THE DOCTRINAL PARADOX & INTERNATIONAL LAW

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In the second half of the twentieth century, the number of international courts and tribunals available to help settle transnational disputes exploded. During the same period, there was also a proliferation of research in social choice theory that illustrates a range of ways that the aggregation of preferences and judgments can create inconsistent results. This research has become an increasingly important tool for legal scholars who seek to understand the strategic constraints that shape judicial decision-making. One important insight gained from this scholarship is the existence of the "doctrinal paradox." The doctrinal paradox shows that under certain conditions, the decision-making processes of multi-member courts can be indeterminate because the outcomes of cases change based on the way that the judges choose to aggregate their judgments. In other words, the same distribution of opinions among a panel of judges may result in either party A or party B winning a particular case, depending on the method that the judges use to reach a final decision. The doctrinal paradox thus not only creates outcomes that may appear logically incoherent, but since it results in decisions that are at tension with the precedent they create, it also threatens the integrity of the development of law more broadly.

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This Article is the first to explore the important implications that the doctrinal paradox has for international adjudication. To do so, we have undertaken one of the first efforts to compile comparative data on the decision-making procedures and dissent rates of international courts. By coupling this information with insights from international relations and international law, we argue that there are unique features of international courts and tribunals that affect the causes and consequences of the doctrinal paradox. Specifically, since international courts are uniquely vulnerable to having their decisions ignored by litigants but still provide an essential avenue for the development of the corpus of international law, the impact of paradoxical decisions can be magnified. We also discuss examples where the doctrinal paradox can arise and has arisen during the course of international adjudication. Finally, we argue that the designers of international legal institutions should explicitly consider the tradeoffs associated with maintaining flexible policies versus adopting a fixed judgment aggregation mechanism.

TABLE OF CONTENTS

1. Introduction 69
2. Judgment Aggregation Theory 74
   2.1. Social Choice Theory and Judgment Aggregation 75
   2.2. The Doctrinal Paradox 79
   2.3. The Doctrinal Paradox in Practice 83
   2.4. The Options for Avoiding Indeterminacy 86
3. Causes & Consequences of the Doctrinal Paradox in International Law 90
   3.1. Situating Judgment Aggregation in International Adjudication 93
   3.2. The Conditions Necessary for the Dotrinal Paradox & International Adjudication 98
   3.3. Resolving Indeterminacy in International Adjudication 105
   3.4. The Consequences of Indeterminacy in International Adjudication 108
4. The Paradox During International Adjudication 112
   4.1. Strategy for Locating the Doctrinal Paradox Internationally 113
   4.2. Permanent International Courts 115
   4.3. Scientific Decision-Making by International Panels 118

4.4. International Investment Arbitration 123
5. Resolving the Paradox in International Adjudication.....127
5.1. Flexible Aggregation Procedures in International Adjudication.....128
5.2. Context-Sensitive Voting in International Adjudication 131
5.3. Issue-Based Voting in International Adjudication 133
5.4. Outcome-Based Voting in International Adjudication.....135
6. Conclusion 137

1. INTRODUCTION

In the latter half of the twentieth century, the international community created a dramatic number of new international forums to resolve transnational disputes. Today, there are more than two dozen permanent courts and more than one hundred judicial bodies and procedures that resolve legal disputes through international adjudication.[1]

These courts, tribunals, and panels have also played an increasingly important role in addressing a range of critical international issues that had previously been resolved through diplomacy and politics alone.[2] As the frequency and the stakes of international adjudication have increased, scholars and practitioners have wisely leveraged the theoretical insights from different fields of scholarship in order to improve the efficacy of the international legal project and thus put its operation, not just its mandate, on a clearer conceptual foundation.

One field of research that has rapidly expanded in conjunction with the proliferation of international courts and tribunals is social

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[1] *See* Cesare P.R. Romano, *A Taxonomy of International Rule of Law Institutions*, 2 J. INT'L DISP. SETTLEMENT 241, 241–42 (2011) (documenting the existence of 142 international "bodies and procedures" that are part of the effort to "control[] implementation of international law").

[2] *See, e.g.*, Erik Voeten, *The Politics of International Judicial Appointments: Evidence from the European Court of Human Rights*, 61 INT'L ORG. 669, 670 (2007) ("[S]cholars have argued that the rulings of the European Court of Justice (ECJ) have fundamentally transformed the European Union (EU) legal system, that decisions by the World Trade Organization's (WTO) Appellate Body have amounted to judicial policymaking, and that judgments by the International Criminal Tribunals for the former Yugoslavia (ICTY) and Rwanda (ICTR) have helped to establish a substantial new body of international law.") (footnotes omitted).

choice theory.[3] This field of scholarship seeks to understand the properties of decision-making in group settings. The key insight of this research is that the decision-making processes of individuals who have formed collective entities—whether as corporations, juries, or panels of appellate courts—are different from the decision-making processes of an individual.[4] This insight has profound implications for many fields of scholarship and has been increasingly incorporated into legal theory.[5] By thinking of judges, juries, and legislatures as collective, and not singular, entities, it has been possible to elucidate the strategic considerations that constrain decision-making in legislative and judicial bodies.[6] Social choice theory has thus successfully been deployed to help explain everything from the evolution of criminal law to constitutional interpretation on the Supreme Court.[7]

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[3] Writing more than twenty-five years ago, Amartya Sen stated that "[t]he number of books and papers published in formal social choice theory has now certainly exceeded a thousand, the bulk of it coming in the last decade and a half." Amartya Sen, *Social Choice and Justice: A Review Article*, 23 J. ECON. LITERATURE 1764, 1765 n.7 (1985).

[4] *See generally* CHRISTIAN LIST & PHILIP PETTIT, GROUP AGENCY: THE POSSIBILITY, DESIGN, AND STATUS OF CORPORATE AGENTS 4 (2011) (defending the existence of group agency as a phenomenon separate from, though reconcilable with, "methodological individualism").

[5] *See id.* at 1 ("The issue of group agency lies at the heart of social-scientific and economic methodology and of legal and political philosophy."). *See also* Adrian Vermeule, *Foreword: System Effects and the Constitution*, *The Supreme Court 2008 Term*, 123 HARV. L. REV. 4, 6 (2009–2010) (arguing that although the topic has not yet been fully explored, "[p]ublic law is rife with system effects"). *See generally* MAXWELL L. STEARNS & TODD J. ZYWICKI, PUBLIC CHOICE CONCEPTS AND APPLICATIONS IN LAW (2009) (describing public choice theory's rise in prominence as due to its providing "means of closing the gap between the normative prescriptions . . . [of] the traditional economic analysis of law . . . [with] the observed realities of legal practice and doctrine").

[6] *See, e.g.*, Adrian Vermeule, *Many-Minds Arguments in Legal Theory*, 1 J. LEGAL ANALYSIS 1, 20–22 (2009) (arguing that the doctrinal paradox may temper the claimed benefits of the "wisdom of the crowds" effect that comes from having many judges decide an issue). *Cf.* CASS R. SUNSTEIN, INFOTOPIA: HOW MANY MINDS PRODUCE KNOWLEDGE 16–19 (2006) (exploring the successes and recommending different methods of aggregating the knowledge of "many minds").

[7] *See, e.g.*, LEO KATZ, WHY THE LAW IS SO PERVERSE 6–9 (2011) (arguing that social choice theory can help to explain a number of peculiar features of our legal and criminal justice system); *see also* Richard H. Fallon, Jr., *The Supreme Court, Habeas Corpus, and the War on Terror: An Essay on Law and Political Science*, 110 COLUM. L. REV. 352, 376 (2010) (arguing that the Supreme Court should be thought of as a "they" and not an "it").

In the context of multi-member courts, one contribution of social choice theory that has been particularly useful is the identification of the doctrinal paradox.[8] This paradox is that when a group of judges has to make decisions in a case that involves several connected propositions, and they have divergent views on how the case should be decided, the outcome of the case can change based on whether the court chooses to aggregate its overall judgment on how the case should be disposed of; or, instead, chooses to aggregate its judgments on each individual proposition. In other words, the same facts, law, and distribution of viewpoints can result in either party winning the case depending on which way the judges choose to count their votes. Although the paradox may be rare, it is more than simply a theoretical possibility. Research on the Supreme Court has shown that the decision on how to aggregate votes in the face of the doctrinal paradox may have altered the result "in well over one hundred cases, and it would certainly have led to different results in twenty or thirty [S]upreme [C]ourt cases."[9] When the doctrinal paradox does occur, it not only creates a logically incoherent decision in the instant case, but also creates a broader problem for the integrity of the development of law because the outcomes of prior cases are incompatible with the reasoning about how individual issues should be viewed.[10] The result is that the paradox risks creating law that is not "consistent, interpretable, [or] action-guiding."[11] It also illustrates the mistake of viewing collective decision-making bodies as singular, rational agents.[12] Despite these ramifications, to date, existing scholarship has focused on either discussing hypothetical examples or high profile cases that arose in appellate litigation in the United States.

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[8] Philip Pettit and others have also more recently referred to this phenomenon as the "discursive dilemma." For further discussion on this point, see *infra* text accompanying note 47.

[9] John M. Rogers, *"Issue Voting" by Multimember Appellate Courts: A Response to Some Radical Proposals*, 49 VAND. L. REV. 997, 999 (1996).

[10] *See generally* Christian List & Philip Pettit, *On the Many as One: A Reply to Kornhauser and Sager*, 33 PHIL. & PUB. AFF. 377, 377 (2005) (citing RONALD DWORKIN, LAW'S EMPIRE (1986)) (discussing the "integrity challenge" presented by the doctrinal paradox).

[11] LIST & PETTIT, *supra* note 4, at 15.

[12] *See id.*

Given this limited emphasis in the existing scholarship, the unique implications that the doctrinal paradox has for international adjudication have been almost entirely ignored by scholars and practitioners. Our project aims to be the first to provide a systematic look at the implications that this important insight from social choice theory has for the design and decision-making procedures of international courts and tribunals. To do so, we have undertaken what are, perhaps, the first efforts to compile comparative data both on the formal decision-making procedures of the permanent international courts, and on the rates that international judges on a range of courts file dissenting and concurring opinions. Using this data, we demonstrate that policy makers and judges have not established procedures regarding what should happen when a decision in a case has two justifiable results, even though the structural features that lead to the doctrinal paradox are present in international courts. Moreover, we will argue that when the doctrinal paradox does occur, the consequences are magnified. This is both because states are able to refuse to comply with international decisions and because transnational legal decisions play an important role in establishing the corpus of international law. Paradoxical decisions convey unclear messages to other courts and legal actors. As a result, the doctrinal paradox is not just an interesting theoretical problem—it is an important source of indeterminacy that should be considered by the practitioners and policy makers who design the institutions that facilitate international adjudication.[13]

Our project makes two important contributions. First, we hope to bring the doctrinal paradox, and more broadly, the problems of judgment aggregation, to the attention of scholars and practitioners of international law. This may help the contributions from research on judgment aggregation to be taken into consideration by the designers of new international courts and tribunals and by judges on existing courts, who should consider whether to take the proactive step of adopting a clear position on judgment aggregation mechanisms. Second, we hope to launch a discussion on how distinct features of adjudication and decision-making in

[13] It is worth noting that indeterminacy is what results when it is unclear how a collective body will act given a set of preferences of judgments. *See* JON ELSTER, EXPLAINING SOCIAL BEHAVIOR: MORE NUTS AND BOLTS FOR THE SOCIAL SCIENCES 413–419 (2007).

different settings can influence the cause and consequences of the doctrinal paradox. Specifically, we propose that scholars seek to explain the mechanisms that lead to the doctrinal paradox in different contexts and the implications that this may have for adjudication. By focusing on the distinct characteristics of different forms of adjudication, policy makers and institutional designers may be more likely to take the risks of indeterminacy in decision-making seriously, and to consider fully the tradeoffs of formal judgment aggregation mechanisms versus more flexible approaches. We believe that both of these contributions have important theoretical and practical implications.

With these goals in mind, our paper proceeds in four parts. In Section 2, we explain the evolution of social choice theory, and then discuss the relevance of this research to the practice of adjudication by multi-member courts. In Section 3, we argue that it is important that the insights from judgment aggregation theory generally, and the doctrinal paradox specifically, be applied to international adjudication. To do so, we canvass the official policies dictating how the judges on permanent international courts and tribunals are to resolve cases, which allows us to illustrate how certain features of international adjudication help to pave the way for occurrence of the doctrinal paradox. Additionally, we analyze how the features of international legal institutions can magnify the consequences of the doctrinal paradox because states have the power to refuse to comply with adverse decisions; we discuss how the mixed messages sent by the decisions can potentially be more problematic to the growth of international law than they would be in a domestic setting. In Section 4, we explore how the doctrinal paradox has arisen in the course of international adjudication and how it could occur in the future. Specifically, we describe how the doctrinal paradox has occurred in the European Court of Human Rights and how it may appear in other contexts like international panels making scientific judgments and during international arbitration. In Section 5, we turn to considering the potential ways to resolve the paradox. Given the considerable variation among international courts and tribunals, we do not attempt to prescribe one solution. Instead, we discuss how the approaches available to resolve the paradox present unique tradeoffs in international contexts. It is our ultimate position that there are justifiable reasons for taking a number of different approaches, but that judgment aggregation

methods should be an important consideration when the policies and procedures of international courts are established.

2. JUDGMENT AGGREGATION THEORY

In the second half of the twentieth century, a massive literature in social choice theory emerged that sought to understand how decisions are made in group settings.[14] The core of this literature focuses on how groups aggregate their preferences, focusing specifically on when groups have to issue a decision on what they believe to be true or false. One strand of this literature takes this premise further by studying how groups make decisions where there are multiple underlying premises that must be considered. Since one important purpose of the court system is to make true-or-false decisions on a series of claims or propositions, this analysis has clear implications for legal scholars and practitioners. To date, the legal theorists who have tried to arbitrage ideas from judgment aggregation theory have primarily focused on how they can help to explain and inform the way that adjudication is conducted in appellate litigation in the United States. As a result, it is our hope to explain the importance and relevance of the problems raised by judgment aggregation theory before turning to examine how the failure to addresses these issues can create harms that are unique to and accentuated in adjudication in international settings.

This Section proceeds in four parts. First, we explain existing research on judgment aggregation theory. Second, we turn to examining one specific problem of judgment aggregation, the doctrinal paradox. This paradox is strongly associated with adjudication by multi-member courts, and is thus of particular relevance to the proceedings at international courts and tribunals. Third, we discuss several high-profile cases where the doctrinal paradox has occurred in appellate litigation in the United States. These examples help to illustrate both that the paradox is more than simply a theoretical possibility, as well as how judges have altered their decisions in inconsistent ways to avoid paradoxical results. Finally, we consider the drawbacks associated with both of the judgment aggregation methods available to resolve cases when

[14] Christian List, *The Theory of Judgment Aggregation: An Introductory Review*, 187 SYNTHESE 179, 179 (2012) ("The theory of judgment aggregation is a growing interdisciplinary research area in economics, philosophy, political science, law and computer science.").

the doctrinal paradox occurs. Although they have previously been debated in the domestic context only, the drawbacks associated with both methods have the potential to manifest themselves in international law and, as we will discuss later in Section 5, may even be worse.

2.1. Social Choice Theory and Judgment Aggregation

The field of social choice theory grew out of the important contributions of Condorcet and Arrow.[15] In 1785, the Marquis de Condorcet published a now-famous essay that demonstrated that when there are at least three people making a decision together over at least three options, there are conditions under which it is impossible for a stable majority to be reached in favor of any of the options.[16] For example, if three people were deciding among options A, B, or C, it could be the case that if each person were to rank their preferences, then it could result that A is preferred to B, that B is preferred over C, but that C is preferred over A.[17] What then is the rational and fair ordering of the options for our group of three? There is none, according to Condorcet; none of the options is preferred by a majority to any of the other options. The important implication of the Condorcet paradox—also known as the voting paradox—is that the principle of transitivity, "which operates as a basic rationality assumption for individuals, cannot be assumed for groups."[18] Despite its theoretical importance,

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[15] *See* MAXWELL L. STEARNS, CONSTITUTIONAL PROCESS: A SOCIAL CHOICE ANALYSIS OF SUPREME COURT DECISION MAKING 44 (2000) ("The intellectual discipline of social choice grows out of a deceptively simple problem that a French philosopher and mathematician, the Marquis de Condorcet, described in a famous essay in 1785.") (footnote omitted); *see also* Richard H. Pildes & Elizabeth S. Anderson, *Slinging Arrows at Democracy: Social Choice Theory, Value Pluralism, and Democratic Politics*, 90 COLUM. L. REV. 2121, 2124 (1990) (noting that, in social choice theory, the "most important discovery continues to be that for which the economist Kenneth Arrow received the Nobel Prize"). For a discussion of the intellectual history of social choice theory with a number of examples that have been said to pre-date Condorcet and Arrow, see WULF GAERTNER, A PRIMER IN SOCIAL CHOICE THEORY 3–6 (2006).

[16] *See* STEARNS, *supra* note 15, at 45 (explaining that the principle of transitivity is that if "C is preferred to A and A is preferred to B" then it logically follows that one must "prefer C to B").

[17] For an easy-to-follow explanation of the Condorcet paradox, see Lewis A. Kornhauser & Lawrence G. Sager, *The One and the Many: Adjudication in Collegial Courts*, 81 CALIF. L. REV. 1, 12 n.22 (1993).

[18] STEARNS, *supra* note 15, at 45.

Condorcet's insight lay largely dormant until it was generalized by Kenneth Arrow in the mid-twentieth century.[19] Arrow's contribution was to extend Condorcet's analysis to prove that when "searching for democratic procedures that would aggregate the given preferences of individuals into a single collective outcome, . . . [Condorcet's] paradox turns out to be an inescapable feature of any decision-making process likely to be considered even minimally fair."[20] Arrow was thus able to show that democratic procedures alone are not able to create rational and fair ways to resolve the paradox that Condorcet had identified.[21]

These initial insights created social choice theory, which is perhaps best described as "the logical study of the properties of collective decision-making processes."[22] Since Arrow's groundbreaking work, the field of social choice theory has exploded to become one of the largest and most influential in the social sciences.[23] This research has focused "not so much [on] the empirical question of how groups actually do make decisions, [but] rather [on] the normative and logical questions of how they should, and could, aggregate information about the views, interests or preferences of individuals into group decisions."[24] Additionally, it is worth noting that not only have Condorcet's and Arrow's important contributions influenced a large volume of scholarship, but the research that has followed from their ideas has

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[19] *See* KENNETH J. ARROW, SOCIAL CHOICE AND INDIVIDUAL VALUES (2d ed. 1963); *see also* Christian List & Ben Polak, *Introduction to Judgment Aggregation*, 145 J. ECON. THEORY 441, 442 (2010) (arguing that "Arrow's work struck a chord across the social sciences"). *But see* ELSTER, *supra* note 13, at 454 ("Kenneth Arrow may have rediscovered and generalized Condorcet's insight, but he was not influenced by him.").

[20] Pildes & Anderson, *supra* note 15, at 2131.

[21] For an excellent explanation of Arrow's contribution, see ALFRED F. MACKAY, ARROW'S THEOREM: THE PARADOX OF SOCIAL CHOICE: A CASE STUDY IN THE PHILOSOPHY OF ECONOMICS 1–5 (1980).

[22] Pildes & Anderson, *supra* note 15, at 2124.

[23] *See* STEARNS, *supra* note 15, at 45 (citing Sen, *supra* note 3, at 1765 n.7) (arguing that "the modern theory of social choice" has "proved to be among the largest and most influential bodies of social science literature"); *see also* Maxwell L. Stearns, *The Misguided Renaissance of Social Choice*, 103 YALE L.J. 1219, 1224 (1994) (noting that the "literature in the field of social choice has proliferated").

[24] John S. Dryzek & Christian List, *Social Choice Theory and Deliberative Democracy: A Reconciliation*, 33 BRIT. J. POL. SCI. 1, 2-3 (2003).

spanned a wide range of topics and fields.[25] This is because the realization that it may be impossible for the preferences of individuals to be aggregated in a way that is consistent and rational has profound implications for those concerned with the outcomes produced by any collective decision-making body, from tenure committees to juries to national legislatures.[26]

One specific branch of social choice theory that is of particular relevance to judicial adjudication is judgment aggregation.[27] The key distinction that makes judgment aggregation a subfield of broader social choice theory is that there is a difference between the *preferences* of individuals and the *judgments* of individuals.[28] In other words, there is a difference between the statement "I prefer outcome A" and the statement "outcome A is correct or true." The implication of this distinction is that there are greater logical constraints imposed upon actors seeking to render judgments than those simply trying to form collective decisions.[29] Judgment aggregation is thus distinct from general social choice theory because it often deals with binary judgments instead of rankings of preferences, and the importance of logical consistency to avoid paradoxical results is higher.

Unsurprisingly, scholars interested in judgment aggregation theory have paid particular attention to adjudication of multi-

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[25] *See* Stearns, *The Misguided Renaissance of Social Choice*, *supra* note 23, at 1224–25 ("Perhaps more astounding than the quantity of literature generated under the label 'social choice' is the range of propositions that Condorcet's initial insight has been used to support in recent years."); *See also* Sen, *supra* note 3, at 1764 (noting that social choice theory has "immediate and extensive implications for economics, philosophy, politics, and the other social sciences").

[26] For an interesting recent example of how social choice theory can be used to understand the law, see KATZ, *supra* note 7.

[27] *See generally* Christian List & Philip Pettit, *Aggregating Sets of Judgments: Two Impossibility Results Compared*, 140 SYNTHESE 207, 214 (2004) (describing an aggregation procedure "which takes as its input a profile of complete, consistent and deductively closed personal sets of judgments across the individuals . . . and which produces as its output a collective set of judgments . . . which is also complete, consistent and deductively closed").

[28] *See* Lewis A. Kornhauser & Lawrence G. Sager, *Unpacking the Court*, 96 YALE L.J. 82, 84 n.4 (1986) ("Sen introduces a distinction between the aggregation of individual *interests* and individual *judgments*.") (citing Amartya Sen, *Social Choice Theory: A Reexamination*, 45 ECONOMETRICA 53 (1977), *reprinted in* AMARTYA SEN, CHOICE, WELFARE AND MEASUREMENT 158 (1982)).

[29] *See* List & Polak, *supra* note 19, at 442 (noting that judgment "aggregation problems differ from preference aggregation not just in their interpretation, but also in the constraints governing them").

member courts.[30] This is both because multi-member courts are collective decision-making institutions[31] and also because there is a high premium placed on logical consistency in judicial decisions. Of course, although adjudication by multi-judge courts may be the primary focus of judgment aggregation, it is worth noting that judgment aggregation theory has evolved into a diverse field of research.[32] Research in judgment aggregation is related to work in other fields, including abstract aggregation theories[33] and belief merging in computer science.[34] In fact, the field has grown to the point that that researchers have even attempted to leverage insights from biology to understand collective decision-making procedures.[35] The common feature of all of these lines of research, however, is the recognition that it can be impossible for multiple actors to democratically make logically consistent decisions across more than one issue.

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[30] *See* Adrian Vermeule, *The Judiciary is a They, Not An It: Interpretive Theory and the Fallacy of Division*, 14 J. CONTEMP. LEGAL ISSUES 549, 553 n.8 (2005) ("Important literatures in social choice and voting theory have explored aggregation problems on multi-judge courts."); Kornhauser & Sager, *supra* note 28, at 88 ("The distinction between preference aggregation and judgment aggregation sharpens our focus on the question of multi-judge courts.").

[31] *See* Vermeule, *supra* note 30, at 552 ("[T]he collective structure of judicial institutions means that it is simply inadequate to theorize about interpretation as if the judiciary were a unitary institution, perhaps conceived as a single individual.").

[32] *See generally* List, *supra* note 14 (exploring the growing research area related to judgment aggregation).

[33] *See, e.g.*, Ariel Rubinstein & Peter C. Fishburn, *Algebraic Aggregation Theory*, 38 J. ECON. THEORY 63, 63 (1986) (presenting a unifying algebraic framework to analyze general aggregation problems); Robert Wilson, *On the Theory of Aggregation*, 10 J. ECON. THEORY 89, 89 (1975) (discussing how algebraic structures support "logical restrictions on the possible ways of aggregating individuals' preferences").

[34] *See, e.g.*, Sébastien Konieczny & Ramón Pino Pérez, *Merging Information Under Constraints: A Logical Framework*, 12 J. LOGIC & COMPUTATION 773, 805 (2002) (presenting a "logical framework for belief base merging in the presence of integrity constraints when there is no preference over the belief bases"); Gabriella Pigozzi, *Belief Merging and the Discursive Dilemma: An Argument-Based Account to Paradoxes of Judgment Aggregation*, 152 SYNTHESE 285, 295 (2006) (using a belief merging operator defined in artificial intelligence to address the literature on judgment aggregation).

[35] *See* Christian List & Adrian Vermeule, *Independence and Interdependence: Lessons from the Hive* 2 (Harvard Law Sch. Pub. Law & Legal Theory Working Paper Series, Paper No. 10-44, 2010), *available at* http://dx.doi.org/10.2139/ssrn.1693908 (building upon judgment aggregation scholarship by exploring the collective decision-making processes of honeybees).

2.2. The Doctrinal Paradox

Although judgment aggregation theory has generated a number of important ideas, one that is of particular importance to adjudication is the doctrinal paradox.[36] The doctrinal paradox was first identified in an important article in the Yale Law Journal by Kornhauser & Sager in 1986; however, the concept was mentioned only in passing.[37] Six years later, Kornhauser introduced the term "doctrinal paradox,"[38] and a body of scholarship began to develop that explored the implications of their discovery.[39] The basic insight of the doctrinal paradox is that when judges have to decide a series of connected issues in order to render an overall judgment in a case, the resulting judgment is dependent on whether the judges take a majority vote on the overall outcome of the case or if the judges instead take separate votes on the individual issues of the case.[40] In other words, the specific protocol that judges use to decide cases can produce different results.

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[36] Kornhauser & Sager, *supra* note 17, at 12 n.22 (noting that "the doctrinal paradox is distinct from the Condorcet paradox"). For an explanation of why the doctrinal paradox is different than the Condorcet, logrolling, sequential, and Ostrogorski paradoxes, see Lewis A. Kornhauser, *Modeling Collegial Courts II: Legal Doctrine*, 8 J.L. ECON. & ORG. 441 (1992) [hereinafter Kornhauser, *Modeling Collegial Courts II*].

[37] Kornhauser & Sager, *supra* note 17, at 1 n.1 (noting that they "identified in passing the doctrinal paradox" in their previous article on judgment aggregation (citing Kornhauser & Sager, *supra* note 28, at 115–16)); s*ee also* List, *supra* note 14, at 2 ("The initial observation that motivated much of the current [research on judgment aggregation] had its origins in the area of jurisprudence, in Kornhauser and Sager's work on decision making in collegial courts . . . .") (citation omitted). *But see* LIST & PETTIT, *surpa* note 4, at 43 (describing historical precursors to the current literature).

[38] *See* Kornhauser, *Modeling Collegial Courts II*, supra note 36, at 467 (outlining how "[c]ase-by-case and issue-by-issue adjudication may, in some circumstances, produce two different resolutions of a case"); s*ee also* List, *supra* note 14, at 181 (noting that the term "doctrinal paradox" was introduced by Kornhauser in his 1992 article). Kornhauser & Sager, *supra* note 17, at 3 ("This paradox, which we call the doctrinal paradox, is a prominent instance of the broader proposition that appellate adjudication is a collective endeavor that can only be fully understood once its collective features are considered.").

[39] *See* Dimitri Landa & Jeffrey R. Lax, *Legal Doctrine on Collegial Courts*, 71 J. POL. 946, 946 (2009) ("[Kornhauser & Sager's initial] result was later named the Doctrinal Paradox, and it inspired a growing body of literature on collegial application of a fixed legal rule, spanning legal theory, social choice theory, and deliberative democratic theory.") (citations omitted).

[40] For a useful, concise statement of the doctrinal paradox, see Jean-François Bonnefon, *Behavioral Evidence for Framing Effects in the Resolution of the Doctrinal*

The doctrinal paradox can be best illustrated through a simple hypothetical example initially offered by Philip Pettit. His example considers a three-judge court deciding a torts case.[41] To decide the case, assume that the existing legal doctrine holds that the judges must first decide the outcome of two separate issues. The first issue is whether the defendant's negligence was causally responsible for the harm suffered by the plaintiff. The second issue is whether the defendant had a duty of care towards the plaintiff. Based on their answers to those two issues, the judges then have to determine if they believe that the plaintiff is indeed liable in the case. Assume the three judges make the following judgments on each of the three questions:

	Cause of Harm?	*Duty of Care?*	*Liable?*
Judge A	Yes	Yes	Yes
Judge B	Yes	No	No
Judge C	No	Yes	No
Outcome	**2 – 1**	**2 – 1**	**1 - 2**

In this scenario, there are two judges who believe that the defendant is not liable. As a result, if the court were to aggregate their judgment by simply taking the majority view as to whether the defendant was liable, the decision would be in favor of the defendant. On the other hand, there were two votes in favor of the plaintiff on both of the sub-issues of the case. If the court were to aggregate their judgment by taking the majority view on each of the sub-issues of the case, the result would be in favor of the plaintiff. Since these are both logically justifiable ways to

Paradox, 34 SOC. CHOICE & WELFARE 631, 631 (2010) ("A doctrinal paradox occurs when majority voting on a compound proposition (such as a conjunction or disjunction) yields a different result than majority voting on each of the elements of the proposition."). For one of the initial articulations of the paradox, see Kornhauser & Sager, *supra* note 17, at 11 ("The fact that a court in a rather simple case of this sort could face a choice between two voting protocols, each of which seems quite reasonable, indeed natural, to follow and yet discover that the outcome of the case will turn on the choice between them, is the product of a structural paradox latent in appellate adjudication.").

[41] Philip Pettit, *Collective Persons and Powers*, 8 LEGAL THEORY 443, 444–45 (2002). It has been argued that this was roughly the situation in the famous torts case, *Palsgraf v. Long Island R.R. Co.*, 162 N.E. 99 (N.Y. 1928). Lewis A. Kornhauser, *Aggregate Rationality in Adjudication and Legislation*, 7 POL., PHIL. & ECON. 5, 15 (2008).

aggregate the judgment of the court, the aggregation method that the court selects will determine the outcome of the case. Thus, as this illustration of the doctrinal paradox makes clear, this distribution of individual beliefs makes the ultimate outcome of the case indeterminate.[42]

From this insight—that the way judgments are aggregated impacts the outcome of cases—a robust literature quickly developed that focused on multi-member courts.[43] The initial

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[42] It is worth noting that judges may still be open to persuasion and willing to change their minds on how issues should be resolved. The doctrinal paradox occurs, however, when the views held by decision-makers result in the type of distribution we have just described. In other words, the logic does not assume that preferences are fixed, but instead that at times, even judges open to persuasion may not reach agreement.

[43] For a general discussion of the evolution of the literature, see Lewis A. Kornhauser, *Appeal and Supreme Courts*, *in* 5 ENCYCLOPEDIA OF LAW AND ECONOMICS: THE ECONOMICS OF CRIME AND LITIGATION 45 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000), *available at* http://encyclo.findlaw.com/7200book.pdf [hereinafter Kornhauser, *Appeal and Supreme Courts*]. To follow the progression of the debate in jurisprudential circles as set forth in Kornhauser, *Appeal and Supreme Courts*, see John M. Rogers, *"I Vote This Way Because I'm Wrong": The Supreme Court Justice as Epimenides*, 79 KY. L.J. 439 (1991) (preferring case-by-case aggregation to issue-by-issue aggregation because of the latter's possibility of creating indeterminacy and incoherence); Lewis A. Kornhauser, *Modeling Collegial Courts I: Path-Dependence*, 12 INT'L REV. L. & ECON. 169 (1992) (identifying the possibility of choosing among result-bound, rule-bound, and reason-bound elements of *stare decisis* in the process of decision-making and arguing in favor of result-bound decisions); Kornhauser, *Modeling Collegial Courts II*, *supra* note 36, at 453–57 (introducing the term "doctrinal paradox" and differentiating it from the Condorcet cycle); David Post & Steven C. Salop, *Rowing Against the Tidewater: A Theory of Voting by Multijudge Panels*, 80 GEO. L.J. 743 (1992) [hereinafter Post & Salop, *Rowing Against the Tidewater*] (favoring issue-by-issue aggregation because it will yield the same results every time and encourages collegial deliberation among judges); Kornhauser & Sager, *supra* note 17, at 57 (suggesting that the multi-judge panels have a "metavote" on whether the judges should adopt a case-by-case outcome or an issue-by-issue outcome); John M. Rogers, *supra* note 9, at 1038 (arguing against issue-by-issue aggregation because judges cannot agree on how to divide the issues, and even if they were to agree, judges would occasionally oppose a judgment of their own court); Maxwell L. Stearns, *How Outcome Voting Promotes Principled Issue Identification: A Reply to Professor John Rogers and Others*, 49 VAND. L. REV. 1045, (1996) (challenging Rogers' argument that dividing issues is a difficult task); David G. Post & Steven Salop, *Issues and Outcomes, Guidance, and Indeterminacy: A Reply to Professor John Rogers and Others*, 49 VAND. L. REV. 1069 (1996) [hereinafter Post & Salop, *Issues and Outcomes*] (supporting Stearns's argument that it is not problematic to divide issues in decision-making); Evan H. Caminker, *Sincere and Strategic Voting Norms on Multimember Courts*, 97 MICH. L. REV. 2297, at 2380 (1999) (arguing against vote-trading and collegial decision-making); Jonathan Remy Nash, *A Context-Sensitive Voting Protocol for Multimember Courts*, 56 STAN. L. REV. 75, 75–15 (2003) (offering a

focus of research into the doctrinal paradox was thus on the implications for appellate adjudication.[44] Although the original paradox formulation focused on cases where judges must decide issues that are sequenced in an specific order because of existing legal doctrine,[45] Philip Pettit generalized the doctrinal paradox by showing the problem arises any time a group must decide a series of related issues.[46] Pettit thus renamed this phenomenon the *discursive dilemma*,[47] and he helped extend the reach of the literature from concerns over jurisprudence to political and formal theory more broadly.[48] In this paper, we will continue to refer to this phenomenon as the doctrinal paradox.

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methodology for addressing disputes when doctrinal paradoxes arise); Michael I. Meyerson, *The Irrational Supreme Court*, 84 Neb. L. Rev. 895, at 955 (2006) (exploring the idea that "group decision-making leads to the unavoidable possibility of truly irrational opinions, those in which a majority of Justices vote that one party prevails on all relevant issues, but that party still loses that case").

[44] *See* Kornhauser & Sager, *supra* note 17, at 6 ("Appellate adjudication by multi-judge courts is a complex practice which has important ingredients of both redundant and collegial enterprise."); Kornhauser & Sager, *supra* note 28, at 82 ("Appellate adjudication, the common, almost exclusive focus of theories of adjudication, is thus essentially a group process, yet extant theories neither explain the group nature of the process nor take it into account.") (footnote omitted).

[45] Philip Pettit, *Groups with Minds of Their Own*, *in* SOCIALIZING METAPHYSICS: THE NATURE OF SOCIAL REALITY 167, 168 (Frederick F. Schmitt ed., 2003) ("This paradox arises when a multimember court has to make a decision on the basis of received doctrine as to the considerations that ought to determine the resolution of a case: that is, on the basis of a conceptual sequencing of matters to be decided.") (citation omitted).

[46] *See* Philip Pettit, *Deliberative Democracy and the Discursive Dilemma*, 11 PHIL. ISSUES 268, 274 (2001) (listing five basic elements that summarize the doctrinal paradox).

[47] See *id.* at 272 ("I prefer the word 'discursive', because the problem in question is not tied to the acceptance of common doctrine, only to the enterprise of making group judgments on the basis of reasons. I prefer the word 'dilemma', because while the problem generates a choice in which each option has its difficulties, it does not constitute a paradox in any strict sense.").

[48] For an excellent review of the evolution of the literature that has emerged from Kornhauser & Sager's discovery of the doctrinal paradox, see List, *supra* note 14. For examples of the formularization and increasingly generalized nature of the literature that has emerged, see generally, Franz Dietrich & Philippe Mongin, *The Premiss-Based Approach to Judgment Aggregation*, 145 J. ECON. THEORY 562 (2010); Franz Dietrich & Christian List, *Strategy-Proof Judgment Aggregation*, 23 ECON. & PHIL. 269 (2007); Christian List, *The Discursive Dilemma and Public Reason*, 116 ETHICS 362 (2006); Christian List, *The Probability of Inconsistencies in Complex Collective Decisions*, 24 SOC. CHOICE & WELFARE 3 (2005); Christian List & Philip Pettit, *On the Many as One: A Reply to Kornhauser and Sager*, 33 PHIL. & PUB. AFF. 377

2.3. The Doctrinal Paradox in Practice

Although scholars discussing the doctrinal paradox have primarily focused on situations in which the problems associated with judgment aggregation could theoretically arise,[49] research on this topic did not take off until a series of court cases brought the paradox to the attention of academics.[50] Shortly after Kornhauser & Sager's initial identification of the doctrinal paradox, two Supreme Court cases occurred in which a Justice purposely voted *against* the rationale he agreed with to avoid the distribution of votes fitting the conditions of the doctrinal paradox. Scholars then identified other cases where the doctrinal paradox occurred in the course of appellate litigation.

The first of the Supreme Court cases was *Pennsylvania v. Union Gas Co*.[51] In this case, the Supreme Court had to decide two related issues.[52] The first issue was whether the Eleventh Amendment bars Congress from acting under the Commerce Clause in a way that makes states vulnerable to suit in federal court. The second issue was, assuming that Congress did have the power, whether the Superfund Amendments and Reauthorization Act of 1986 (SARA) was an exercise of that power. For the case to go forward, both questions had to be answered "yes." In this instance, five Justices *did* answer "yes" to each question—but not the same five. As a result of the distribution of views, only four Justices were supportive of allowing the suit to go forward. To avoid this paradoxical result, Justice White explicitly changed his vote on the outcome of the case in favor of allowing the suit to go forward, although his reasoning would have otherwise dictated against it.

(2005); Lewis A. Kornhauser & Lawrence G. Sager, *The Many as One: Integrity and Group Choice in Paradoxical Cases*, 32 PHIL. & PUB. AFF. 249 (2004).

[49] *See, e.g.*, List, *supra* note 14, at 179 (noting that the problems associated with judgment aggregation theory can arise in contexts "ranging from legislative committees to referenda, from expert panels to juries and multi-member courts, from boards of companies to international organizations, from families and informal social groups to societies at large").

[50] *See, e.g.*, Kornhauser & Sager, *supra* note 17, at 1 n.1 (noting that the rise in scholarship on this topic is likely because "the Supreme Court's recent and disturbing encounters with the doctrinal paradox have begun to excite attention").

[51] 491 U.S. 1 (1989). For a discussion of this case, see generally Rogers, "*I Vote This Way*", *supra* note 43.

[52] Kornhauser & Sager, *supra* note 17, at 14.

Thus, the court only avoided the doctrinal paradox because an individual Justice changed his vote.

	Pennsylvania v. Union Gas Co.		
	Power to Act?	***Exercised in SARA?***	***Allow Suit?***
Blackmun	Yes	Yes	Yes
Brennan	Yes	Yes	Yes
Kennedy	No	No	No
Marshall	Yes	Yes	Yes
O'Connor	No	No	No
Rehnquist	No	No	No
Scalia	No	Yes	No
Stevens	Yes	Yes	Yes
White	Yes	No	?
Outcome	**5–4**	**5–4**	**?**

Just two years later, the same phenomenon occurred in *Arizona v. Fulminante*.[53] In *Fulminante*, the Supreme Court decided three connected issues.[54] The first issue was whether the defendant in the case was coerced into a confession. The second issue was whether the "harmless error" doctrine applies if a coerced confession is entered into evidence. Assuming both issues are answered in the affirmative, the third issue was whether the admission of the defendant's testimony in this particular case was a non-harmless error. Only if all three questions were answered "yes" would the defendant be given a new trial. In this case, a majority did answer affirmatively on each issue. However, as with *Pennsylvania v. Union Gas Co.*, the distribution of beliefs was such that if the Justices voted based on their individual determination as to whether a new trial should occur, the answer would be no. Here again, the two aggregation methods produced different outcomes.[55] As a result, Justice Kennedy changed his vote on whether a new trial should be awarded so that the outcome of the

[53] 499 U.S. 279 (1991).

[54] Kornhauser & Sager, *supra* note 17, at 14–15.

[55] As others have argued, it is important to speak in the "speculative voice" in this case because Justice Souter chose not to vote on every part of the case. Kornhauser & Sager, *supra* note 17, at 15 n.36.

case reflected the votes on each of the individual propositions in the case.

Arizona v. Fulminante

	Coerced Confession?	*Harmless Error Applied?*	*Non-harmless Error?*	*New Trial?*
Blackmun	Yes	No	Yes	Yes
Kennedy	No	Yes	Yes	?
Marshall	Yes	No	Yes	Yes
O'Connor	No	Yes	No	No
Rehnquist	No	Yes	No	No
Scalia	Yes	Yes	No	No
Souter	No	Yes	Not Decided	Not Decided
Stevens	Yes	No	Yes	Yes
White	Yes	No	Yes	Yes
Outcome	**5–4**	**5–4**	**5–3**	**?**

In addition to these two examples where Justices changed their votes on the outcome of the case to avoid the doctrinal paradox, scholars identified and began to debate a third case in which the doctrinal paradox came before the Supreme Court.[56] In *National Mutual Insurance Co. v. Tidewater Transfer Co.*,[57] the Supreme Court had to decide two issues to determine if diversity jurisdiction should extend to citizens of the District of Columbia.[58] The first issue was whether the District of Columbia counted as a "state" for the purpose of diversity jurisdiction in federal court. The second issue was whether Congress could extend diversity jurisdiction beyond the strict confines of Article III of the Constitution. An affirmative answer to either question would provide a basis to extend diversity jurisdiction to the citizens of D.C. In the case, however, a substantial majority rejected both rationales. That said, there were still five votes in favor of extending diversity jurisdiction overall. As a result, by a margin of five votes to four,

[56] *See, e.g.*, Post & Salop, *Rowing Against the Tidewater*, *supra* note 43, at 748–50, 764–65 (describing *National Mutual Insurance v. Tidewater Transfer Co.*, 337 U.S. 582 (1949), as an example of the doctrinal paradox).

[57] 337 U.S. 582 (1949).

[58] *See* Kornhauser & Sager, *supra* note 17, at 20–21 (summarizing *Tidewater*'s doctrinal issues).

the Court decided to extend jurisdiction, although a substantial majority of the Court rejected both possible rationales for doing so.

National Mutual Insurance v. Tidewater Transfer Co.

	Is D.C. a "State"?	*Extending Article III?*	*Statute Valid?*
Black	Yes	No	Yes
Burton	Yes	No	Yes
Douglas	No	No	No
Frankfurter	No	No	No
Jackson	Yes	No	Yes
Murphy	No	Yes	Yes
Reed	No	No	No
Rutledge	No	Yes	Yes
Vinson	No	No	No
Outcome	**3–6**	**2–7**	**5–4**

These examples help illustrate three important points about the doctrinal paradox. First, the doctrinal paradox is not simply a theoretical possibility; the opinions of judges in real cases have been distributed such that the outcome of the case hinged on the method of judgment aggregation that was employed. Second, since judges are willing to change their votes to avoid the doctrinal paradox, it may be that the doctrinal paradox is influencing the outcome of cases where the paradox itself is not observed. Third, if courts do not explicitly select a formal judgment aggregation method, individual judges may change their votes to ensure the outcome of the case is consistent with the method they deem most legitimate. Taken together, these points illustrate why the doctrinal paradox should be of interest to scholars and practitioners who care about judicial outcomes being consistent and fair.

2.4. The Options for Avoiding Indeterminacy

As the previous discussion illustrates, it is not merely a theoretical possibility that the distribution of judgments in a case can create two logically justifiable outcomes. Rather, the doctrinal paradox is a real phenomenon that impacts the disposition of cases adjudicated on multi-member courts. As described above, courts have two possible judgment aggregation methods at their

disposal.[59] The first, *outcome-based voting*, resolves cases by counting the judges' votes on what the result of the case should be. This was the approach taken by the Court in *Tidewater*.[60] The second method, *issue-based voting*, resolves cases by taking the majority vote on each issue considered in the case, and then adopting the logically required outcome dictated by those votes. In both *Union Gas*[61] and *Fulminante*,[62] one Justice changed his vote so that the resolution of the case was consistent with issue-based voting. Although these two judgment aggregation methods have been given different names by different commentators,[63] there has been an active debate comparing the relative drawbacks of these approaches in the decision-making processes of the U.S. Supreme Court and of the Circuit Courts of Appeal.[64]

Unfortunately, the doctrinal paradox is a problem without an easy solution. The primary objection to *issue-based voting* has focused on the problems associated with forcing judges to agree on what issues are at stake in each case.[65] In cases with clearly established doctrine that dictates exactly what issues the members of a court must decide and in what order they must decide them, this is not a major problem, and issue-based voting may be a reasonable practice. However, in many cases, identifying the legal issues is itself a complicated matter. For example, current Sixth

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[59] *See, e.g.*, Dietrich & Mongin, *supra* note 48, at 563 ("*Prima facie*, there are two plausible ways for the court to reach a decision by taking majority votes.").

[60] *See supra* text accompanying notes 56–58 (discussing the doctrinal paradox in *Tidewater*).

[61] *See supra* text accompanying notes 51–52 (discussing *Union Gas*).

[62] *See supra* text accompanying notes 53–55 (discussing *Fulminante* and comparing the case with *Union Gas*).

[63] *See* List & Polak, *supra* note 19, at 459 (noting that within the class of aggregation rules are included "premise-based rules" or "issue-by-issue voting," on the one hand, and "conclusion-based rules" or "case-by-case voting," on the other); Bonnefon, *supra* note 40, at 632 (discussing "elemental" versus "compound aggregation").

[64] We focus on the drawbacks because the existing scholarship primarily addresses which one of the judgment aggregation methods has greater flaws. *See, e.g.*, Post & Salop, *Issues and Outcomes*, *supra* note 43, at 1084 (advocating for issue-based voting while noting that "[b]oth issue voting and outcome voting have potential flaws.").

[65] For a very clear summary of how social choice theory explains this result, see Stearns, *supra* note 43, at 1063 ("Without outcome[-based] voting, the determination of issues and issue levels would determine the outcome of the case.").

Circuit Judge John M. Rogers illustrated this problem while still a professor at the University of Kentucky College of Law by identifying seventeen different issues that were decided, explicitly or implicitly, by the Supreme Court in *Tidewater* en route to determining how to dispose of the case.[66] If courts were to adopt issue-based voting procedures, the concern is that "judges would have an incentive to divide down [the issues of the case], until a favorable voting path emerges . . . ."[67] This method thus gives the advantage to the members of a court who can successfully manipulate the proceedings to ensure that their preferred set of issues are the ones that will be decided in any given case.[68] Moreover, issue-based voting creates the additional problem of harming judicial economy because judges are forced to consider how they would resolve each issue that the court determined was important in a given case, even if they have already found a dispositive issue.[69] Although some scholars have downplayed these concerns, the major drawback of issue-based voting is that it pushes judges to focus on strategically advantageous issues instead of legally important ones.[70]

In contrast, the major drawback of *outcome-based voting* is that it produces confusing legal precedent. The argument is that when decisions in cases such as *Tidewater* are handed down, the "orderly development of legal doctrine" is harmed.[71] When a case is decided such that the reasoning and votes on the individual issues do not support the conclusion reached by the court, "it produces precedent that is both less useful and may be incapable of coherent

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[66] Rogers, *supra* note 9, at 1002–04 (cataloguing the "Issues on which justices disagreed in *Tidewater*" as well as "the number of votes for and against the issue").

[67] Stearns, *supra* note 43, at 1064.

[68] *See id.* ("With issue[-based] voting, one imagines [judicial] confirmation proceedings in which the parliamentary skills of the Supreme Court nominees are . . . more[] important than such matters as integrity, fitness for judicial service, knowledge of the law, or even jurisprudential perspective.").

[69] Post & Salop, *Rowing Against the Tidewater*, *supra* note 43, at 758-59 (describing the judicial economy argument often advanced in favor of outcome-based voting).

[70] *See* Post & Salop, *Issues and Outcomes*, *supra* note 43, at 1074–75 (explaining Professor Rogers' "indeterminacy objection" to issue-based voting—that "[t]here is no developed body of law on how issues must be divided for separate voting").

[71] Kornhauser & Sager, *supra* note 17, at 25.

application."[72] It is unclear, for instance, how a court should apply the *Tidewater* decision to a future case that involves only a subset of the same issues because, in *Tidewater*, the finding on the individual issues did not support the ultimate outcome. Even if outcome-based voting makes it easier to decide a specific case because the judges do not have to decide which issues are important, this method will make the resolution of future cases harder due to the logical disconnect between the rationales that have been provided and the outcomes that are required. Of course, it could be said that this is no more problematic than plurality opinions, which courts already have to interpret to determine precedent,[73] but it is still a problem that outcome voting injects logically inconsistent positions into the law.

Given that this discussion may make issue-based and outcome-based judgment aggregation methods both seem unappealing, it is perhaps unsurprising that some scholars have advocated a flexible approach that allows multi-member courts to implement one or the other method based on the facts and circumstances of an individual case.[74] Although we will discuss the tradeoffs associated with flexible voting in more detail in Section 5, it is important to note at the outset that failure to clearly establish a fixed judgment aggregation method also has a significant drawback: indeterminacy. Indeterminacy occurs when it is unclear how an actor or institution—like a multi-member court—will act in the face of a given set of preferences or judgments.[75] Indeterminacy is a problem for judicial adjudication because it means that the same case could have a different result depending

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[72] *See* Post & Salop, *Issues and Outcomes*, *supra* note 43, at 1070 (referring to this problem as the "guidance objection" to outcome-based voting).

[73] *See* Rogers, *supra* note 9, at 1007 (stating that, while practitioners seeking to apply plurality opinions "must examine how the authors of each opinion would resolve the case," plurality opinions, in aggregate, "have the full force of law") (citing Evan H. Caminker, *Precedent and Prediction: The Forward-Looking Aspects of Inferior Court Decisionmaking*, 73 TEX. L. REV. 1, 46 (1994)).

[74] *See, e.g.*, Kornhauser & Sager, *supra* note 17, at 30–33 (advocating for judges to use a "metavote"—a vote at the "collegial action" stage on whether to apply issue-based or outcome-based voting—in cases where the doctrinal paradox occurs); Nash, *supra* note 43, at 146–57 (proposing a "context-sensitive voting protocol" by which courts determine whether to use either issue-based or outcome-based voting).

[75] *See* ELSTER, *supra* note 13, at 415–16 (using the example of a municipal council to demonstrate that social preferences might be indeterminate—there might be no procedure that accurately predicts the outcome of a group decision).

on which procedure the court adopted, and that it is impossible to know which way the court will act from case to case.[76] For example, imagine the cries of unfairness that would arise if in some cases a tie vote by the Supreme Court (which can occur if a Justice recuses himself or herself) resulted in deferring to the circuit court, while in other cases the tie was broken by the most senior Justice participating in the decision. Moreover, an additional drawback of a flexible approach is that when confronted with a case that presents a doctrinal paradox, judges will have to decide both the issues of the case and the procedure that should be used to aggregate the vote. As a result, simply leaving courts to address the doctrinal paradox may not necessarily be the optimal solution.

At this point, it should hopefully be clear that there are tradeoffs associated with every approach when faced with the doctrinal paradox. What is less clear, however, is how the particular features of adjudication in international settings affect these tradeoffs. International courts may have reason to be especially sensitive to the problem of wasting judicial resources associated with issue-based voting, the problem of communicating unclear precedent to other legal actors associated with outcome-based voting, and the problem of real and perceived arbitrariness associated with flexible approaches. It is thus worth analyzing the implications of the doctrinal paradox for adjudication in international settings. We begin this project here.

3. CAUSES & CONSEQUENCES OF THE DOCTRINAL PARADOX IN INTERNATIONAL LAW

While scholars have long recognized the important concerns that the doctrinal paradox poses for judicial adjudication, very little research has addressed its application to international adjudication. This oversight is particularly surprising because, in the second half of the twentieth century, the number of forums for international dispute resolution exploded.[77] Today there are more

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[76] *See* Vermeule, *supra* note 5, at 14 ("Here too, however, a less provocative way of stating the problem is in terms of indeterminacy rather than incoherence: a given profile of judgments will yield different collective judgments under different aggregation procedures.").

[77] *See generally* Cesare P.R. Romano, *The Proliferation of International Judicial Bodies: The Pieces of the Puzzle*, 31 N.Y.U. J. INT'L L. & POL. 709 (1999) (providing a systemic overview of the expansion of the international judiciary). *See also* Eric A. Posner & John C. Yoo, *Judicial Independence in International Tribunals*, 93 CALIF. L.

than 140 different judicial bodies and procedures that exist to resolve international legal disputes.[78] Of these bodies, there are currently more than twenty-five permanent international courts with independent judges issuing decisions that are legally binding.[79] These international judicial bodies have become increasingly powerful while addressing a range of important substantive legal issues,[80] from facilitating the integration of Europe[81] to changing the scope of the laws of war.[82] Moreover, the proliferation of international institutions and courts has also given rise to a series of new issues that are not simply international analogs of domestic problems, but instead unique by-products of the international environment.[83] While it is indisputable that the

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REV. 1, 3 (2005) ("[I]nternational courts proliferated in the aftermath of World War II, with a noticeable acceleration after the end of the Cold War.").

[78] *See* Romano, *supra* note 1, at 241–42 (stating that the rapid growth of international dispute resolution forums in the post-Cold War era, "with well over 142 bodies and procedures," has been difficult to "comprehensively map").

[79] *See* Karen J. Alter, *The Evolving International Judiciary* (Buffett Ctr. for Int'l & Comparative Studies, Working Paper Series No. 11/002, 2011) *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1859507 ("[T]here are at least 26 permanent international courts . . . ."); *see also* Erik Voeten, *The Impartiality of International Judges: Evidence from the European Court of Human Rights*, 102 AM. POL. SCI. REV. 417, 417 (2008) ("[S]tates have created about two dozen permanent international judicial bodies with formally independent judges that issue legally binding judgments and many more quasi-judicial or nonpermanent dispute settlement mechanisms.") (citing DANIEL TERRIS, CESARE P.R. ROMANO, & LEIGH SWIGART, THE INTERNATIONAL JUDGE: AN INTRODUCTION TO THE MEN AND WOMEN WHO DECIDE THE WORLD'S CASES 4–5 (2007)).

[80] Posner & Yoo, *supra* note 77, at 11 ("[I]nternational tribunals have become more powerful as a matter of formal law over time. Compulsory jurisdiction has become more common, and the judiciaries have become more independent of the states that establish them.").

[81] *See generally* J.H.H. Weiler, *The Transformation of Europe*, 100 YALE L.J. 2403 (1991) (explaining the role of the European Court of Justice, among other international institutions, in creating a cohesive European Community). *See also* Randall W. Stone, *Risk in International Politics*, 9 GLOBAL ENVTL. POL. 40, 58 (2009) (noting that "international courts have steadily expanded their prerogatives and provided a powerful impulse to European integration") (citing Geoffrey Garrett, *International Cooperation and Institutional Choice: The European Community's Internal Market*, 46 INT'L ORG. 533 (1992)).

[82] *See generally* Allison Marston Danner, *When Courts Make Law: How the International Criminal Tribunals Recast the Laws of War*, 59 VAND. L. REV. 1 (2006) (discussing the role of the Nuremberg, Tokyo, Yugoslavia and Rwanda international military and criminal tribunals and the International Criminal Court in shaping the laws of war).

[83] *See, e.g.*, Stone, *supra* note 81, at 41 (arguing that long-term problems are harder to address "at the international level, because the international level

scope of international adjudication is expanding, it is also the case that international legal institutions are still in their early stages of development, and their decisions are frequently ignored by litigants.[84] As a result of the unique challenges faced by international courts and tribunals, international adjudication is fertile ground upon which to explore the implications of the doctrinal paradox. This Section aims to start that process by exploring the reasons why the doctrinal paradox is especially potent in international settings. To do so, we have collected original data on the policy and procedures used to decide cases in permanent international courts. Further, we undertake one of the first efforts to present comparative data on the rates at which dissenting and concurring opinions are filed in international courts.

This Section proceeds in four parts. First, we discuss the lack of attention paid to the unique risks associated with judgment aggregation and the doctrinal paradox in international adjudication. Many parties are guilty of this lapse, including political theorists working on social choice questions, scholars of international law, and policy makers who have established international institutions. Second, we explore why the conditions that lead to the doctrinal paradox are present in international settings. These reasons include: the role of dissenting opinions in international judgments, the potential for bias that results from the design of international adjudicatory bodies, and the still-evolving nature of international laws and procedures. Third, we explain that when the designers of international legal institutions do not consider the tradeoffs associated with different judgment aggregation policies, judges are placed in a position to establish procedures that may lead to undesirable outcomes. Specifically, we argue that the failure to establish formal judgment aggregation rules creates a risk of both allowing informal coercion and

imposes greater supermajority requirements"); Karen J. Alter, *Delegating to International Courts: Self-Binding vs. Other-Binding Delegation*, 71 LAW & CONTEMP. PROBS. 37, 43–44 (2008) (explaining how compulsory dispute adjudication "differs fundamentally at the international level compared to the domestic level" because the interests of the state and the international court are not aligned); Jacob Katz Cogan, *Competition and Control in International Adjudication*, 48 VA. J. INT'L L. 411, 434 (2008) (noting that "there are a number of factors, some unique . . . to the international system, that work in favor of judicial discretion").

[84] *See infra* Section 3.4.

exacerbating the democratic deficit already present in international institutions. Finally, this Section concludes by arguing that the doctrinal paradox poses risks to already-weak international institutions that are greater than those posed in domestic settings. Simply put, in international settings, disgruntled litigants have a greater range of options, including noncompliance and exit, when confronted with adverse decisions. Consequently, issuing decisions that do not clearly communicate the state of the law impedes the development of the corpus of international law.

3.1. Situating Judgment Aggregation in International Adjudication

The contributions of social choice theory, including the doctrinal paradox, have particular relevance for understanding the law generally, collective decision-making, and how to structure practices and procedures in adjudicatory institutions.[85] The value of these insights is not only applicable in domestic contexts, but also provides leverage to problems that arise in international settings. Despite this fact, there has been an unfortunate discrepancy between the progress made in judgment aggregation theory and the application of this theory to international adjudication. In this Section, we argue that there has been a lack of attention to the unique features of judgment aggregation in international settings from scholars researching the doctrinal paradox and social choice theory more broadly, from international law scholars, and from the institutional designers of international courts and tribunals.

First, scholars of the doctrinal paradox have not considered the unique features of international adjudication in their research. The first discussion of the doctrinal paradox arose in passing in Kornhauser & Sager's prominent article *Unpacking the Court*, which analyzed theories of adjudication for multi-judge courts.[86] The subsequent research on this topic moved to a discussion of specific Supreme Court and appellate court decisions in the United States.[87]

From this line of research, scholars quickly pivoted to abstracting away from specific historical cases, pointing out that

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[85] *See generally* STEARNS & ZYWICKI, *supra* note 5.

[86] *See* Kornhauser & Sager, *supra* note 28.

[87] *See supra* Section 2.3; *see, e.g.*, Rogers, *"I Vote This* Way", *supra* note 43 (citing various Supreme Court decisions to evaluate the ramifications of the doctrinal paradox upon the vote of various justices).

the doctrinal paradox is a general problem that can occur in a range of situations.[88] Since this analytic move, researchers have primarily focused on providing hypothetical cases where the doctrinal paradox could arise in order to illustrate broader theoretical claims.[89] The result is that researchers have not only failed to use examples from international courts and tribunals to illustrate their points,[90] but they have also failed to consider how indeterminate results might either arise from or create unique problems in international settings.[91]

Second, academics researching adjudication in international courts and tribunals do not appear to have taken note of the doctrinal paradox, or judgment aggregation theory more broadly, in their scholarship. Although there have been passing references to the doctrinal paradox in scholarship on international law,[92] it does not appear that any research has tried to systematically explain the implications that this line of research has for international courts and tribunals. The cursory attention that the doctrinal paradox has received is in many ways surprising. In the last several decades, scholarship in international law has increasingly incorporated ideas from international relations and other disciplines.[93] This development has been largely embraced

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[88] *See, e.g.*, Pettit, *supra* note 41, at 451–54 (explaining that the doctrinal paradox or "discursive dilemma" arises in any group context).

[89] *See, e.g.*, List & Polak, *supra* note 19, at 6–15 (describing the interplay of judgment aggregation and Arrow's theorem); *see also* List, *supra* note 14, at 179 ("[T]he theory of judgment aggregation looks at the structural properties that different judgment aggregation problems have in common, abstracting from the details of individual cases.").

[90] Not only have prominent scholars not discussed cases from transnational courts, but there also does not appear to be much discussion in the literature of examples of the doctrinal paradox occurring in domestic courts outside the United States. *But see* Kornhauser & Sager, *supra* note 17, at 12 (mentioning the House of Lords and other English "superior" courts as an example of collegial courts).

[91] *See* D. Daniel Sokol, *Explaining the Importance of Public Choice for Law*, 109 MICH. L. REV. 1029, 1040–48 (2011) (explaining the failure of Stearns and Zywicki's recent book PUBLIC CHOICE CONCEPTS, *supra* note 5, to address the presence of these issues in the international context).

[92] *See, e.g.*, Jens David Ohlin, *Joint Intentions to Commit International Crimes*, 11 CHI. J. INT'L L. 693, 741 (2011) (citing scholarship on the doctrinal paradox to support the proposition that "group behavior must be analyzed at the group level in order to make sense of it") (internal citation omitted).

[93] Kenneth W. Abbott, *International Relations Theory, International Law, and the Regime Governing Atrocities in Internal Conflicts*, 93 AM. J. INT'L L. 361, 361 (1999)

as a way of developing a deeper and more complex understanding of how diverse political actors behave during international adjudication.[94]

Moreover, instead of ignoring theoretical concerns, the literature on international courts and tribunals has largely formed around several important debates with strong theoretical underpinnings. For example, scholars have actively debated whether the proliferation of international legal institutions creates a risk of fragmentation;[95] which features of international tribunals are most likely to engender compliance by parties to the litigation;[96] and what the limits of international law are and should be.[97] As part of this recent theoretical turn in international legal scholarship, there have even been occasional attempts to integrate ideas from social choice theory.[98] These attempts, however, have

("[I]nternational relations (IR) theory, a branch of political science, has animated some of the most exciting scholarship in international law.").

[94] *See, e.g.*, David D. Caron, *Towards a Political Theory of International Courts and Tribunals*, 24 BERKELEY J. INT'L L. 401, 406 (2006) ("[O]ur understanding of the variety of political functions of, and justifications for, courts becomes richer and more complex by examining international courts and tribunals not only in terms of international relations, but also in terms of the political theory of domestic courts.").

[95] *See, e.g.*, Roger P. Alford, *The Proliferation of International Courts and Tribunals: International Adjudication in Ascendance*, 94 AM. SOC'Y INT'L L. PROC. 160 (2000) (discussing the consequences that the lack of attention given to new courts and tribunals may have on international law); Pierre-Marie Dupuy, *The Danger of Fragmentation or Unification of the International Legal System and the International Court of Justice*, 31 N.Y.U. J. INT'L L. & POL. 791, 798–801 (1999) (suggesting that a more dynamic International Court of Justice is necessary to remedy concerns pertaining to lack of clarity in international law).

[96] *Compare* Posner & Yoo, *supra* note 77, at 27–28 (arguing that the most successful tribunals are dependent tribunals), *with* Laurence R. Helfer & Anne-Marie Slaughter, *Why States Create International Tribunals: A Response to Professors Posner and Yoo*, 93 CALIF. L. REV. 899, 901–05 (2005) (explaining the faultiness of Professor Posner and Yoo's theory that dependent tribunals are most effective and desirable form of tribunal) (citing Posner & Yoo, *supra* note 77).

[97] *See* JACK L. GOLDSMITH & ERIC A. POSNER, THE LIMITS OF INTERNATIONAL LAW 203 (2005) ("Efforts to improve international cooperation must bow to the logic of state self-interest and state power."); *see also* ANDREW T. GUZMAN, HOW INTERNATIONAL LAW WORKS: A RATIONAL CHOICE THEORY 33–48 (2008) (explaining how the concepts of reputation, reciprocity, and retaliation are central to understanding the scope and role of international law).

[98] *See, e.g.*, Paul B. Stephan III, *Barbarians Inside the Gate: Public Choice Theory and International Economic Law*, 10 AM. U. J. INT'L L. & POL'Y 745, 754–67 (1995) (discussing how public choice theory is useful in analyzing matters of international law, particularly executive power, currency controls, trade, and the

overlooked the doctrinal paradox as a specific and useful insight. As a result, international law scholars have not yet considered whether international courts and tribunals should take actions to avoid the possible indeterminate voting patterns that the doctrinal paradox can create.

Third, it does not appear that the instruments drafted to establish international courts and tribunals have provided guidance on how cases that produce indeterminate voting patterns should be resolved. To investigate this issue further, we collected the rules of procedure for the permanent international courts and tribunals identified in Professor Karen Alter's recent article surveying the international judiciary.[99] For each of these judicial bodies, we collected the treaty establishing the court or tribunal as well as the documents published by the court that established the rules and procedures for how judgments would be made.[100] For each document, we then evaluated five elements of the rules that are relevant to the question of whether the doctrinal paradox could be observable and how it should be resolved.[101] Those elements are: (1) whether the tribunal's decisions are made public; (2) whether a reason for each decision is required; (3) whether dissents are allowed; (4) how "majority voting" is discussed in the event that dissents are permitted; and finally, (5) whether there is any discussion of how judgments should be aggregated when indeterminate voting patterns occur. The results of this research are presented in the Appendix.[102]

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protection of culture); *see also* John O. McGinnis & Mark L. Movsesian, *Against Global Governance in the WTO*, 45 HARV. INT'L L.J. 353, 354–58 (2004) (citing scholarship on public choice theory to support the proposition that the scope of WTO authority should not be expanded).

[99] For a discussion of the Alter's typology, see Alter, *supra* note 79.

[100] Alter's list contains twenty-five permanent international courts. *Id.* at 4. Unfortunately, insufficient documentation was available to reliably code the policies of five courts: the Benelux Court of Justice (BCJ); the West African Economic and Monetary Union (WAEMU); the Central African Monetary Community (CEMAC); the Dispute resolution system of the Association of Southeast Asian Nations (ASEAN); and the Southern Common Market (MERCUSOR). As a result, these courts were not included in the Appendix, *infra*.

[101] *See* Appendix, *infra* for a complete summary of the provisions of each of the permanent international courts and tribunals that are relevant to judgment aggregation.

[102] It is worth noting that there is still considerable work to be done to fully explain the variation in the procedures used by international courts and tribunals. We are not aware of any academic efforts to fully document the different

Based on this analysis, we can say with confidence that international courts do not have formal rules that govern how judgments should be aggregated when the doctrinal paradox occurs during adjudication. Of course, given that domestic courts have not formally adopted judgment aggregation mechanisms, it is unsurprising that permanent international courts and tribunals have not either. Interestingly, our data show that seventeen of the nineteen judicial bodies we analyzed *do* have a rule in place asserting that decisions will be made by a majority vote. For example, Article 55 of the International Court of Justice Statute provides: "All questions shall be decided by a majority of the judges present."[103] However, these treaties are not clear as to whether a majority vote is required for each of the issues presented in a case, or for the overall resolution of the controversy. This situation means that the doctrinal paradox is a real possibility for the majority of the international courts. This lack of clarity is particularly extreme in the case of the Inter-American Court of Human Rights ("IACtHR"). Article 16 of the Rules of Procedure of the IACtHR provides: "The Presidency shall present, point by point, the matters to be voted upon. . . . The decisions of the Court shall be adopted by a majority of the Judges present at the time of the voting."[104] Alas, the text does not clarify what the Court should do if the individual votes mandated by the President differ from the overall majority view on what the outcome of the case should be. Moreover, not only do the rules governing the judicial procedures of international courts fail to explicitly provide judgment aggregation mechanisms, but many also include specific provisions requiring that courts provide their reasoning and allow dissents. By revealing the distribution of the judges' opinions and their justifications for how individual points should be resolved—which does not occur with courts that only issue unanimous decisions—it makes it possible to observe the doctrinal paradox. In other words, these courts have put the conditions that make the

procedures used by international judicial bodies while also exploring the factors that drive those differences.

[103] Statute of the International Court of Justice art. 55, June 26, 1945, 59 Stat. 1055, 3 Bevans 1179.

[104] Inter-Am. Ct. H.R., Rules of Procedure of the Inter-American Court of Human Rights, art. 16(1), (3), LXXXV [85th] Regular Period of Sessions, Nov. 16–28, 2009, http://www.corteidh.or.cr/reglamento.cfm.

doctrinal paradox possible in place, but have not issued clear guidance on how it should be resolved.[105]

Finally, surveying international courts in this way makes it clear that there is a great deal of variance in the procedures adopted by international courts, but that the implications of this variance has not yet been fully explored. Although we have only considered judgment aggregation, future research should continue to explore how these differences in procedures impact international litigation and the development of international law along a range of dimensions.

3.2. The Conditions Necessary for the Doctrinal Paradox & International Adjudication

There has unfortunately been relatively little theoretical or empirical research into the conditions that give rise to occurrences of the doctrinal paradox in the course of international adjudication. To review, the doctrinal paradox arises when multiple judges hold a distribution of opinions that do not result in a consistent majority view on how the individual components and overall outcome of the case should be decided. As we argue in this part, the conditions necessary for this situation to materialize are all present in international courts and tribunals. Specifically, international judges and arbitrators have shown their willingness to file separate and dissenting opinions to express their views, and the evolution of international law and judicial bodies has created an environment that makes occurrences of the doctrinal paradox a distinct possibility.

The first reason that the doctrinal paradox may occur in international settings is that concurring and dissenting opinions are often filed. This is significant because a requirement of the doctrinal paradox is that adjudicators hold differing opinions on how a case should be decided. The willingness and ability of judges to file separate opinions is thus a necessary condition for the doctrinal paradox to manifest itself in judicial decisions. It is then significant that there is a long history of judges penning separate opinions in transnational court decisions. For example, of the twelve advisory opinions that the International Court of Justice issued in its first twenty years of operation, only one was

[105] For a lenghtier discussion on "observable" instances of the doctrinal paradox, see *infra* Section 4.1.

unanimous.[106] Despite this history of active dissent, the phenomenon has been largely overlooked in comparative international legal scholarship that analyzes the characteristics of transnational courts. In fact, there have not yet been any articles or studies that have comprehensively examined dissent rates in international courts.

Therefore, in order to examine the phenomenon more fully, we collected data on the rate at which separate opinions, whether concurring or dissenting, have been filed in the course of adjudication by judges serving on international courts and tribunals. Figure 1 employs data from a variety of sources to show the rates at which separate opinions were filed for six prominent international judicial bodies: the International Court of Justice ("ICJ"),[107] the European Court of Justice ("ECJ"),[108] the European Court of Human Rights ("ECtHR"),[109] the International Centre for Settlement of Investment Disputes ("ICSID"),[110] the Iran-United

[106] *See* R. P. Anand, *The Role of Individual and Dissenting Opinions in International Adjudication*, 14 INT'L & COMP. L. Q. 788, 788 (1965) (noting that in the first twenty years of the ICJ's existence, "of the twenty-nine judgments or orders delivered by the [ICJ] in twenty-one contentious cases since 1945, only four judgments were unanimous, and out of twelve advisory opinions handed over during this period only one opinion was given by an undivided Court") (internal citations omitted).

[107] The ICJ data is from a dataset collected by Eric Posner & Miguel de Figuerideo of the seventy-six cases heard by the ICJ through 2003 where judges voted on "substantive issues." Eric A. Posner & Miguel F. P. de Figueiredo, *Is the International Court of Justice Biased?*, 34 J. OF LEGAL STUD. 599, 605 (2005). For the complete dataset, see *International Court of Justice*, INT'L COURTS DATA, http://www9.georgetown.edu/faculty/ev42/ICdata_files/Page580.htm (last visited Oct. 17, 2012) (click on "data" hyperlink to download).

[108] The ECJ has not had a single dissenting opinion filed to date. *See* Vlad Perju, *Reason and Authority in the European Court of Justice*, 49 VA. J. INT'L L. 307, 309 (2009) ("The ECJ finds itself alone among supranational and international courts and one of only a handful of national apex courts that bans its judges from writing concurring or dissenting opinions.").

[109] The ECtHR data is based on Erik Voeten's dataset collected from the 1,163 cases heard between 1960 and 2006 that were deemed by the ECtHR to be of the highest level of importance. The cases in "importance level 1 are deemed to make a significant contribution to the development of case law." Erik Voeten, *supra* note 79, at 425. For the complete dataset, see *European Court of Human Rights*, INT'L COURTS DATA, http://www9.georgetown.edu/faculty/ev42/ICdata_files/Page364.htm (last visited Oct. 17, 2012) (click on "SPSS" or "STATA" hyperlink to download in different formats).

[110] The ICSID data was collected by the authors. The rate is based on twenty-two separate opinions filed in the 330 publicly available ICSID decisions and

States Claims Tribunal ("IUSCT"),[111] and the World Trade Organization ("WTO").[112] As a point of comparison, Figure 1 also includes data on the United States Supreme Court ("US SC")[113] and Federal Courts of Appeals ("US COA").[114] The figure reports the percent of decisions that include at least one separately filed dissenting or concurring opinion for the sample analyzed for each court.

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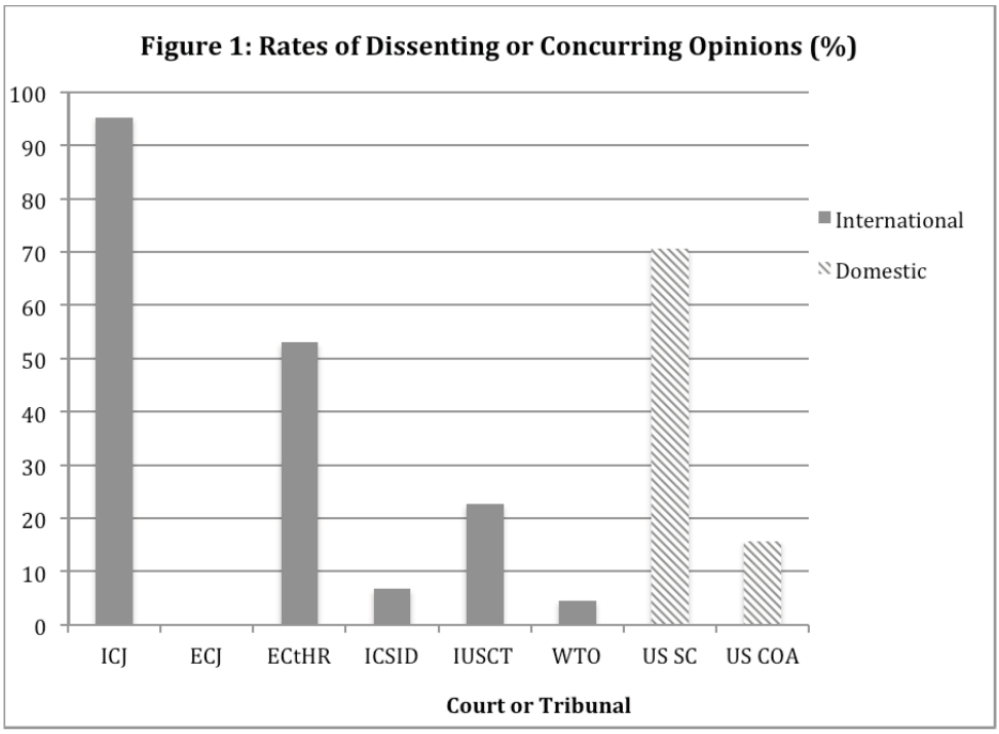
awards. The list of decisions is available at *Search Online Decisions and Awards*, ICSID, https://icsid.worldbank.org/ICSID/FrontServlet?requestType=CasesRH&reqFrom=Main&actionVal=OnlineAward (last visited Oct. 17, 2012).

[111] The IUSCT data was collected by the authors. The rate is based on twenty separate opinions filed in the 133 published IUSCT decisions through 2004. The list of decisions is available at *General Documents: Tribunal Awards and Decisions*, IRAN-UNITED STATES CLAIMS TRIBUNAL, http://www.iusct.net/Pages/Public/A-Documents.aspx (last visited Oct. 17, 2012).

[112] The WTO data was collected by Meredith Kolsky Lewis. It shows that, of 105 panel decisions made through 2006, only six dissenting opinions have been filed. *See* Meredith Kolsky Lewis, *The Lack of Dissent in WTO Dispute Settlement*, 9 J. INT'L ECON. L. 895, 899 nn.15–20 (2006) (listing the WTO cases in which dissenting opinions have been filed).

[113] The United States Supreme Court data is based on the decisions issued in the 2005 through 2010 terms. During this period, the Supreme Court issued 476 decisions, of which 336 had either concurrences or dissents filed. The data was collected from the Harvard Law Review Statistics 2006–2011. *See The Statistics*, *The Supreme Court, 2010 Term*, 125 HARV. L. REV. 362, 367 (2011); *The Statistics*, *The Supreme Court, 2009 Term*, 124 HARV. L. REV. 411, 416 (2010); *The Statistics*, *The Supreme Court, 2008 Term*, 123 HARV. L. REV. 382, 387 (2009); *The Statistics*, *The Supreme Court, 2007 Term*, 122 HARV. L. REV. 516, 521 (2008); *The Statistics*, *The Supreme Court, 2005 Term*, 120 HARV. L. REV. 372, 377 (2006). For an analysis of Supreme Court decisions that looks only at dissent rates and not concurrences, see Lee Epstein, William M. Landes, & Richard A. Posner, *Why (and When) Judges Dissent: A Theoretical and Empirical Analysis*, 3 J. LEGAL ANALYSIS 101, 106, 106 n.9 (2011) (finding that between 1990 and 2007, there was a dissent rate of 62 percent in Supreme Court cases).

[114] The Court of Appeals data is based on 339 cases with dissents or concurrences in the sample of 2160 cases in the "U.S. Court of Appeals database" heard between 1997 and 2002. For the complete dataset, see *U.S. Court of Appeals Database Project*, http://www.wmich.edu/nsf-coa/ (last visited Oct. 17, 2012) (click on "Court of Appeals Database" hyperlink for download options). It is important to note that this dataset is not taken from the total universe of cases heard during this time period, but instead samples cases from each circuit to facilitate cross-circuit analysis. For another analysis of dissents, excluding concurrences, in the United States courts of appeals, see Epstein, Landes, & Posner, *supra* note 113 (finding that there was a 2.6 percent dissent rate in courts of appeals between 1990 and 1970, and a 7.8 percent dissent rate between 1989 and 1991 based on a separate analysis of a sample of 1,025 published decisions).



As Figure 1 shows, although there is a great deal of variance, judges and arbitrators on many international bodies can and do file separate opinions.[115] On the extremes, the ICJ had at least one separate opinion filed in 95% of contentious cases through 2003, while the European Court of Justice has never delivered an opinion that was not unanimous. Additionally, although the jurists presiding over cases brought before ICSID and the WTO have only issued separate opinions in 7% and 5% of cases, respectively, the ECtHR (53%) and IUSCT (23%) both have fewer unanimous opinions than the United States Courts of Appeals (16%). Moreover, these often are very fractured decisions with multiple concurrences and dissents, conditions that are conducive to

[115] It is worth noting that many domestic courts in other countries do not allow dissenting opinions. *See, e.g.*, HERSCH LAUTERPACHT, THE DEVELOPMENT OF INTERNATIONAL LAW BY THE INTERNATIONAL COURT 67 (1982) ("In some countries, such as Belgium, France and Germany, only one judgment is delivered and there is no indication whether the judgment is given unanimously or by majority.").

doctrinal paradox.[116] The important takeaway is that judges in transnational courts often hold differing views in a case, and that if the doctrinal paradox is a concern to scholars of jurisprudence in the United States, international scholars should also take note of the possibility of this phenomena occurring.

A second reason that the doctrinal paradox might be likely to occur in international settings is that judges may have divergent views on issues because of the possibility of relationships between the judges and litigants that do not exist in domestic settings. One unique feature of international law is that treaties establishing international courts and tribunals often explicitly allow judges to hear cases in which their home country is a litigant. For example, Article 31 of the ICJ Statute provides: "Judges of the nationality of each of the parties shall retain their right to sit in the case before the Court."[117] Moreover, the Statute also explicitly provides that a country appearing before the court may appoint a judge to the panel deciding its case if no judge of its nationality is already present.[118] Of course, judges in domestic settings may hear cases in which they have preexisting biases, but in the international setting, steps are taken to guarantee participation in cases where the judge may have a strong potential for bias. Emerging empirical research suggests this does in fact occur: judges are biased towards the countries that appoint them. For example, Eric Posner and Miguel de Figueiredo have presented evidence of judges voting to support their home countries at the ICJ,[119] and Erik Voeten has presented evidence to suggest that there are similar biases towards a judge's home country in the European Court of Human Rights.[120] This is perhaps unsurprising since judges often serve for relatively short

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[116] *See, e.g.*, K. R. Simmonds, *The Interhandel Case*, 10 INT'L & COMP. L.Q. 495 (1961) (providing an example of a contentious decision argued in the International Court of Justice).

[117] Statute of the International Court of Justice art. 31, June 26, 1945, 59 Stat. 1055, 3 Bevans 1179.

[118] *Id.* ("If the Court includes upon the Bench no judge of the nationality of the contesting parties, each of these parties may proceed to *choose* a judge as provided in paragraph (2) *of this Article*.").

[119] *See* Posner & Figueiredo, *supra* note 107, at 601 (using "sophisticated empirical tests . . . to show that, in fact, judges are significantly biased in favor of their home states when that state appears as a party" before the ICJ).

[120] *See* Voeten, *supra* note 79, at 417 ("There is some evidence that career insecurities make judges more likely to favor their national government when it is a party to a dispute.").

terms on international courts, and their career interests make it necessary to stay in the good graces of the governments and actors that appointed them.[121] It is worth noting that this feature of international adjudication is not entirely without merit, as it helps ensure that countries are willing to submit to the jurisdiction of international courts. That said, the implication of national bias by judges is that, compared to domestic settings, there is an increased possibility that international judges on multi-member courts will have divergent views on how cases should be resolved in both the component issues and the final outcome.

A third reason that international adjudication is fertile ground for the doctrinal paradox is that, although the density of international law is increasing, in many areas international law still remains under-developed. As previously noted, there has been a dramatic proliferation in the number of international judicial courts and tribunals in the last sixty years.[122] At the same time, there has been a proliferation of international laws,[123] as the expansion of international institutions has led to a corresponding growth in the legislative and regulatory activities that these organizations undertake.[124] The result is an increasingly complex web of laws governing a range of international interactions, including entirely new areas that were previously untouched by international law.[125] International courts and tribunals are thus

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[121] *See* Paul B. Stephan, *Courts, Tribunals, and Legal Unification – The Agency Problem*, 3 CHI. J. INT'L L. 333, 337 (2002) ("Knowing that they can be replaced, the members of the [international courts and tribunals] have an incentive not to do anything that will upset the countries with nominating authority.").

[122] *See supra* text accompanying notes 77–81 (indicating that international courts have multiplied and gained more prominence since World War II); *see also* Symposium, *The Proliferation of International Judicial Bodies: The Pieces of the Puzzle*, 31 N.Y.U. J. INT'L L. & POL. 679 (1999) (investigating the different factors leading to the proliferation of international judicial bodies and the implications of having numerous international courts).

[123] *See, e.g.*, William Ewald, *The Complexity of Sources of Transnational Law: United States Report*, 58 AM. J. COMP. L. 59, 63–66 (2010).

[124] Curtis A. Bradley & Judith G. Kelley, *The Concept of International Delegation*, 71 LAW & CONTEMP. PROBS. 1, 35 (2008) (noting that international institutions "increasingly engage in a variety of legislative and regulatory activities").

[125] *See, e.g.*, Jacob Katz Cogan, *The Regulatory Turn in International Law*, 52 HARV. INT'L L.J. 322 (2011) (discussing international law's increasing emphasis to regulate individuals); CHRISTINA L. DAVIS, WHY ADJUDICATE? ENFORCING TRADE RULES IN THE WTO (forthcoming 2012) (enumerating a variety of ways that global trade law has become more complex); Anthea Roberts, *Clash of Paradigms: Actors*

charged with interpreting and applying a dizzying body of international law that comes from a range of domestic and international sources. The judges on these courts, however, have relatively little precedent to help guide their decisions as they wade into uncharted areas of international adjudication. Judges therefore may find it difficult to determine which component issues are critical to decide en route to a final judgment, which impacts judgment aggregation if the judges choose to employ issue-based voting.[126] In addition, even if the judges can easily agree on which legal and factual issues they should be deciding as part of a case, there are fewer previous cases to guide them on how they should rule on the various issues. The result is that, with few precedents and messy law to guide judgments, it is likely that the judges will have a wide distribution of views on any given issue. The lack of precedent thus directly affects the likelihood that the distribution of votes in a case will result in the occurrence of the doctrinal paradox.

A fourth reason that international judicial bodies may facilitate the occurrence of the doctrinal paradox is that the procedures of international courts are often still poorly developed. Given how rapidly many of these courts have been created and how infrequently many have been used, a large number of international courts and tribunals remain "in their early stages of development."[127] Notably, this is true of the procedures that the courts use to decide contentious cases. As a result, when contentious situations arise in international courts—when there are divergent majorities for the different propositions that the court has to consider—there is unlikely to be established policies for refereeing the disputes. Thus, if the conditions that create the doctrinal paradox do arise, international courts are particularly unlikely to have thought through how best to evaluate the various sub-issues pertinent to the decision and then decide on an overall outcome to the case. This stands in contrast to domestic courts of appeals in the United States, where internal policies and

and Analogies Shaping the Investment Treaty Arbitration System, 107 AM. J. INT'L L. (forthcoming 2013) (on file with the authors) (discussing the evolution of international investment law).

[126] *See infra* Section 5.1 (examining the merits of flexible aggregation procedures in resolving the doctrinal paradox).

[127] Alter, *supra* note 79, at 3.

procedures for deciding cases have evolved over decades. In other words, these infant institutions are susceptible to indeterminate decision-making procedures because they lack clear policies for consistent judgment aggregation.

3.3. Resolving Indeterminacy in International Adjudication

As we have argued, the conditions necessary for the doctrinal paradox to occur are present in a range of transnational judicial bodies. If the doctrinal paradox were to occur, however, it does not mean that the court would fail to reach a decision. Instead, when cases give rise to the doctrinal paradox in an international court or tribunal that does not have a formal judgment aggregation policy,[128] the judges on the court are left with one of two options. The first option is that the court could adopt an ad hoc policy to resolve the case each time the doctrinal paradox occurs. The second option is that courts could implement a de facto judgment aggregation system that the members of the court have either explicitly or implicitly adopted. In this option, the members of the court may or may not be aware that they have selected a judgment aggregation policy, and instead simply always defer to one of the two judgment aggregation methods. Both of the two options have advantages and disadvantages that should be considered by the diplomats, scholars, and activists that design international legal institutions.

Although it may appear on its face that adopting an ad hoc aggregation system when the doctrinal paradox arises is the simplest approach, doing so does have associated costs that should be considered. In any setting, whether domestic or international, allowing judges to form ad hoc decisions on how to aggregate decisions after a paradoxical result raises concerns.[129] The obvious concern is that by failing to have a consistent judgment aggregation policy, there is a possibility that like cases might not be treated alike. In other words, if the exact same set of facts were to appear in front of the same set of judges in the future, the result

[128] *See supra* text accompanying notes 99–105 (arguing that the major permanent international courts and tribunals do not have formal judgment aggregation policies that were established by treaties); *see also* Appendix, *infra*.

[129] For a discussion of proposals that suggest a form of ad hoc voting, see *infra* Section 5.3.

of the case could be different if the judgment aggregation system were not consistent over time.[130]

In international settings, however, there is another factor associated with ad hoc policymaking that should also be considered. Previous scholarship on international institutions has noted that both formal and informal policies and norms often develop in international bodies.[131] This scholarship argues that international organizations have a myriad of explicitly stated and negotiated formal rules that govern the operation of those institutions. In addition to these formal rules, there are often also informal rules that are not part of the official standard operating procedure of the organization. Although there are certainly advantages to having two parallel sets of rules governing international institutions, informal rules "allow exceptional access for powerful states to set the agenda and control particular outcomes."[132] In other words, when there is not an explicit policy on the books for how to resolve an issue, powerful actors are frequently able to exercise influence to ensure that their views are given primacy.[133]

This feature of international organizations poses the risk of biasing outcomes in favor of powerful countries if courts adopt an

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[130] *See* Kornhauser, *supra* note 41, at 12 (arguing that treating similar cases alike "imposes a consistency requirement on judicial decisions" and "reason-giving promotes this consistency by characterizing each case and identifying the legally relevant aspects of similarity across cases").

[131] *See* Kenneth W. Abbott & Duncan Snidal, *Hard and Soft Law in International Governance*, 54 INT'L ORG. 421, 422–23 (2000) (arguing that norms serve as a form of soft international law that is often preferable to hard international law codified through legalization); Barbara Koremenos et al., *The Rational Design of International Institutions*, 55 INT'L ORG. 761, 762 (2001) (stating that while norms play an important role in international organizations, these organizations are primarily shaped by the interests of states). *See generally* RANDALL W. STONE, CONTROLLING INSTITUTIONS: INTERNATIONAL INSTITUTIONS AND THE GLOBAL ECONOMY xi (2011) (developing a theory of informal governance to explain "essential features of the politics of diverse international organizations").

[132] STONE, *supra* note 131, at 13. *See also* Randall W. Stone, *The Scope of IMF Conditionality*, 62 INT'L ORG. 589, 590 (2008) (developing a theory of informal rules in the International Monetary Fund where "formal rules . . . embody consensual procedures, and informal rules . . . allow exceptional access for powerful countries").

[133] For a discussion of the benefits of having formal and informal international agreements in the context of international organizations, see generally Jacob Katz Cogan, *Representation and Power in International Organizations: The Operational Constitution and Its Critics*, 103 AM. J. INT'L L. 209 (2009).

ad hoc policy when confronted with cases that fit the doctrinal paradox. Formal rules dictate the number of judges on courts, the selection mechanism to choose those judges, and the scope of the court's jurisdiction.[134] How to aggregate a judgment in the absence of an established policy when a paradoxical result has occurred, however, is an informal decision. Therefore, it matters that power in international courts is not evenly distributed,[135] and allowing this ad hoc decision process by a tribunal introduces a new way by which powerful states have the potential to influence the outcomes of international adjudication.[136] In other words, even if every aspect of a case were fairly and impartially decided, if it leads to the doctrinal paradox, powerful states may be more likely to have the ultimate disposition of the case go their way when there is not a formal judgment aggregation rule on the books.

Given the costs associated with the ad hoc policy described above, it is tempting to conclude that option two, the consistent implementation of a specific judgment aggregation policy, is the better policy. Unfortunately, this policy has drawbacks as well. For one reason, there are tradeoffs associated with the different judgment aggregation methods when a doctrinal paradox arises.[137] For example, using issue-based voting might expend greater resources while using outcome-based voting might produce less useful precedent. The concern with the court deciding how to weigh these tradeoffs on an informal basis is that even if the choice made is the same as the one that diplomats would have negotiated in advance, there is good reason to think that there is a troubling democratic deficit in international organizations.[138] Since adopting a judgment aggregation mechanism might have predictable implications for future litigation before the court, regardless of the policy adopted, it could still be troubling if members of the court

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[134] For a discussion of the formal rules of international courts and tribunals, see generally Romano, *supra* note 1.

[135] Tom Ginsburg, *Bounded Discretion in International Judicial Lawmaking*, 45 VA. J. INT'L L. 631, 634 (2005) ("The ability to constrain international courts is differentially distributed in the international system, so that more powerful states are able to exercise greater control over tribunals.").

[136] Stone, *supra* note 81, at 58 ("International courts act strategically to protect their long-term influence, so they accommodate powerful interest groups.").

[137] *See infra* Sections 5.1 and 5.2

[138] For an overview of the "democratic deficit" debate in international relations, see generally Andrew Moravcsik, *Is there a 'Democratic Deficit' in World Politics? A Framework for Analysis*, 39 GOV'T & OPPOSITION 336 (2004).

chose to adopt the policy without the potential for direct deliberation by the states that would be subject to the jurisdiction of the court.

3.4. The Consequences of Indeterminacy in International Adjudication

As we have argued, insufficient attention has been paid to the possibility of the doctrinal paradox occurring in international settings. Moreover, there are numerous reasons to believe that the conditions necessary for the doctrinal paradox occur in international adjudication, and allowing international courts and tribunals to decide between two defensible outcomes creates problems that are not present in domestic settings. This is true for at least two reasons. First, in international adjudication, states have the ability to refuse to comply with judicial decisions, an option that is not as readily available in domestic settings where the executive and judicial branch can enforce decisions. Second, international legal decisions have a particularly important role in communicating and establishing the corpus of international law.

The first reason that the doctrinal paradox is a greater threat to judicial adjudication in international settings than in domestic settings is that litigants are often able to refuse to comply with international courts' judgments.[139] Trying to determine the rates at which states comply with international legal obligations has been a source of major debate over the last twenty years.[140] In the face of this debate, legal scholars have put forward numerous theories to explain why states may or may not choose to comply with international law when they feel that the action required to comply with the judgment is not in their immediate interest.[141] One of the

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[139] *See* Ginsburg, *supra* note 135, at 660 ("States in some cases simply can ignore the decision of an international court.").

[140] *Compare* Abram Chayes & Antonia Handler Chayes, *On Compliance*, 47 INT'L ORG. 175, 204 (1993) (arguing that noncompliance is a deviant behavior and for a de-emphasis on formal enforcement of international agreements), *with* George W. Downs et al., *Is the Good News About Compliance Good News About Cooperation?*, 50 INT'L ORG. 379, 379–80 (1996) (rejecting scholars' claims that high compliance rates is evidence that enforcement is not the best means of obtaining compliance with international agreements). For a general discussion of the contours of this debate, see Kal Raustiala & Anne-Marie Slaughter, *International Law, International Relations and Compliance*, *in* HANDBOOK OF INTERNATIONAL RELATIONS 538 (Walter Carlsnaes et al. eds., 2002).

[141] *See, e.g.*, GOLDSMITH & POSNER, *supra* note 97 (exploring many theories behind compliance with international law, such as state interest and moral

prominent explanations holds that states use non-compliance with international judicial decisions to express their displeasure with the judgments with which they disagree.[142] Moreover, there is a growing collection of empirical literature using quantitative methods to analyze compliance with a range of issues in international law, including international economic agreements,[143] human rights law,[144] environmental regulations,[145] and the laws of war.[146] Of course, in the case of international adjudication, it is

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obligation); Jacob Katz Cogan, *Noncompliance and the International Rule of Law*, 31 YALE J. INT'L L. 189, 191 (2006) (claiming that by "reconciling formal legal prescriptions with changing community policies or by bridging the enforcement gap created by inadequate community mechanisms of control" states commit "operational noncompliance"—formally breaching international law but preserving a partially effective regime); Andrew T. Guzman, *A Compliance-Based Theory of International Law*, 90 CALIF. L. REV. 1823 (2002) (arguing that rational, self-interested states comply with international law due to concerns over their reputation amongst other states); Harold Hongju Koh, *Why Do Nations Obey International Law?*, 106 YALE L.J. 2599, 2603 (1997) ("[T]his overlooked process of interaction, interpretation, and internalization of international norms into domestic legal systems is pivotal to understanding why nations 'obey' international law . . . .").

[142] *See* Ginsburg, *supra* note 135, at 660 (noting that when a state ignores the decision of an international court, that it "is at bottom a communicative act expressing displeasure with a court ruling").

[143] *See, e.g.*, Beth A. Simmons, *International Law and State Behavior: Commitment and Compliance in International Monetary Affairs*, 94 AM. POL. SCI. REV. 819 (2000) (showing that reputational concerns and competitive market pressures serve as a more effective form of generating compliance with international economic agreements); Beth A. Simmons, *Money and Law: Why Comply with the Public International Law of Money?*, 25 YALE J. INT'L L. 323 (2000) (demonstrating that states comply with the public international law of money to increase international trade, which allows the market to serve as an effective enforcement mechanism).

[144] *See, e.g.*, BETH A. SIMMONS, MOBILIZING FOR HUMAN RIGHTS: INTERNATIONAL LAW IN DOMESTIC POLITICS (2009) (using case studies and statistical analysis to show that human rights practices improve following the ratification of human rights treaties); Oona A. Hathaway, *Do Human Rights Treaties Make a Difference?*, 111 YALE L.J. 1935, 1939 (2002) (analyzing 166 nations over forty years and determining that noncompliance with human rights treaties is common).

[145] *See, e.g.*, Xinyuan Dai, *Why Comply? The Domestic Constituency Mechanism*, 59 INT'L ORG. 363 (2005) (presenting findings regarding the effects of domestic constituency on the compliance decisions of governments under the auspices of the European acid rain regime).

[146] *See* James D. Morrow, *When Do States Follow the Laws of War?*, 101 AM. POL. SCI. REV. 559, 561 (2007) (finding that treaty ratification increases compliance with the laws of war for democratic but not autocratic nations); Benjamin Valentino et al., *Covenants Without the Sword: International Law and the Protection of Civilians in Times of War*, 58 WORLD POL. 339 (2006) (studying the effectiveness of international laws prohibiting attacks on civilians in times of war).

often extremely difficult to conclusively determine whether states are complying with court judgments.[147] This is true for a variety of reasons, including the fact that states can simply ignore international courts in covert ways, that states may drag their feet for years before complying, or because there may be selection effects that limit the number of politically sensitive cases that reach courts.[148] There is strong reason to believe, however, that courts frequently encounter difficulty in enforcing their judgments, as the rates of non-compliance described in the literature suggest.[149] Courts might also alter their decisions, seeking to avoid non-compliance.[150] Hence, an international tribunal's vote distribution in a case might encourage its judges to justify a decision for one party—the very situation that arises in the doctrinal paradox. If so, then the tribunal might choose an outcome aimed at minimizing the likelihood of non-compliance. In other words, the court might decide for the party who threatens it most. In extreme cases, a state could choose to exit if it believes that a tribunal reached its decision ad hoc and unfairly.[151] Exit from international institutions is rare and an unlikely response to the doctrinal paradox.[152] Still, the possibility for exit highlights how the stakes of indeterminacy during decision-making rise in international settings.

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[147] *See* Posner & Yoo, *supra* note 77, at 28 ("[C]ompliance [with international courts] can be hard to observe . . . .").

[148] *See id.*

[149] *See* LISA CONANT, JUSTICE CONTAINED: LAW AND POLITICS IN THE EUROPEAN UNION 50–94 (2002) (arguing that European courts encounter difficulty enforcing their judgments).

[150] For an empirical analysis of the non-compliance phenomenon in the European Court of Justice, see Clifford J. Carrubba et al., *Judicial Behavior under Political Constraints: Evidence from the European Court of Justice*, 102 AM. POL. SCI. REV. 435, 449 (2008) ("[T]hreats of noncompliance and legislative override induce courts to alter their decisions to mollify those political interests responsible for compliance and legislation."); *see also* Clifford J. Carrubba, *Courts and Compliance in International Regulatory Regimes*, 67 J. POL. 669, 687 (2005) (discussing how "international courts can help overcome problems of enforcement in international agreements").

[151] *See* Jacob Katz Cogan, *Competition and Control in International Adjudication*, 48 VA. J. INT'L L. 411, 424 (2008) ("[A] State, having previously consented to a court's jurisdiction or to a treaty regime, usually may exit.").

[152] *But see* Laurence R. Helfer, *Exiting Treaties*, 91 VA. L. REV. 1579, 1602 (2005) ("[D]enunciations and withdrawals are a regularized component of modern treaty practice—acts that are infrequent but hardly the isolated or aberrant events that the conventional wisdom suggests.").

Another consequence of international cases that produce the doctrinal paradox is that their decisions do not effectively communicate information important to the development of international law.[153] International courts and tribunals play a primary role disseminating information on international law, including to other courts and tribunals on how futures cases should be decided and to practitioners on how to advise states and litigants.[154] The clearly articulated rationales of majority decisions and clarifications and arguments presented in separate and dissenting opinions provide the channels for such communication.[155] This communication, however, loses usefulness when opinions are confusing because the decisions on component issues do not match the final judgment. Scholars have expressed concern that such fragmentation hinders the development of international law.[156] Examples of the doctrinal paradox create a problem for international courts because they risk creating unclear and unusable information for future courts and litigants. These decisions confuse instead of clarify the corpus of international law.[157]

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[153] Although legal precedents might peripherally affect civil law legal systems, they occupy central importance in common law countries. Precedent is arguably of particular importance to international law because of the relatively few cases that result in judicial decisions.

[154] *See* GUZMAN, *supra* note 97, at 51 ("Recognizing that international courts serve almost exclusively to provide information changes the way one views and evaluates them.").

[155] For an argument that dissenting and separate opinions serve an important role in generating discussion on international courts that shape future decisions and law, see CHESTER BROWN, A COMMON LAW OF INTERNATIONAL ADJUDICATION 55–65 (2007); *see also* LAUTERPACHT, *supra* note 115, at 66 ("[T]he individual Opinions of the Judges . . . facilitate the fulfillment of the indirect purpose of the [ICJ], which is to develop and to clarify international law.").

[156] *See*, *Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law*, Report of the Study Group of the International Law Commission, 58th sess, May 1–June 9, July 3–Aug 11, 2006, U.N. Doc. A/CN.4/L.682 (Apr. 3, 2006) (Martti Koskenniemi) (detailing how erosion of general international law and increasingly specialized law-making lead to conflicts between rules and rule-making).

[157] Increasing uncertainty about the status and content of international law also risks increasing the number of cases that proceed to litigation. Prior judicial rulings can help to clarify the likely disposition of legal disputes if they were to be litigated, but unclear rulings can increase uncertainty, thereby encouraging litigation.

4. THE PARADOX DURING INTERNATIONAL ADJUDICATION

The staggering number of the different bodies and processes of international adjudication presents one of its most striking features.[158] One of the most salient features of the doctrinal paradox is its occurrence in any collective decision-making body that is required to make multiple connected judgments.[159] Although previous scholarship glosses over the unique features of the different settings in which the paradox can occur, a full appreciation of its scope and implications necessitates examining these features more closely. So the general features of the doctrinal paradox in international settings discussed in Section 3 will be focused in Section 4 on three increasingly important areas of international adjudication: human rights, adjudication of complex scientific issues, and arbitration. By doing so, we hope to illustrate how the indeterminacy caused by the doctrinal paradox relates to scholars and practitioners working across different branches of international law.

This Section proceeds in four parts. First, we address how the doctrinal paradox can occur whether it is observable or not. By highlighting this distinction, we are able to fully explain our approach for identifying examples of when there is a possibility of the doctrinal paradox occurring in international adjudication. Second, we describe a case from the European Court of Human Rights where the doctrinal paradox occurred. This case illustrates how judges on the world's most active international court issued judgments that led to a paradoxical result. Third, we explain the increasing frequency with which international panels must make judgments that hinge on contested scientific information and how this can create difficulties in aggregating judgments or providing coherent case law for the future. Given the complexity and uncertainty of the decisions made over multiple issues, the possibility exists that these conditions will lead to logically inconsistent outcomes. Finally, we discuss how the adoption of new practices in international adjudication has created the opportunity for the doctrinal paradox to arise. Although the

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[158] For a survey of the different forms of international dispute settlement, see generally J. G. MERRILLS, INTERNATIONAL DISPUTE SETTLEMENT (5th ed. 2011).

[159] *See* List & Polak, *supra* note 19, at 442 (discussing judicial panels, multi-member academic job-search committees, and scientific expert panels aggregating individual members' preferences into collective decisions).

policies of traditional arbitration panels made the doctrinal paradox unlikely, the creation of permanent arbitration panels like ICSID, which publishes dissenting opinions, makes such forums fertile grounds for indeterminate decision-making.

4.1. Strategy for Locating the Doctrinal Paradox Internationally

Scholars interested in the doctrinal paradox face the challenge of showing that it is more than a mere possibility and actually appears in the decision-making of multi-member courts. But even if a published decision makes clear that a different voting procedure would have produced a different decision, reading through the huge number of any court's published decisions to identify the paradox poses practical difficulties.

A more interesting challenge is that the doctrinal paradox often does not reveal itself in published decisions.[160] Even if the distribution of judgments causes a doctrinal paradox, individual judges can obscure their opinions, concealing the paradox. Specifically, at least three reasons justify why the paradox likely passes unobserved even during judicial adjudication. First, judges can change their votes on a component issue so that even if the distribution of judgments in a case would have created an indeterminate result, the published decision appears logically consistent across the issues and outcomes. In the earlier examples of the doctrinal paradox on the U.S. Supreme Court, the paradox was observable because a judge explained that he changed his vote on the final outcome because he did not want the decision to be inconsistent with the votes of the individual issues addressed in the case.[161] If, however, the judge changed his vote on a component issue instead of on the case's outcome, it would have been impossible to discern that the doctrinal paradox had occurred during the decision-making process (unless the judge specifically explained his actions in a concurring opinion or it was later revealed when the Justice's papers were released).

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[160] Post & Salop, *Rowing Against the Tidewater*, *supra* note 43, at 748 ("[C]onflict seldom is revealed in published appellate court opinions. This is not surprising, however, because when courts engage in outcome voting, the judges in the majority typically do not reveal their views on issues that they 'do not need to reach' in order to vote for or against a particular outcome.").

[161] *See supra* text accompanying notes 51–54.

Second, the doctrinal paradox might go unobserved because of great variation in the rate at which judges release dissenting or separate opinions.[162] Third, judges facing the doctrinal paradox might not spend time dwelling on the quandary. They might simply issue an opinion explaining how they agreed to resolve the case without discussing their different views on component issues.[163]

The international context adds to these problems. First, instances of the doctrinal paradox in international settings are difficult to locate and analyze even when observable since many tribunals issue complex and long decisions across formats, languages, and databases. Second, international courts vary highly in whether they publish the justifications of their decisions and in whether dissents are issued in non-unanimous decisions.[164] The lack of a clear statement of reasoning and of dissents makes it nearly impossible to identify instances of the doctrinal paradox. Indeed, even if researchers could readily access the decisions of every international tribunal, the doctrinal paradox is more likely to be unobserved internationally than in the U.S., where courts usually explain their reasoning and publish dissenting opinions.

Hence, our strategy of identifying instances of the doctrinal paradox considers how it could arise within the specific contours of three different types of international adjudication. For this effort, we selected forms of international adjudication that met three criteria. First, the form of adjudication must be used frequently in international law. Since many international adjudicatory bodies are seldom used, it makes sense to show how this paradox arises in the forums that actually have active dockets. Second, the issues must form part of an important and growing area of international law. After all, the stakes of the doctrinal paradox would be minimal if it was only likely to occur during the adjudication of issues tangential to the core of the international legal project. Third, we discuss forms of adjudication that cover a wide range of legal issues. By examining the selected cases, we demonstrate that the doctrinal paradox poses implications for legal

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[162] *See supra* text accompanying notes 106–116.

[163] *See* Kornhauser & Sager, *supra* note 17, at 12 ("Judges who have encountered the doctrinal paradox in the course of their collective adjudicative efforts have barely paused to reflect on their quandary.").

[164] *See supra* Sections 3.1 and 3.2; *see also* Appendix, *infra*.

scholars and practitioners interested in topics ranging from human rights to environmental protection to investor protection. Through the discussion of three distinct methods of dispute settlement, we show that the doctrinal paradox should be both of general interest and practical importance to many aspects of international adjudication.

4.2. Permanent International Courts

It would be reasonable to believe that the doctrinal paradox is more likely to occur on a very active court; in international adjudication, the most active court is the European Court of Human Rights ("ECtHR").[165] The ECtHR is a transnational court that hears suits brought by individual plaintiffs claiming that their government violated one or more of their rights protected by the Convention for the Protection of Human Rights and Fundamental Freedoms ("European Convention on Human Rights") of 1950.[166] Although, of the tremendous number of suits filed with the Court, the majority are dismissed before reaching argument, the seven percent of cases that reach trial are heard by a panel of seven judges, including a judge from the country of the plaintiff who brought the case.[167] The panel then issues a decision, which may include dissents, and a detailed explanation of the judges' reasoning. Since the ECtHR has issued more than seven thousand opinions through this process, the court has become one of the most respected international legal institutions.[168]

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[165] *See* Voeten, *supra* note 2, at 671 (the ECtHR "has by far the largest caseload of any international court").

[166] *See* Council of Europe, Convention for the Protection of Human Rights and Fundamental Freedoms, art. 14, *opened for signature* Nov. 4, 1950, E.T.S. No. 5, 213 U.N.T.S. 222 [hereinafter European Convention on Human Rights]. For an excellent and concise summary on the ECtHR, see Voeten, *supra* note 79, at 418–19. Note that "a few interstate cases" have been brought in the ECtHR. *Id.* at 418, n.5.

[167] *See id.* at 419.

[168] *See* Laurence R. Helfer, *Redesigning the European Court of Human Rights: Embeddedness as a Deep Structural Principle of the European Human Rights Regime*, 19 EUR. J. INT'L L. 125, 125 (2008) ("The European Court of Human Rights (ECtHR) is the crown jewel of the world's most advanced international system for protecting civil and political liberties."); *see also id.* at 126 ("[T]he Convention and its growing and diverse body of case law have transformed Europe's legal and political landscape, qualifying the ECtHR as the world's most effective international human rights tribunal.").

The decision in *Fretté v. France*, issued by the ECtHR, meets the conditions of the doctrinal paradox.[169] The case concerned whether a French court's decision to uphold the denial of an adoption by a single gay man violated his right of equal treatment under the European Convention on Human Rights. Although the court had to decide several issues in making its final determination, the core controversy surrounded two issues. The first issue concerned whether Article 14 of the Convention applied. Article 14 provides that the "enjoyment of the rights and freedoms set forth in this convention shall be secured without discrimination on any ground . . . ."[170] If Article 14 applied, the second issue addressed whether the decision to deny the plaintiff the right to adopt constituted discrimination. A "yes" to both questions was necessary to issue a finding that the French government had violated the plaintiff's rights under the Convention.

Fretté v. France

	Article 14 Applicable?	*Discrimination?*	*Violation of Article 14?*
Bratza	Yes	Yes	Yes
Costa	No	Not Decided	No
Fuhrmann	Yes	Yes	Yes
Jungwiert	No	Not Decided	No
Kuris	Yes	No	No
Traja	No	Not Decided	No
Tulkens	Yes	Yes	Yes
Outcome	**4 – 3**	**3 – 1**	**3 – 4**

The decision in *Fretté* ultimately concluded that Article 14 of the Convention did apply, but that that case did not exhibit

[169] Fretté v. France, 38 Eur. Ct. H.R. 438 (2002). In an article on the adoption laws of the European Union, George Letsas mentions this case as an example of the doctrinal paradox. George Letsas, *No Human Right to Adopt?*, 1 UCL HUM. RTS. REV. 134, 137 (2008).

[170] European Convention on Human Rights, art. 14 ("The enjoyment of the rights and freedoms set forth in this Convention shall be secured without discrimination on any ground such as sex, race, colour, language, religion, political or other opinion, national or social origin, association with a national minority, property, birth or other status.").

discrimination constituting a violation of Article 14.[171] The outcome thus found for the defendant, the French government. Only a single judge, however, adopted this reasoning. Judge Kuris wrote the opinion for the court, explaining the reasoning behind its decision, but three judges then signed two other opinions. An interesting result ensued because the three judges who agreed with Judge Kuris that Article 14 was applicable also voted that Fretté's treatment constituted discrimination. Therefore, France, the defendant state, prevailed because the three judges who found that Article 14 did not apply chose not to address the second issue.[172] *Fretté* then resembles the previously discussed Supreme Court case *Arizona v. Fulminante,* in which Judge Souter chose not to decide two of the issues of the case.[173] As in *Fulminante,* it is impossible to say with certainty what would have happened in *Fretté* if all seven judges had voted on each issue. As it stands, the *Fretté* decision does not correspond to the distribution of the votes on each component issue. In other words, the members of the court applied outcome-based voting to resolve this case.

The partially concurring opinion in *Fretté* recognized the decision's peculiarity. Writing for himself and two other judges who found that Article 14 did not apply, Judge Costa noted: "The fundamental paradox of this judgment seems to [be] that it would have been easier to justify the rejection of the complaint on the legal basis of the inapplicability of Article 14 than to declare Article 14 applicable and then find no breach of it."[174] Interestingly, Judge

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[171] *See Fretté,* 38 Eur. Ct. H.R. at 459 [¶ 43] ("[T]he justification given by the Government appears objective and reasonable and the difference complained of is not discriminatory for the purposes of Art.14 of the Convention.").

[172] The Partly Concurring Opinion of these three judges notes the difficulty in resolving whether the adoption denial constituted discrimination, but does not attempt to conclusively do so because it is unnecessary to determine the final disposition. *See id.* at 463–466 (partly concurring opinion of Judge Costa joined by Judges Jungwiert and Traja).

[173] *See supra* text accompanying notes 53–55; *see also* Kornhauser & Sager, *supra* note 17, at 15 n.36 (stating that when discussing *Fulminante*, "[o]ne has to speak in this speculative voice because Justice Souter, curiously, cast an incomplete roster of votes. He supported the view that the confession was voluntary, and joined in the conclusion that the harmless error doctrine applied to the admission of coerced confessions, but he did not take a position on the question of whether the error in *Fulminante* would have been harmless and did not vote on the outcome of the case.").

[174] *See Fretté*, 38 Eur. Ct. H.R. at 466 [¶ O-I18] (partly concurring opinion of Judge Costa joined by Judges Jungwiert and Traja).

Costa was the French judge,[175] and the majority of the judges disagreed with him on this point, finding that Article 14 *did* apply. However, the outcome Judge Costa supported—a finding for the French government—was the ultimate decision of the court. Although there is empirical evidence that suggests that judges on the ECtHR are more likely to support their home government,[176] there is no evidence that the result of this case was due to bias towards France on the part of the panel of judges. That said, the case does illustrate that the doctrinal paradox can lead to indeterminacy on the international stage. It also highlights that having a judge appointed by the defending national government on the panel raises the possibility that a decision will appear political in a way that it could not in domestic contexts.

4.3. Scientific Decision-Making by International Panels

Another area where the doctrinal paradox may appear in international adjudication is in the context of cases in which scientific information must be considered.[177] As the complexity and density of international laws and regulations have grown, international adjudicatory bodies have increasingly been called on to make decisions that involve scientific questions.[178] This trend has forced international adjudicatory bodies to evaluate sophisticated scientific evidence on topics ranging from how specific genetically modified organisms impact food safety and health to the implications that various pollutants have on global climate change.[179] The scientific questions that courts are forced to consider are often not single discrete points, but instead require issuing a series of connected judgments on a number of related

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[175] *See Judges of the Court Since 1959*, EUR. COURT OF HUMAN RIGHTS, http://www.echr.coe.int/NR/rdonlyres/4DE51198-3FDF-4CD5-82D1-1704E49A57AB/0/Liste_des_juges_depuis1959_EN.pdf (last accessed Oct. 17, 2012).

[176] *See* Voeten, *supra* note 79, at 428 (observing the situations where judges show bias towards their home countries).

[177] *See, e.g.*, List & Polak, *supra* note 19, at 442 ("[C]onsider an expert panel that is asked to give advice on a set of complex scientific questions.").

[178] *See* Sungjoon Cho, *From Control to Communication: Science, Philosophy, and World Trade Law*, 44 CORNELL INT'L. L.J. 249, 250 (2011) ("Recently, science has become increasingly salient in various fields of international law.").

[179] *See generally* Andrew Green & Tracey Epps, *The WTO, Science, and the Environment: Moving Towards Consistency*, 10 J. INT'L ECON. L. 285 (2007) (exploring the World Trade Organization's treatment of issues of "scientific uncertainty").

premises en route to reaching a final disposition for the case. The result is that scientific decision-making by international courts and tribunals is fertile ground for the doctrinal paradox to arise.

One of the primary reasons that scientific judgments by adjudicatory bodies are likely to give rise to the doctrinal paradox is that making scientifically grounded decisions often entails consideration of a number of related propositions.[180] Take global warming as an example.[181] To determine if global warming is occurring may require a consideration of the current base rate of carbon dioxide in the atmosphere, whether the rate is increasing, the relation of atmospheric carbon dioxide and temperature, and whether that current increase translates into an increase in average temperature. More broadly, making scientific determinations often requires evaluating different forms of scientific evidence across a range of topics before being able to make a final judgment on a larger scientific claim.

One difficulty that confounds decision-making on scientific questions is that there are often substantial scientific uncertainties in the component issues.[182] The nature of these uncertainties can vary from "risks" (which have a well understood probability distribution), to Knightian uncertainty (which prevents the assignment of probabilities over different outcomes), to complete ignorance (where the range of possible outcomes is not even known).[183] As a consequence, even when using modern statistical

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[180] *Cf.* JON ELSTER, EXPLAINING TECHNICAL CHANGE: A CASE STUDY IN THE PHILOSOPHY OF SCIENCE 189 (1983) (discussing how decision-making on energy use requires making several related determinations).

[181] *See* Franz Dietrich & Christian List, *Arrow's Theorem in Judgment Aggregation*, 29 SOC. CHOICE & WELFARE 19, 19–20 (2007) (using global warming as an example to illustrate the discursive dilemma).

[182] For a discussion of these issues of scientific uncertainty in the context of trade law, see Sungjoon Cho, *Of the World Trade Court's Burden*, 20 EUR. J. INT'L L. 675, 678 (2009).

[183] For further discussion, see Vern Walker, *Keeping the WTO from Becoming the "World Trans-science Organization": Scientific Uncertainty, Science Policy, and Factfinding in the Growth Hormones Dispute*, 31 CORNELL INT'L L.J. 251, 255 (1998) (questioning the WTO's combination of science and regulation). *See also* JOHN HICKS, CAUSALITY IN ECONOMICS (1979); Paul Davidson, *Some Misunderstanding on Uncertainty in Modern Classical Economics*, *in* UNCERTAINTY IN ECONOMIC THOUGHT 21, 34 (Christian Schmidt ed., 1996) (advocating John Keynes' approach to uncertainty which requires differentiating uncertainty from risk); Mark Perlman & Charles R. McCann Jr., *Varieties of Uncertainty*, *in* UNCERTAINTY IN ECONOMIC THOUGHT, *supra* at 9, 17–18 (exploring sources of uncertainty and methods for resolving uncertainty).

techniques, scientific experts can arrive at wildly different estimates of the amount and impact of uncertainty in a particular scientific claim.[184] Because the predicted point estimates may vary greatly across studies, the impact of differing methodological and normative assumptions that inform these analyses is quite high. Temporarily resolving risk, uncertainty, ignorance, and ambiguity for the purpose of making public policy or deciding legal claims thus necessarily requires making assumptions about the behavior of the physical world.[185]

The result is that legal decisions requiring scientific judgments will inevitably face conditions favorable to the doctrinal paradox because there is the possibility of heterogeneous views on the resolution of the underlying scientific questions. Simply put, even with the same information, experts with the same level of competence will come to different conclusions on scientific questions. This problem is compounded, however, because the challenge that faces public policy makers and judges then is not just a function of the inherent indeterminacy of scientific inquiry, but also a function of the nature of public policy—there needs to be some sort of specificity and consistency in the reasons given for a particular policy or decision. In the context of scientific evidence, this means that judges need to be able to articulate a clear set of mechanisms that can demonstrate that a causal process is underway, thus requiring a policy or legal intervention. Moreover, in order for some form of harm to be established, there needs to be a demonstration that the mechanisms that generate the harm actually operate. As a result, scientific cases that give rise to the doctrinal paradox are both possible, even when there is solid

[184] *See, e.g.*, Andrew Stirling, *Risk, Uncertainty and Precaution: Some Instrumental Implications from the Social Sciences*, *in* NEGOTIATING ENVIRONMENTAL CHANGE: NEW PERSPECTIVES FROM SOCIAL SCIENCE 33 (Frans Berkhout et al. eds., 2003) (discussing risk in environmental social science and finding precaution to be an instrumentality of risk); Andrew Stirling, *Risk at a Turning Point?*, 1 J. RISK RES. 97, 97 (1998) (examining the subjectivity of comparative risk assessments and the consequent need for increased public participation in policy making); Andrew Stirling, *Limits to the Value of External Costs*, 25 ENERGY POL'Y 517, 517–18 (1997) (discussing the difficulties of energy risk analysis and its subjective findings).

[185] *See, e.g.*, SHEILA JASANOFF, THE FIFTH BRANCH: SCIENCE ADVISERS AS POLICYMAKERS 9–12 (1990) (analyzing agencies' growing dependence on scientists throughout the policy making process); Elster, *supra* note 180, at 185–207 (arguing that the risk and uncertainty inherent in energy production must be used as a basis for choice).

scientific evidence on the issues in the case, and difficult to resolve, given the requirement that scientific decisions have logically consistent causal stories.

The way that these concepts are emerging in international courts and tribunals is illustrated by the debate on the use of antibiotics in livestock.[186] In addition to their use to treat sick animals (therapeutic use) and to prevent animals from becoming sick (prophylactic use), antibiotics can also be used at sub-therapeutic levels to speed up the growth rates of livestock (antibiotic growth promoters, or AGPs).[187] Despite these advantages of antibiotics, however, they may negatively affect public health by creating bacteria that are resistant to antibiotics. Determining whether a threat exists to public health hinges on multiple connected propositions; hence the possibility of judgment aggregation problems.

To determine whether AGPs pose a threat to public health involves analysis of a number of component issues, including dose-response effects (creating a measure of the amount of resistance produced by using a certain amount of antibiotics), the effect of other antibiotics and biological phenomena present in empirical tests of a resistance link, and confirmation of transfer of resistance genes to resident human bacterial flora which then interfere in a therapeutic intervention for a human livestock consumer. If a judge believes that the current use of antibiotics does produce substantial resistance levels but that it has not been shown to compromise human therapeutic intervention, then banning antibiotics on public safety grounds would clearly not be warranted.

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[186] *See generally* J. J. Dibner & J. D. Richards, *Antibiotic Growth Promoters in Agriculture: History and Mode of Action*, 84 POULTRY SCI. 634 (2005) (discussing the various responses to the use of antibiotic growth promoter).

[187] *See* W. W. Cravens & G. L. Holck, *Economic Benefits to the Livestock Producer and to the Consumer from the Use of Feed Additives*, 31 J. ANIMAL SCI. 1102, 1102 (1970) (examining the economic benefits arising from the use of feed additives); E. L. R. Stokstad & T. H. Jukes, *Further Observations on the "Animal Protein Factor"*, 73 PROC. SOC'Y EXPERIMENTAL BIOLOGY & MED. 523, 527 (1950) (tracking the effects of different diets on animal growth rates); P. R. Moore et al., *Use of Sulfasuxidine, Streptothricin, and Streptomycin in Nutritional Studies with the Chick*, 165 J. BIOL. CHEM. 437, 440 (1946) (exploring the effect of sulfonamides on the nutritional vitamin requirements of chicks).

Beginning in 1997, the European Union ("EU") began banning AGPs, and by 2006 their use was fully prohibited in Europe.[188] During this process, arguments on whether AGPs should be banned turned on the positions taken on these issues. The EU's Scientific Committee on Animal Nutrition ("SCAN") argued that there was insufficient evidence that antibiotic-resistant bacteria in animals could be transferred to humans in a way that would spread resistance mechanisms.[189] The EU's Scientific Steering Committee ("SSC"), however, decided that transfer was at least possible.[190] These divergent viewpoints reflected disagreement within the scientific community itself as to whether definitive demonstration of a biological mechanism is required to affirm a premise. This disagreement on premises formed an important part of the challenges to the bans brought by economic interests in the EU's Court of First Instance (renamed the General Court in November 2009). Pfizer, the manufacturer of one of the banned antibiotics, Virginiamycin, based much of its argument on the need

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[188] *See* Victoria F. Samanidou & Evaggelia N. Evaggelopoulou, *Chromatographic Analysis of Banned Antibacterial Growth Promoters in Animal Feed*, 31 J. SEPARATION SCI. 2091, 2102 (2008) (listing various bans on antibiotics as growth promoters).

[189] *See Opinion of the Scientific Comm. for Animal Nutrition on the Immediate and Longer-term Risk to the Value of Streptogramins in Human Medicine Posed by the Use of Virginiamycin as an Animal Growth Promoter* (July 10, 1998), *available at* http://ec.europa.eu/food/fs/sc/scan/out14_en.print.html (concluding that virginiamycin as a growth promoter does not present an immediate public health risk); *Rep. of the Scientific Comm. for Animal Nutrition on the Use of Avilamycin in Feedingstuffs for Turkeys for Fattening*, at 6 (Oct. 24, 1997), *available at* http://ec.europa.eu/food/fs/sc/oldcomm6/antibiotics/52_en.pdf (finding that the use of avilamycin for fattening turkeys is acceptable).

[190] *See Opinion of the Scientific Steering Comm. on Antimicrobial Resistance*, at 75–76 (May 28, 1999), *available at* http://ec.europa.eu/food/fs/sc/ssc/out50_en.pdf (concluding that immediate efforts must be taken to reduce the overall use of antimicrobials). It is worth noting that there continues to be a lively debate in scientific circles over whether the ban is justified and whether it is helpful or harmful to human health. *See, e.g.*, Peter Collignon, *Antibiotic Growth Promoters*, 54 J. ANTIMICROBIAL CHEMOTHERAPY 272, 272 (2004) (highlighting the dangers of using antibiotics as growth promoters); Ian Phillips et al., *Does the Use of Antibiotics in Food Animals Pose a Risk to Human Health? A Critical Review of Published Data*, 53 J. ANTIMICROBIAL CHEMOTHERAPY 28, 28 (2004) (acknowledging the possible harm of antibiotics on humans while demonstrating that the actual danger is small); John Turnidge, *Antibiotic Use in Animals—Prejudices, Perceptions, and Realities*, 53 J. ANTIMICROBIAL CHEMOTHERAPY 26, 27 (2004) (discussing the need to control the spread of resistant bacteria).

to evaluate each premise.[191] The source of Pfizer's argument, however, was the initial reports from SCAN. Of course, disagreements over key scientific premises also form the crux of other important international debates, such as carbon emissions and global warming.

While the potential for doctrinal paradoxes due to judgments about scientific information is present in domestic courts, the harms are magnified at the international level. As scholars like Andrew Guzman have argued, the topics at the heart of scientific disputes are also at the core of any government's obligations—protecting the health and safety of its citizens.[192] The impact is then not only that the process of making scientific decisions during international adjudication is likely to produce divergent judgments that could lead to the doctrinal paradox, but also that governments will face domestic pressures to not comply with international decisions based on uncertain scientific judgments.[193] As international courts pass judgment on an increasing number of disputes based on scientific evidence, judgment aggregation problems could lead to controversial judgments that threaten the logical coherence of international law and diminish the legitimacy of their associated organizations because litigants feel that the scientific uncertainty provides even more political cover than usual to ignore the court's decision.

4.4. International Investment Arbitration

Another corner of international adjudication where the conditions are present for the doctrinal paradox to create indeterminate decisions is international arbitration. This growing

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[191] Case T-70/99, Alpharma Inc. v. Council, 2002 E.C.R. II-3506 (stating the need for risk assessment of food additives before implementing bans while upholding the ban on bacitracin zinc); Case T-13/99, Pfizer Animal Health SA v. Council, 2002 E.C.R. II-3318 (rejecting Pfizer's arguments criticizing the Council's risk assessment and upholding the ban on virginiamycin).

[192] *See* Andrew T. Guzman, *Food Fears: Health and Safety at the WTO*, 45 VA. J. INT'L L. 1, 26 (2004) ("[T]he regulation of health and safety goes to the heart of national sovereignty.").

[193] *Id.* at 10–11 (arguing in the case of WTO decisions regarding a treaty which allows states to adopt trade restrictions to protect plant, animal or human life, "[l]osing defendants will face strong pressures to resist compliance, making it more likely that a dispute will lead to a long-term standoff in which the losing defendant retains the measure and the winning complainant suspends concessions in response.").

field of international law has been undergoing major transformations as new subject matters are covered by an increasing array of permanent arbitration panels. The developments have not only changed the face of commercial arbitration, but also opened the door to the possibility of the doctrinal paradox occurring in a situation where the judges are poorly equipped to resolve an indeterminate decision.[194]

This threat is a relatively recent development because the structure of traditional international arbitration previously made the occurrence of the kind of splits in judgment that would lead to the doctrinal paradox all but impossible.[195] Traditionally, international arbitration took place by having each party to the dispute appointing a president (the third member of the panel), who would "enjoy a natural leadership which allows them to exert a dominant influence on co-arbitrators and bring them over to support the award."[196] The result was that dissenting opinions issued in international arbitration were rare.[197] Instead, even if there was a true disagreement, the members of the panel would still draft a unanimous decision that tried to grapple with the troubling issues.[198] The impact is that the traditional result of an international arbitration was that the president of the panel was largely able to get his or her way without having to grapple with discrepancies in the reasoning of the members of the panels.

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[194] For an excellent discussion of the reasons that international arbitrators should begin to pay attention to the doctrinal paradox, see Manuel Conthe, *Majority Decision in Complex Arbitration Cases: The Role of Issue-By-Issue Voting* (2010), http://www.josemigueljudice-arbitration.com/xms/files/02_TEXTOS_ARBITRAGEM/01_Doutrina_ScolarsTexts/awards/Majority_decisions_and_issue-by-issue_voting.pdf (examining how a final decision can be affected by the way voting is organized within the decision-making body).

[195] For background on international arbitration in the investment treaty arbitration context, see generally GUS VAN HARTEN, INVESTMENT TREATY ARBITRATION AND PUBLIC LAW (2007) (exploring "the recently emerged system of investment treaty arbitration").

[196] Conthe, *supra* note 194, at 9.

[197] *See, e.g.*, Peter J. Rees & Patrick Rohn, *Dissenting Opinions: Can they Fulfil a Beneficial Role?*, 25 ARB. INT'L 329, 329–30 (2009) (claiming that the prevailing view is that dissenting opinions should be discouraged).

[198] *See* Alan Redfern, *The 2003 Freshfields – Lecture Dissenting Opinions in International Commercial Arbitration: The Good, the Bad and the Ugly*, 20 ARB. INT'L 223, 224 (2004) (noting that historically "[t]he expectation is that th[e] award will be unanimous").

Over time, however, there has been an evolution in international arbitration that has opened the door to the possibility of decisions that result in voting patterns by tribunal members that are open to the possibility of indeterminate decisions. The primary development that has helped pave the way for the possibility of the doctrinal paradox is that there has been a move towards allowing dissenting opinions in international arbitration.[199] This development has sparked a debate in the international arbitration community.[200] On the one hand, advocates have argued that allowing dissenting opinions forces the majority to take greater pains to craft carefully reasoned opinions that grapple with the tough questions raised by the dispute.[201] Others have argued that the move to allow dissenting opinions has produced little value while creating a new avenue for arbitrators—who hope to be appointed to panels in the future—to grandstand.[202] Regardless of the merits of the decision to allow dissenting opinions, this move has paved the way for the possibility of the doctrinal paradox occurring during the course of international arbitration.

One forum that perhaps exemplifies the change in policies that have left the door open to the possibility of paradoxical voting patterns is the International Centre for Settlement of Investment Disputes ("ICSID"). ICSID is an arm of the World Bank which was established to provide a forum for the resolution of international investment disputes between a state party to the ICSID Convention and a national of another state party.[203] The rules governing ICSID create the conditions necessary to facilitate the doctrinal

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[199] For a discussion of the historical development of the decision to allow dissenting opinions in international arbitration, see *id.* at 225 ("Dissenting opinions have come to international commercial arbitration as a gift of the common law.").

[200] *See generally* Albert Jan van den Berg, *Dissenting Opinions by Party-Appointed Arbitrators in Investment Arbitration*, *in* LOOKING TO THE FUTURE: ESSAYS ON INTERNATIONAL LAW IN HONOR OF W. MICHAEL REISMAN 821 (Mahnoush H. Arsanjani et al. eds., 2010).

[201] *See* Richard M. Mosk & Tom Ginsburg, *Dissenting Opinions in International Arbitration*, 15 MEALEY'S INT'L ARB. REP. 26, 30 (2000) ("[A] well-reasoned dissent can help ensure that the majority opinion deals with the most difficult issues confronting it.").

[202] *See* Redfern, *supra* note 198, at 225 ("It is doubtful, however, whether the dissenting opinion has added much, if anything, of value to the arbitral process.").

[203] *See* Convention on the Settlement of Investment Disputes Between States and Nationals of Other States art. 1(2), *opened for signature* Mar. 18, 1965, 17 U.S.T. 1270, 575 U.N.T.S. 159.

paradox.[204] Specifically, the rules governing ICSID formally require that the panel publish a written opinion explaining the reasoning for each of the issues submitted to the panel, and not just a ruling on the overall judgment of the court.[205] Additionally, arbitrators on ICSID panels have the explicit right to file a dissenting opinion to express their reasoning or thoughts on any aspect of the ruling.[206] Although these conditions have not led to an observed example of the doctrinal paradox occurring in any of ICSID's published decisions, in at least one case there were shifting majorities on the different issues decided. In *Duke Energy International v. Peru*,[207] two members of the panel filed partial dissenting opinions in which they each suggested one of the key issues in the case on which they disagreed with the majority. Moreover, in the dissenting opinions, the arbitrators were clear that they disagreed with aspects of the reasoning that led to the conclusion of the panel.[208] The implication is that even if an observed or unobserved instance of the doctrinal paradox has not yet occurred, it is clear that all of the conditions are present and that arbitrators are willing to act in the way that makes it possible.

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[204] *See* CHRISTOPH H. SCHREUER, THE ICSID CONVENTION: A COMMENTARY 830–34 (2d ed. 2009) (discussing the evolution of the decision to allow dissents from ICSID decisions).

[205] *See* International Centre for Settlement of Investment Disputes, Rules of Procedure for Arbitration Proceedings (Arbitration Rules), Rule 47(1)(i), Apr. 10, 2006, https://icsid.worldbank.org/ICSID/StaticFiles/basicdoc/partF-chap06.htm (providing that an ICSID award shall be written and contain "the decision of the Tribunal on every question submitted to it, together with the reasons upon which the decision is based . . . .").

[206] *See id.* Rule 47(3) ("Any member of the Tribunal may attach his individual opinion to the award, whether he dissents from the majority or not, or a statement of his dissent.").

[207] *See* Duke Energy Int'l Peru Invs. No. 1, Ltd. v. Republic of Peru, ICSID Case No. ARB/03/28, Award, ¶ 141 (Aug. 18, 2008), 15 ICSID Rep. 100 (2010), *available at* http://italaw.com/documents/DukeEnergyPeruAward_000.pdf (identifying depreciation assessment and merger revaluation assessment as two key issues discussed by the tribunal).

[208] *See Duke v. Peru*, 15 ICSID Rep. (partial dissenting opinion of Arbitrator Dr. Guido Santiago Tawil), ¶ 1, *available at* http://italaw.com/documents/DukeEnergyPeruAward_000.pdf ("I have concurred with my distinguished colleagues and fellow arbitrators in most of the issues discussed in the Award. Unfortunately, I am unable to join in their conclusions on two issues . . . ."); *see also Duke v. Peru*, 15 ICSID Rep. (partial dissenting opinion of Arbitrator Dr. Pedro Nikken), ¶ 1–3, *available at* http://italaw.com/documents/DukeEnergyPeruAward_000.pdf (expressing his agreement with aspects of the majority reasoning, but dissenting on the estoppel issue related to the merger).

5. RESOLVING THE PARADOX IN INTERNATIONAL ADJUDICATION

We have argued that not only do features of international adjudication make the doctrinal paradox possible while potentially magnifying its impact, but also that there are a number of growing areas of international law where this dilemma may surface. The question then becomes how the problem should be resolved. Unfortunately, there are no easy answers. As we previously discussed in Section 2.4, there are tradeoffs associated with all approaches to judgment aggregation—issue-based voting, outcome-based voting, flexible approaches, or context-specific rules that incorporate both issue and outcome voting. Flexible approaches give courts the freedom to consider the specifics of individual cases, but in so doing, create indeterminacy and the potential for accusations of unfairness. Fixed-strategy approaches, on the other hand, may be less subject to cries of unfairness, but they force the court into decisions that may not be in its overall interest. The stakes associated with these tradeoffs are particularly acute in international settings because courts must balance two crucial requirements: maintaining support of the states subject to their jurisdiction and producing logically sound and justifiable decisions. As a result, analyzing the consequences of these tradeoffs for international adjudication is a worthwhile endeavor.

To do so, this Section proceeds in four parts, each of which considers the pros and cons of one of the possible approaches to addressing the doctrinal paradox. First, we discuss the advantages and drawbacks of maintaining maximally flexible policies, which allow international courts to exercise full discretion in disposing of cases as they arise. This approach has the clear benefit of allowing the court to decide the best disposition for an individual case given the particular divergent views of the judges, but does so at the expense of consistency. Second, we consider the virtues of the context-specific voting rules that have been proposed in the past. These policies create procedures for addressing the paradox, but give judges the opportunity to select between different judgment aggregation methods depending on the circumstances. Third, we consider the impact of a fixed policy that employs issue-based voting. Of particular salience for international law is that this method often creates more logically consistent precedent, but it may also drain judicial resources and introduce avenues for politicking into the decision-making process. Fourth, we consider

the problems associated with relying on outcome-based voting in international settings. Since the major problem that has been identified with this method in domestic settings is that it creates less intelligible precedent, these concerns have particular force given that the corpus of international law is still in its infancy. As we hope to show, each of these four approaches has both advantages and disadvantages that should be carefully weighed by those establishing judicial procedures to confront the problems identified by judgment aggregation theory.

5.1. Flexible Aggregation Procedures in International Adjudication

One obvious approach that international courts and tribunals could take to respond to the doctrinal paradox is to implement a policy that gives judges maximal flexibility over how to aggregate judgments in any given situation. This means that the court would have several options to consider in cases where the distribution of votes resulted in the doctrinal paradox. One option is that the court could elect to use either issue-based or outcome-based voting to resolve the case, deciding the final outcome based on the method that they select. Alternatively, the court could choose to hide the occurrence of the doctrinal paradox either by having judges change their votes—as Justice White chose to do in *Union Gas* and Justice Kennedy chose to do in *Fulminante*[209]—or by publishing a decision that was not sufficiently detailed to make the occurrence of the doctrinal paradox clear. This policy, whether explicit or implicit, would ensure that the judges and arbitrators on international courts and tribunals would have complete freedom to decide how to confront the unique circumstances of each case that comes before them.

This flexible approach, which is likely the status quo for many international legal institutions, presents several clear advantages. The first, and perhaps most important, is that by not having a set policy in advance, the judges have the flexibility to decide each case in the way that they think will best avoid hurting the legitimacy or long-term health of the court on which they serve.[210]

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[209] *See supra* text accompanying notes 51–56 (discussing the increase of a doctrinal paradox in U.S. Supreme Court decisions).

[210] *See* Ginsburg, *supra* note 135, at 668 ("[S]trategic constraints, though less apparent in the international context than in domestic lawmaking, provide important limits on judicial discretion.").

Recall that the doctrinal paradox, even in domestic settings, makes a single, logically justified result impossible, which can be "embarrassing" for the court.[211] In international settings, however, the problem goes deeper than mere embarrassment. When judges issue decisions that states view as unfavorable or unjustifiable, it may result in the court being utilized less in the future.[212]

One form of decision that litigants before international courts may find particularly troubling is if the court chooses to aggregate their votes in a way that leads a party to lose, when an alternative aggregation method would have led that same party to win. Furthermore, courts have additional incentives to make sure that, if there are "close calls," they do not rule against powerful states with strong interests at stake in the case.[213] As a result, the judges serving on international courts may have good reasons to either alter the voting to mask the doctrinal paradox, or alternatively, to aggregate the votes in a way that ensures the interests of powerful states are respected. Having a flexible judgment aggregation policy that leaves voting up to the judges makes this possible.

Another advantage of maintaining the status quo—of a flexible strategy—is that it is the only approach that does not require expending energy that could otherwise be directed toward other important international judicial reforms. As the volume of cases brought before international judicial bodies has increased in recent years, there has been an attendant increase in pressure to make reforms. For example, scholars have argued for the need to reform

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[211] *See* Kornhauser & Sager, *supra* note 17, at 34 ("The embarrassment is entirely the court's: the divergence between reasons and outcome does not impugn the soundness of any specific judge's decision."); Rogers, *supra* note 9, at 1013 ("Of course it may be embarrassing to the law that we have a rule that no individual reasoner could arrive at.").

[212] *See* Posner & Yoo, *supra* note 77, at 21 ("In short, arbitrators or judges have an incentive to rule within the range of outcomes acceptable to the states—in other words, acting according to their instructions or according to the ex ante boundaries of cooperation—because such decisions make it more likely that they will be used again.").

[213] *See, e.g.*, Geoffrey Garrett & Barry R. Weingast, *Ideas, Interests, and Institutions: Constructing the European Community's Internal Market*, *in* IDEAS AND FOREIGN POLICY: BELIEFS, INSTITUTIONS, AND POLITICAL CHANGE, 173, 199–203 (Judith Goldstein & Robert O. Keohane eds., 1993) (arguing that the structure of the ECJ discourages it from issuing decisions that would not have widespread European Community support); *see also id.* at 62 n.239, 66 n.267 (discussing the incentives that ECJ judges have to not to deviate from strong preferences of powerful member states because the judges have renewable terms).

prominent international courts such as the ECtHR and the ICJ so that the courts can best cope with their increasing dockets.[214] Since it can be difficult to make even uncontroversial reforms to international institutions, the process of reforming international courts and tribunals may require considerable time and effort. As a result, leaving flexible procedures in place that allow judges to decide how to best aggregate votes in each individual case might be an especially appealing solution because it does not require expending capital on selecting and implementing a new strategy that could otherwise be directed to other judicial reform projects.

Of course, as we have described in the foregoing Sections, maintaining a flexible strategy does have associated costs that should be of concern to international judicial bodies. Paramount among these is the risk of creating decisions that will be perceived as illegitimate. Without an aggregation rule established in advance, judges have yet another avenue allowing them to act politically. And, as previously mentioned, in international settings, the incentive for judges to act politically when there are two justifiable outcomes is only magnified. Although all of the judges on formally independent international courts are independent, there is evidence to suggest that the judges are responsive to the needs of the states that appointed them in order to secure reappointment or future career opportunities.[215]

The impact of this bias is twofold. First, even in the absence of explicit evidence, the perception of bias calls into question the validity and impartiality of decisions that are issued by international courts when the doctrinal paradox is observed.

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[214] *See, e.g.*, Helfer, *supra* note 168, at 126 (arguing that reform of the ECtHR is needed because "the EC[t]HR is becoming a victim of its own success and now faces a docket crisis of massive proportions"); *see also* Cecily Rose, *Questioning the Silence of the Bench: Reflections on Oral Proceedings at the International Court of Justice*, 18 J. TRANSNAT'L L. & POL'Y 47 (2008) (making the case for the need to reform the way that oral argument is conducted at the ICJ).

[215] *See* Roland Vaubel, *Principal-Agent Problems in International Organizations*, 1 REV. INT'L. ORG. 125, 133 (2006) ("If the supervisory institution is a court, its members are supposed to be independent once they have been appointed. This means that they should not take instructions from the governments which have nominated them. However, if the judges may be reappointed . . . they may still be subservient to the government of their country."); *see also* Posner & de Figueiredo, *supra* note 107, at 601 (discussing judges' partiality in favor of their home state in judicial decision making); Voeten, *supra* note 79, at 417 (noting that judges are partial to their national governments when the government is a party in a dispute before the judge's court).

Second, even when the doctrinal paradox is not observed, knowing that the judges do not have a fixed method of aggregation suggests that there is negotiation occurring behind the scenes. Therefore, while maintaining complete flexibility has its advantages,[216] the risks associated with this strategy at the international level may outweigh the advantages for doing so.

5.2. Context-Sensitive Voting in International Adjudication

Another strategy that international adjudicatory bodies could adopt to address the doctrinal paradox is a context-specific method that changes based on the circumstances of the case.[217] The difference between a completely flexible system, as described in Section 5.1 above, and a context-specific judgment aggregation method is that the latter imposes a fixed way to determine whether issue-based or outcome-based voting will be used in any given case. In other words, a court may employ both outcome- and issue-based voting, but it would have a fixed policy in place that dictated which method to use each time the judges encountered the doctrinal paradox through a majority vote.

The first context-specific strategy that was suggested in the literature was the proposal for a "meta-vote" put forward by Kornhauser & Sager.[218] Under their proposal, when a paradoxical voting result occurred, the judges on multi-member courts would take the time to "deliberate about the appropriate collegial action to take in the case before them . . . ."[219] After doing so, the judges would then vote on how the judgment in the case should be aggregated. In addition to holding a meta-vote, Kornhauser & Sager argued that the judges should then take the additional step of "proffer[ing] an opinion or several opinions justifying their

[216] *See generally* Andrew T. Guzman, *The Design of International Agreements*, 16 EUR. J. INT'L L. 579 (2005) (arguing that certain design elements in treaties such as dispute resolution mechanisms increase the costs of non-compliance, and thus states have rational reasons to not include these elements in order to make it easier to violate the treaties when non-compliance is in their interests).

[217] *See* Kornhauser & Sager, *supra* note 17 (explaining the Condorcet paradox and failing assumptions in ranking preferences within a group); Nash, *supra* note 43.

[218] *See* Kornhauser & Sager, *supra* note 17, at 30 (discussing judges' use of both outcome- and issue-based voting and using the meta-vote as a method of tabulating and documenting these judicial decisions).

[219] *Id.*

meta-vote."[220] According to Kornhauser & Sager, there are several advantages to this procedure. Perhaps the most distinctive is that by drafting decisions justifying the meta-vote, the court could begin to develop jurisprudence on how votes should be aggregated in different circumstances.[221] Additionally, this strategy would ensure that courts are not boxed into one judgment aggregation mechanism when it may not lead to the best outcome in all circumstances.[222] Furthermore, it would allow courts to learn from the experiences of other judicial bodies.[223]

However, this strategy also has several drawbacks in international settings. First, if judges were forced to take a meta-vote that would later be publically disclosed as part of the decision, they may feel even greater political pressure to not cast a vote that crosses the interests of the powerful states.[224] Second, by attempting to articulate justifications for the judgment aggregation method used, the court might appear less principled than if it had a fixed aggregation rule or if it had simply made a decision behind the scenes.

A second type of context-specific voting procedure has been proposed by Jonathan Remy Nash.[225] Nash proposed a complex hybrid system that lays out specific criteria for when issue-based and outcome-based voting should be used.[226] A very simplified take of Nash's complex proposal is that pure issues of law would be decided by outcome-based voting, while pure issues of fact would be decided by issue-based voting.[227] The purported benefit

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[220] *Id.*

[221] *See id.* at 32 (observing how the meta-vote makes "possible the development of a systematic, reflective jurisprudence of collective judicial action").

[222] *See id* (noting how a meta-vote might offer a procedure for choosing among different protocols).

[223] *See, e.g.*, Jonathan J. Charney, *The Impact on the International Legal System of the Growth of International Courts and Tribunals*, 31 N.Y.U. J. INT'L L. & POL. 697, 700 (1999) (noting that after experimentation has occurred in different international courts, "one would expect that the best ideas will be adopted widely").

[224] *See* Ginsburg, *supra* note 135 (discussing the influence that relatively powerful states possess in international courts).

[225] *See* Nash, *supra* note 43.

[226] *See id.* at 146–58. For a simplified explanation of Nash's proposal, see Meyerson, *supra* note 43, at 77.

[227] *See* Nash, *supra* note 43, at 158–59 ("The substantive portion of the proposal would employ outcome-based voting to resolve pure questions of law and issue-based voting to resolve other questions.").

of establishing this kind of complex policy is that it does not require the court to revisit the question of which judgment aggregation method to use each time the doctrinal paradox occurs while still incorporating the advantages of both issue- and outcome-based voting.[228]

Like the meta-vote, a complex context-specific voting protocol like the one proposed by Nash would have several negative consequences if an international court or tribunal employed it. The first is a result of the fact that the procedures of international courts are still in their early stages of development,[229] so policymakers may not have the knowledge necessary to craft a complex decision that would effectively minimize the potentially harmful effects of the doctrinal paradox. An additional drawback is that this type of decision rule does not exist at all in domestic courts.[230] If international courts were to adopt a policy that is dramatically different than those found in domestic institutions, it may only serve to increase the perception that international courts and law are strange and unnecessarily bureaucratic.

5.3. Issue-Based Voting in International Adjudication

As discussed in Section 2.4, there are a number of major drawbacks associated with issue-based voting as a way of resolving the doctrinal paradox. Of these potential drawbacks, at least four are intensified in international settings.

First, the primary argument that is leveled against issue-based judgment aggregation is that it adds a level of complexity by making judges debate and decide which issues are the critical ones that must be decided to resolve the case. Because almost all cases involve a range of substantive issues, choosing the critical component issues to vote on makes deciding a case that much

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[228] *See infra* Sections 5.3 and 5.4 (discussing the advantages and drawbacks of issue-based and outcome-based voting).

[229] *See supra* text accompanying note 127 (noting that a majority of present day international courts are still in the beginning of their maturation).

[230] *See* Nash, *supra* note 43, at 147 ("[E]ven if outcome-based voting is not the product of natural evolution, it is nonetheless unquestionably the dominant protocol today; again, the fact that certain exceptions persist suggests that those exceptions ought presumptively to be retained."). We cannot find any evidence of a court adopting a complex decision rule like the one that Nash outlines.

more difficult.[231] Furthermore, because this method of judgment aggregation necessitates voting on the component issues to determine the outcome, judges may advocate voting on specific issues in order to manipulate the ultimate outcome in favor of their own beliefs. Although there will always be a certain amount of politicking that goes on behind the scenes in any court, it may not be wise to intentionally introduce a procedure into international adjudicatory bodies that creates incentives for gamesmanship. Since judges serve short terms and are reappointed by their government, there are already incentives in place for these judges to act strategically. Introducing an explicit avenue for political maneuvering will negatively impact the perception (and perhaps the reality) that international judicial bodies are acting consistently and fairly.

Second, deciding what component issues that the court should vote on is even more difficult in the absence of clearly established precedent. In domestic legal cases, there are often explicit doctrinal tests that have been established through prior decisions by the same court or higher courts. Even when such tests do exist, there is still room for negotiation over what component issues the court should decide. Without clear precedent, however, identifying and agreeing on the salient issues is even more difficult. Unsurprisingly, international tribunals are likely to be dealing in areas of law without clearly established doctrine or tests for resolving legal issues. As compared to domestic judges, international judges will have to debate more frequently which tests to create. As a result, international adjudicatory bodies will find it more difficult to engage in issue-based voting than domestic courts. Worse yet, the precedent and legal tests created through issue-based voting may not be sufficiently parsimonious because the tests were originally devised for strategic, and not purely legal, reasons.

Third, issue-based voting consumes a greater amount of judicial resources than other strategies because it requires an extra round of bargaining to select the salient component issues, and then requires every judge to think through their opinion on issues

[231] *See* Rogers, *supra* note 9, at 1002 ("When voting by outcome, individual justices decide what issues they deem to be relevant or dispositive, but when all judges are to vote on the same underlying issues, who decides which issues get a vote?").

that are not essential to the resolution of the case.[232] The result is that it simply takes more time and resources to resolve an individual case with issue-based voting. Although it is true that there are a number of international courts that are serially under-utilized by the parties that establish them, it is still an inescapable fact that one major weakness of existing international courts and tribunals is that they expend too many resources to decide cases. It seems particularly unwise for international courts and tribunals to adopt a practice that is more resource intensive if there is another logically justifiable strategy available. This course of action makes the court vulnerable to criticism and may make member states disinclined to provide resources in the future.

Finally, issue-based voting goes against standard judicial practice.[233] Courts have always traditionally voted on the outcome of the case, not on component issues, and the potential of a few aberrant decisions should not be enough to cause courts and tribunals to jettison this traditional feature of adjudication. Since there are not any examples of domestic legal systems utilizing issue-based voting[234] it may be particularly unwise for international law to do so. Adopting a procedure that runs counter to the legal norms of the member states is likely to increase the perception that international law is novel in undesirable ways, which jeopardizes the international legal project.

5.4. Outcome-Based Voting in International Adjudication

Alas, the shortcomings of the strategies discussed above should not be interpreted as counseling in favor of outcome-based voting. As with issue-based voting, there are at least two acknowledged criticisms of outcome-based voting that would be especially nefarious in international contexts.

The most common argument against outcome-based voting is that it creates logically inconsistent precedent, which is problematic when it comes to resolving future cases with the same

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[232] *See* Post & Salop, *Rowing Against the Tidewater*, *supra* note 43, at 758 (contending that "judicial economy" is a frequent criticism of issue-based voting).

[233] *See* Rogers, *supra* note 9, at 1006 (noting that the practice of outcome voting is "almost universal"); *see also* Nash, *supra* note 43, at 77 (explaining that "judges in [America] have traditionally adhered to outcome-based voting").

[234] *See supra* text accompanying notes 51–56 (explaining that many domestic courts have chosen not to vote on every part of the case).

issues.[235] The thrust of this concern is that when outcome-based voting is used to decide a case with a doctrinal paradox, it will be unclear to future courts how they can apply the precedent since the reasoning and outcome of the case will cut in different directions. This is of particular importance because a range of actors, from lower courts to bureaucrats, often must try to comply with this unclear precedent.[236] The coherence of international law is especially important to the development of the international legal system.[237] The purpose of international law is not just to create precedent for use in future cases, but also to flesh out the body of international law so that states, international actors, and individuals can be guided by the courts to determine what is required of them. If the international law that is produced by courts is logically inconsistent, it will be an unhelpful guide to states and actors who are seeking to understand what international law is and what compliance looks like.

Second, another complaint against outcome-based voting is that it creates less usable precedent. This is because judges are able to not discuss or decide issues that were not essential to their reasoning on a particular issue.[238] The impact is that courts pass on the opportunity to create law that would help make it easier to interpret the law and increase the ease with which it would be possible to predict the future actions of the judiciary. In the international setting, the decision to pass on important issues may come at an even higher cost than for domestic courts.

Although the ECtHR has an incredibly active docket, there are many international courts that have very few opportunities to

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[235] *See* Post & Salop, *Rowing Against the Tidewater*, *supra* note 43, at 761 (arguing that outcome voting suffers from fundamental flaws and is systematically incoherent).

[236] *See* Nash, *supra* note 43, at 99 ("An appellate court that resolves a paradoxical case using outcome-based voting fails to give clear guidance as to the nature of its holding. This 'guidance problem' affects later courts that try to follow the paradoxical case as precedent, the lower court to which the appellate court remands the case for further proceedings, and legislative and administrative bodies.").

[237] Charney, *supra* note 223, at 707 (1999) (arguing that an important part of a useful and peaceful international legal system is coherence in international law).

[238] *See* Post & Salop, *Rowing Against the Tidewater*, *supra* note 43, at 759 ("[U]sable precedent is another important output of the system, and, precisely because outcome-voting allows judges to decline to reach certain issues presented in individual cases, a far greater number of plurality opinions lacking the full force of law will be produced.").

address important international legal issues. This is often because it is difficult for parties to invoke the jurisdiction of the courts, and not because there are no disputes occurring. As a result, it may be a missed opportunity for courts, endowed with time and resources but few opportunities to employ outcome-based voting when doing so decreases the amount of usable precedent the court will create. Although this argument might not be persuasive for overworked domestic courts that are under a constant docket crunch, there are international courts for which taking the time to debate and decide all of the relevant issues presented by a case and formally voting on each one may be worthwhile because it will make a valuable contribution to the evolution of international law.

6. CONCLUSION

From limited resources to low rates of compliance, international courts and tribunals face a staggering array of problems, and those who believe in the value of using law to resolve transnational disputes have been fighting tirelessly to find solutions. It has not been our intention to heap another problem onto the pile. Instead, it has been our hope that by discussing the relevance of judgment aggregation theory and the doctrinal paradox to international law, we have illustrated the inherent problem of viewing international courts as singular, rational agents while also shedding light on one source of indeterminacy in transnational adjudication that has received little attention. As international law becomes more complex and transnational adjudication more common, the fractured decisions that lead to the occurrence of the doctrinal paradox will become all the more common. As a result, it is our hope to launch a discussion of how international courts should aggregate their judgments to ensure both fairness to litigants and the orderly development of international law. Hopefully, anyone who believes in logically sound and procedurally fair adjudication—regardless of the setting—will see the value of this conversation.

APPENDIX: VOTING PROCEDURES OF PERMANENT INTERNATIONAL COURTS

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
International Court of Justice—ICJ (1946)	Yes (Article 58) The decision "shall be read in open court, due notice having been given to the agents."	Yes (Article 56) "The judgment shall state the reasons on which it's based."	Yes (Article 58)	Yes (Article 57) "[A]ny judge shall be entitled to deliver a separate opinion."	Yes (Article 55) "All questions shall be decided by a majority of the judges present."
European Court of Justice—ECJ (1952)	Yes (Article 37) "Judgments shall be signed by the President and the Registrar. They shall be read in open court."	Yes (Article 36) "Judgments shall state the reasons on which they are based."	Yes (Article 37)	Unclear There is no explicit ban in the statute, but there has never been a dissenting opinion.	Unclear There is no mention of voting.

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
European Court of Human Rights—ECtHR (1959)	Yes (Rule 78) "[F]inal judgments of the Court shall be published . . . ."	Yes (Rule 74) The judgment will contain "reasons in point of law."	Yes (Rule 74)	Yes (Rule 74) "Any judge . . . shall be entitled to . . . a separate opinion, concurring with or dissenting from that judgment, or a bare statement of dissent."	Yes (Rule 88) "Reasoned decisions and advisory opinions shall be given a majority vote by the Grand Chamber."
Inter-American Court of Human Rights—IACtHR (1979)	Yes (Article 32) "The Court shall make public . . . its judgments, orders, opinions, and other decisions . . . ."	Yes (Article 65) A judgment must contain "legal arguments" in addition to the ruling on the case.	Yes (Article 32, 65)	Yes (Article 32) "The Court shall make public . . . separate opinions, dissenting or concurring . . . ."	Yes (Article 16) "The decisions of the Court shall be adopted by a majority of the Judges present at the time of voting."

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
Andean Tribunal of Justice—ATJ (Court of Justice of the Andean Community—TJAC) (1984)	Unclear	Yes (Article 76-82)	Yes (Article 76-82)	No (Article 76-82) There is no mention of a right to dissent or issue a separate opinion.	Yes (Article 23) Magistrates selected to write a judgment based on the majority opinion.
Court of Justice of the European Free Trade Association States—EFTA Court (1992)	Yes (Article 61, 65)	Yes (Article 23) "Every Judge taking part in the deliberations shall state his opinion and the reasons for it."	Yes (Article 60)	No (Article 23)	Yes (Article 23) "The conclusions reached by the majority of the Judges after final discussion shall determine the decision of the Court."

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
Economic Court of the Commonwealth of Independent States—ECCIS (1993)	Yes "The chamber can decide to make public only the Resolution of the decision yet it has to provide parties with the complete decision within 30 days from the moment of the public delivery of the resolution."	Unclear	No "The chamber can decide to make public only the Resolution of the decision yet it has to provide parties with the complete decision within 30 days from the moment of the public delivery of the resolution."	No Dissenting Opinion, not published "Dissenting judges can provide the Head of the chamber with their opinion in writing."	Unclear
International Criminal Tribunal for the Former Yugoslavia—ICTY (1993)	Yes (Rule 98 *ter*) "The judgement shall be pronounced in public . . . ."	Yes (Rule 98 *ter*)	Yes (Rule 98 *ter*)	Yes (Rule 98 *ter*) "[S]eparate or dissenting opinions may be appended."	Yes (Rule 98 *ter*) "The judgement shall be rendered by a majority of the judges."

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
Central American Court of Justice—CACJ (1994)	Yes (Article 45) "The statements which they shall formulate to that effect shall be written down with a clear reference to the respective record, in a special book called Book of Votes."	Yes (Article 45)	Yes (Article 45) "It is the right of the judges to have the reasons of their motions and votes included in the record."	No (Article 45) "The judges shall not formulate any protest against the decisions of the court, or against the opinions of their colleagues."	Yes (Article 40)
Court of the Justice of the Common Market for Eastern and Southern Africa—COMESA CJ (1994)	Yes (Article 31) The decision shall be "deliver[ed] in public session . . . ."	Yes (Article 31)	Yes (Article 31)	No (Article 31) "The Court shall deliver one judgment only in respect of every reference to it . . ."	Yes (Article 31) "The judgment of the Court reached in private by majority verdict."

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
Inter-national Criminal Tribunal for Rwanda—ICTR (1994)	Yes (Article 22) The judgement "shall be delivered by the Trail Chamber in public."	Yes (Article 22)	Yes (Article 22)	Yes (Article 22) "[S]eparate or dissenting opinions may be appended."	Yes (Article 22) "The judgement shall be rendered by a majority of the judges ... "
Appellate Body of the World Trade Organ-ization—WTO Appellate Body (1994)	Yes	Unclear	Unclear	Yes (Article 3.2)	Yes (Article 3.2) "The Appellate Body and its divisions shall make every effort to take their decisions by consensus. Where, nevertheless, a decision cannot be arrived at by consensus, the matter at issue shall be decided by a majority vote."

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
Inter-national Tribunal for the Law of the Sea—ITLOS (1996)	Yes (Article 125)	Yes (Article 125)	Yes (Article 125)	Yes (Article 125)	Yes (Article 125)
Caribbean Court of Justice—CCJ (2001)	Yes (Rule 29)	Yes (Rule 3)	Yes (Rule 29)	No (Rule 3) "No other opinion or judgment shall be given or delivered."	Yes (Rule 3) "The conclusions reached by the majority of the Judges after final deliberation shall be the decision or advisory opinion of the Court..."

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
Court of Justice of the East African Comm-unity—EACJ (2001)	Yes (Rule 71)	Unclear (Rule 68)	No (Rule 68) "The Court may, in any particular case, direct that only the decision of the Court and not the reasons for it shall be delivered in Court."	Yes (Rule 68)	Yes (Rule 68)
Economic Comm-unity of West African States Comm-unity Court of Justice—ECOWAS (2001)	Yes (Article 61)	Yes (Article 23)	Yes (Article 60)	No (Article 23)	Yes (Article 23)

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
Inter-national Criminal Court—ICC (2002)	Yes (Article 74, 50)	Yes (Article 74)	Yes (Article 74)	Yes (Article 74) "The Trial Chamber shall issue one decision. When there is no unanimity, the Trial Chamber's decision shall contain the views of the majority and the minority."	Yes (Article 7) "The judges shall attempt to achieve unanimity in their decisions, failing which decisions hall be taken by a majority of the judges."
African Court on Human and Peoples' Rights—ACtHPR (2004)	Yes (Article 43)	Yes (Article 43)	Yes (Article 43) "All judgments shall state the reasons on which they are based."	Yes (Article 44) "If the judgement does not represent in whole or in part the unanimous opinion of the Judges, any Judge shall be entitled to deliver a separate or dissenting opinion."	Yes (Article 42)

Court (Year Created)	Published Decisions?	Provide Reasons?	Publish Reasons?	Published Dissent?	Majority Voting?
Southern African Development Community Tribunal—SADC Tribunal (2005)	Yes (Article 24) "Decisions of the Tribunal shall be in writing and delivered in open court . . . ."	Yes (Rule 21) "Every Member taking part in the deliberations shall give his or her opinion in writing and the reasons for it."	Yes (Article 24) "Decisions . . . shall state the reasons on which they are based."	No (Rule 21) "The conclusions reached by the majority of the Members of the Tribunal after the final deliberations shall be the decisions of the Tribunal."	Yes (Article 24) "Decisions of the Tribunal shall be taken by a majority."

Note: This table presents the policies of permanent international courts that address how the decision making process will be conducted. This information shows the diversity in the policies that international courts have in place. It also demonstrates how the formal policies are often sufficiently vague, requiring that informal procedures be established to determine how judgments will be aggregated and presented.