89 and Kennedy, 'Freedom and Constraint in Adjudication: A Critical

incompatibility between the two.[132] While critical legal scholars do not deny that reasons are advanced to justify decisions, they, like the realists before them, have shown that there is often a disconnect between the stated and the actual reason why it was taken (such as power, ideology, personal preference and so on). Consequently, the critique of indeterminacy of legal concepts and norms can certainly be added to critical approaches taken to knowledge and meaning in other contexts such as linguistic theory and post-structural philosophy.

This sceptical challenge, that concepts such as coherence have no rational basis and can only express the subjective preferences of the individual and never be objectively established,[133] has been the subject of much academic debate.[134] It is not for me to regurgitate or even contribute

Phenomenology' 36 (1986) *Journal of Legal Education* (1986), at 518. See further D. Kennedy, 'The Structure of Blackstone's Commentaries' (1979) 28(2) Buffalo Law Review 205.

[129] C. Dalton, 'An Essay in the Deconstruction of Contract Doctrine' (1985) 94(5) Yale Law Journal, being a very influential CLS-inspired project.

[130] A. D. Freeman, 'Truth and Mystification in Legal Scholarship', (1981) 90 Yale Law Journal.

[131] For an influential attempt to apply CLS ideas to international law, specifically that internal contradictions are part of the law and as such coherence is unsustainable, see D. K. Tarullo, 'Logic, Myth and the International Economic Order' (1985) 26(2) Harvard International Law Journal; more generally see R. M. Unger, *The Critical Legal Studies Movement* (Harvard University Press 1983), 5-15.

[132] M. Koskenniemi, 'The Politics of International Law', (1990) 4 EJIL, at 7.

[133] Singer, 'The Player and the Cards', *supra* note 135 at 8 '[l]aw and morality have no rational foundation that once and for all compels all persons to prefer certain institutions and rules above all others.'

[134] See e.g. Koskenniemi: 'This view is as utopian as naturalistic. Because 'justice', 'social need', 'reasonableness', and 'moral utility' are subjective notions, they cannot be used in order to achieve a determinate delimitation between practice which is and which is not the law.' M. Koskenniemi, *From Apology to Utopia: The Structure of International Legal Argument* (OUP 2005) 1.

to such debates here – to do so would require significantly more words than I have at my disposal presently and would in any case be orthogonal to my present project. Rather, and more modestly, my aim is to point towards what would need to be demonstrated to rebut the sceptical claim that concepts such as coherence can never have any truth-value, that they are simply subjective in nature.[135]

First, I would clarify that I do not pretend to say anything about whether the Court only ever makes factual determinations that are in fact 'rationally justified' – that would require empirical investigation that is beyond the scope of this article.[136] My argument is a normative one, specifically that legal fact-finders, such as the Court, should only make factual determinations that can be rationally justified.

Second, it is important to say that the response to the sceptical challenge does not require me to show that coherence is a concept that exists 'somewhere in the "external" world and that we possess a special […] faculty for sensing [its] presence in the way we sense the existence of celestial bodies, coins, or vacuum cleaners.'[137] Rather, I need only show that evaluative propositions can have truth-value, and are not dependent on the identity of the speaker in each case.[138]

[135] E. Voyiakis, 'International Law and the Objectivity of Value' (2009) 22 LJIL 75.

[136] Alexy, *A Theory of Legal Argumentation', supra* note 21, at 17.

[137] Voyiakis *supra* note 143.

[138] D. Davidson, 'The Objectivity of Values', and 'What Thought Requires', in *Problems of Rationality* (2004); D. Davidson, 'Three Varieties of Knowledge', in *Subjective, Intersubjective, Objective* (2001) 211.

This challenge has been addressed by prominent philosophers such as Davidson, perhaps the most influential English-language philosopher of the second half of the 20th Century, who adhere to a holistic approach to meaning and knowledge.[139] Such philosophers have shown the interdependence of knowledge, whether that be knowledge of the content of our own minds or the minds of others, or knowledge of the world.[140] It is through such interdependence of knowledge that we can claim that some truth-value can attach to concepts such as coherence, without claiming that these concepts exist 'out there' in some pure form.[141]

All of this is to say that I believe that the undeniable contribution of critical scholarship in showing us the often indeterminate nature of legal concepts and the power dynamics at play does not mean that we can never attribute any meaning to concepts such as coherence. Ultimately, the coherence framework set out above assumes that the law exerts a normative force on legal actors, that such actors are at least to some extent able to separate their own personal preferences in an attempt to do justice according to the law, and that concepts are not so malleable so as to be meaningless, but rather that through intersubjectivity we can to a greater or lesser extent construct a core meaning.[142]

[139] Voyiakis *supra* note 143, 68; D. Davidson, *Inquiries Into Truth and Interpretation* (OUP 2002) Essay 13 'On the Very Idea of a Conceptual Scheme' 191; see further J. Malpas 'Donald Davidson' in Stanford Encyclopedia of Philosophy, available at: <https://plato.stanford.edu/entries/davidson/> accessed 5 January 2022.

[140] D. Davidson, *Subjective, Intersubjective, Objective* (2001), Essay 14, 'Three Varieties of Knowledge', 204.

[141] Voyiakis *supra* note 143, 73; D. Davidson, 'The Structure and Content of Truth' (1989), Journal of Philosophy, 87, 279; D. Davidson, *Truth and Predication*, (2005 Belknap Press).

[142] See further R.M. Sainsbury, 'Davidsonian Truth Theories and Context' in Maria Cristina Amoretti and Nicla Vassallo (eds.) *Knowledge, Language and Interpretation: On the Philosophy of Donald Davidson* (Ontos Verlag 2008); Donald Davidson, *Problems of Rationality* (2004) Essay 3, 'The Objectivity of Values'; Essay 9,

'What Thought Requires'; Donald Davidson, *Subjective, Intersubjective, Objective* (2001), Essay 14, Putnam, 'Meaning and Reference', 70 *Journal of Philosophy* (1973), 705.

Conclusion

When faced with factually complex cases such as determining whether a whaling programme is carried out for 'scientific' purposes, whether chemicals released into a river are harmful, or which direction a river naturally flows, it is the responsibility of the ICJ to demonstrate that its factual determinations are rationally justified. The coherence framework set out in this paper provides a way of doing just that. In practical terms, this requires the ICJ judge, as legal fact-finder, to first of all, (1) specify the parties' competing factual claims, before (2) evaluating the coherence of the competing claims against relevant coherence principles before (3) selecting as justified the most coherent of the claims. In doing so the ICJ judge must act in an epistemically responsible manner by fulfilling a number of epistemic duties. This notion of epistemic responsibility also provides a crucial link to the value of truth, preventing the Court's findings of fact from being mere abstractions from reality. Taken together, I hope the reader will agree, these constituent elements of the coherence framework do what I set out to do at the beginning of this paper, namely provide a theoretical account of the Court's fact-finding process, and a normative argument for what it should do in the future.