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Fact-Finding Without Rules: Habermas's Communicative Rationality as a Framework for Judicial Assessments of Digital Open-Source Information

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FACT-FINDING WITHOUT RULES: HABERMAS'S COMMUNICATIVE RATIONALITY AS A FRAMEWORK FOR JUDICIAL ASSESSMENTS OF DIGITAL OPEN-SOURCE INFORMATION

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ABSTRACT

Jürgen Habermas's theory of "communicative rationality" (also known as "communicative action") provides a promising conceptual apparatus through which to justify and validate the International Criminal Court's consideration of the emerging phenomenon of digital open-source information. Because of its process-based and inclusive qualities, Habermas's communicative rationality is particularly apposite for the dynamic nature of digital open-source information and the heterogenous range of actors and institutions which have relevant experiences and skills to contribute to the generation of norms and determinations regarding its role before the Court. This is important, as the International Criminal Court's procedural framework is largely silent on digital material, despite the risks of such materials being misinterpreted or misused as a vehicle for disinformation. In the absence of prescriptive regulatory responses, this article argues that Jürgen Habermas's communcative rationality provides a justifiable framework for the court's judicial deliberations regarding digital information. Importantly, Habermas emphasizes forming a broad epistemic community to draw specialists into the deliberative process. As the truth-seeking evidentiary function increasingly moves outside of the courtroom, Habermas's communicative rationality constitutes an inclusive approach capable of inculcating specialized knowledge into judicial deliberations. In this way, communicative rationality can provide a powerful conceptual justification for the judicial exercise of power regarding the emerging phenomenon of digital open-source information.

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INTRODUCTION

> The legal discourse of the court, on the other hand, is played out in a procedural-legal vacuum, so that reaching a judgment is left up to the judge's professional ability.[1]

The conceptual justification underlying the activities of supranational entities, such as the International Criminal Court ("ICC"), is particularly important at watershed moments when they address new phenomena, not explicitly envisioned in their founding documents. At present, digital open-source information ("DOSI")[2] is rapidly emerging as one of the most important facets of the ICC's operations. [3] Its forensic impact is potentially revolutionary.[4] However, it is not addressed in the ICC's Statute or associated documents. Consequently, it is important to explore the conceptual justification for the Court's assessment of DOSI. The following analysis confronts these issues, using Jürgen Habermas's theory of "communicative rationality" (also known as "communicative action") as a potential conceptual apparatus through which to structure and legitimize its consideration of DOSI. Habermas's communicative rationality is posited as the conceptual prism for several reasons, as discussed below, but primarily because of its process-based and inclusive qualities. These are particularly apposite for the dynamic field of DOSI, in which a heterogenous range of actors and institutions have relevant experiences and skills to contribute to the generation of norms and determinations regarding its role before the Court.

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[1] JÜRGEN HABERMAS, BETWEEN FACTS AND NORMS: CONTRIBUTIONS TO A DISCOURSE THEORY OF LAW AND DEMOCRACY 236–37 (1996) [hereinafter HABERMAS BFN].

[2] Digital information is data stored or translated into binary format. Lindsay Freeman & Raquel Vazquez Llorente, *Finding the Signal in the Noise: International Criminal Evidence and Procedure in the Digital Age*, 19 J. INT'L CRIM. JUST. 163, 168 (2021) (citing *Binary Format*, TECHOPEDIA, http://www.techopedia.com/definition/938/binary-format (last visited Feb. 25, 2023)). DOSI has been defined as "information on the internet that any member of the public can obtain by request, purchase or observation." Yvonne McDermott, Alexa Koenig, & Daragh Murray, *Open Source Information's Blind Spot: Human and Machine Bias in International Criminal Investigations*, 19 J. INT'L CRIM. JUST. 85, 86 (2021). DOSI may include "emails, text messages, websites, files on a hard drive, satellite imagery, drone footage, machine logs, financial transactions and government records." Freeman & Llorente, *supra* note 2, at 168; *see also* Rafael Braga da Silva, *Updating the Authentication of Digital Evidence in the International Criminal Court*, 22 INT'L CRIM. L. REV. 941, 942 (2021) (citing U.S. DEP'T OF JUST., DIGITAL EVIDENCE IN THE COURTROOM: A GUIDE FOR LAW ENFORCEMENT AND PROSECUTORS (2007)) ("Digital evidence includes 'information and data of value to an investigation that is stored on, received, or transmitted by an electronic device.'").

[3] *See, e.g.*, Lindsay Freeman, *Digital Evidence and War Crimes Prosecutions: The Impact of Digital Technologies on International Criminal Investigations and Trials*, 41 FORDHAM INT'L L. J. 283, 283 (2018); McDermott, Koenig, & Murray, *supra* note 2, at 86; Rebecca Hamilton, *User-Generated Evidence*, 57 COLUM. J. TRANSNAT'L L. 1 (2018).

[4] Marina Aksenova, Morten Bergsmo, & Carsten Stahn, *Non-Criminal Justice Fact-Work in the Age of Accountability*, *in* QUALITY CONTROL IN FACT-FINDING 1, 9–10 (Morten Bergsmo & Carsten Stahn eds., 2020); Emma Irving, *And So It Begins . . . Social Media Evidence in an ICC Arrest Warrant,* OPINIO JURIS (Aug. 17, 2017), http://opiniojuris.org/2017/08/17/and-so-it-begins-social-media-evidence-in-an-icc-arrest-warrant; *see* Alexa Koenig, Felim McMahon, Nikita Mehandru, & Shikkha Silliman Bhattacharjee, *Open Source Fact-Finding in Preliminary Examinations*, *in* 2 QUALITY CONTROL IN PRELIMINARY EXAMINATION 681 (Morten Bergsmo & Carsten Stahn eds., 2018).

The ICC addresses situations ranging across the world, from Afghanistan to the Central African Republic to Ukraine. Political, cultural, and legal traditions vary widely between the situations it confronts. Sources and types of evidence, as well as the domestic rules of procedure applicable to their collection and assessment, also differ greatly depending on the situation.[5] Against this backdrop, it is unsurprising that the ICC's evidentiary procedures are generalized in nature and highly discretionary.[6] However, this minimalistic regulatory approach is put into stark relief by the increasing use of DOSI before the ICC.

The central thesis of the article is that, in the absence of detailed regulatory guidance, the assessment of DOSI by the international judiciary can be conceptualized as an application of Jürgen Habermas's theory of communicative rationality.[7] In presenting this thesis, the analysis enters novel territory. Whereas Habermas himself commented on court proceedings,[8] and whereas Habermas's approach has previously been applied to the legitimacy of international institutions, including the ICC,[9] the present analysis examines its applicability to ICC judicial deliberations concerning DOSI. In this respect, the article differs from previous studies on DOSI, which have focused on its investigation or use,[10] rather than the conceptual framework underpinning the judges' considerations of this material.[11]

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[5] *See* Alexander K. A. Greenwalt, *The Pluralism of International Criminal Law*, 86 IND. L.J. 1064, 1068 (2011) ("In the context of domestic criminal law, moreover, states can and do take divergent approaches to these matters without violating applicable international obligations, including those imposed by international human rights law.").

[6] *See infra* Part V (concerning the ICC's procedural framework).

[7] HABERMAS BFN, *supra* note 1, at 4. He also uses the term "communicative reason" synonymously with this term. *Id.*

[8] *See id.* at 235.

[9] *See* Alexander Heinze, *The Statute of the International Criminal Court as a Kantian Constitution*, *in* PHILOSOPHICAL FOUNDATIONS OF INTERNATIONAL CRIMINAL LAW: CORRELATING THINKERS 351 (Morten Bergsmo & E. J. Buis eds., 2018); Cale Davis, *Challenges in Charge Selection: Considerations Informing the Number of Charges and Cumulative Charging Practices*, *in* QUALITY CONTROL IN CRIMINAL INVESTIGATION 703, 730–31 (Xabier Agirre, Morten Bergsmo, Simon De Smet, & Carsten Stahn eds., 2020).

[10] McDermott, Koenig, & Murray, *supra* note 2; U.N. OFF. OF THE HIGH COMM'R FOR HUM. RTS., BERKELEY PROTOCOL ON DIGITAL OPEN SOURCE INVESTIGATIONS, U.N. Doc. HR/PUB/20/2, U.N. Sales No. E.20.XIV.4 (2022), http://www.ohchr.org/sites/default/files/2022-04/OHCHR_BerkeleyProtocol.pdf [hereinafter BERKELEY PROTOCOL]; *see also Digital Evidence*, INT'L NUREMBERG PRINCIPLES ACAD., http://www.nurembergacademy.org/projects/digital-evidence (last visited Feb. 25, 2023); Amnesty Int'l, *Open Source Investigations for Human Rights: Part 1*, ADVOCACY ASSEMBLY, http://advocacyassembly.org/en/courses/57/#/chapter/1/lesson/1 (last visited Feb. 25, 2023); Amnesty Int'l, *Open Source Investigations for Human Rights: Part 2*, ADVOCACY ASSEMBLY, http://advocacyassembly.org/en/courses/58/#/chapter/1/lesson/1 (last visited Feb. 25, 2023). For discussion of the use of DOSI in fraud prevention, see *Open Source Intelligence Techniques (OSINT) for Fraud Prevention*, SEON TECH., http://resources.cdn.seon.io/uploads/2022/02/SEON_Guide_to_OSINT.pdf (last visited Feb. 25, 2023).

[11] *See, e.g.*, Braga da Silva, *supra* note 2, at 941–42.

This study is timely. Human rights reports, investigations, and legal pleadings increasingly rely on such DOSI,[12] and judges are often required to address this material during their deliberations.[13] Yet, the ICC's procedural documents do not address this type of evidence, and judicial treatment of digital evidence remains largely unchartered territory for the ICC. The risks of missteps are particularly acute, as digital evidence constitutes a paradigm shift for the adjudication of international crimes. Instead of fact-finding based largely on testimony presented before them in a courtroom setting, ICC judges are increasingly called on to assess materials generated and potentially edited in the outside world, often with no direct witness to their recording.[14] With this qualitative shift in litigation truth-assessment, it is necessary to closely examine the procedures, practices, and principles underlying judicial assessments of digital open-source materials. This article seeks to do so by examining how Habermas's approach has the potential to compensate for the conceptual shift that an increasing reliance on DOSI signals for the procedural *grundnorms*[15] of judicial deliberations in the Rome System.

The large-scale Independent Expert Review of the ICC undertaken in 2020 suggested that judges would benefit from training on electronic and digital evidence,[16] as well as on the use of digital tools that could enhance the efficiency of judicial processes.[17] Nonetheless, adjustments to the

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[12] *See, e.g.*, Denise Chow & Yuliya Talmazan, *Watching from Space, Satellites Collect Evidence of War Crimes*, NBC NEWS (May 3, 2022, 4:13 AM), http://www.nbcnews.com/science/science-news/ukraine-satellites-war-crimes; *In the Firing Line: Shooting at Australia's Refugee Centre on Manus Island in Papua New Guinea*, AMNESTY INT'L (May 14, 2017), http://www.amnesty.org/en/documents/asa34/6171/2017/en; *MH17: The Open Source Investigation Three Years Later*, BELLINGCAT (July 17, 2017), http://www.bellingcat.com/news/uk-and-europe/2017/07/17/mh17-open-source-investigation-three-years-later; Malachy Browne, *The Times Uses Forensic Mapping to Verify a Syrian Chemical Attack*, N.Y. TIMES (May 1, 2017), http://www.nytimes.com/2017/05/01/insider/the-times-uses-forensic-mapping-to-verify-a-syrian-chemical-attack.html.

[13] A rough indication of the growing significance of DOSI can be drawn from the following: A search of the ICTY/ICTR/IRMCT court records (as of late 2022) reveals that the term "metadata" only appears in two judgments (Nzabonimpa and Mladić), both of which come from 2021, and thirteen other decisions/orders, all post-dated January 1, 2012, along with a total of seventy-five filings, over 90% of which (all but seven) post-date January 1, 2012. *See ICTY Court Records*, U.N. ICTY CT. REC., http://icr.icty.org (last visited Apr. 3, 2023). The same search across the ICC filings shows that the term "metadata" appears in 786 filings (some of these may be duplicated, as French transcripts occasionally include the English term "metadata" alongside the French *métadonnées*), with the large majority (591) of these post-dated January 1, 2012. *See Legal Tools Database*, INT'L CRIM. CT., http://www.legal-tools.org (last visited Apr. 3, 2023). This is limited to publicly accessible filings.

[14] This is different from the conduct of proceedings remotely, which has occurred during COVID-19 in many instances. Remote proceedings still involve the truth-telling moment taking place before the judge(s), albeit from a remote location. Conversely, DOSI, may involve people's accounts being recorded well outside any judicial oversight.

[15] The *grundnorms* refer to the underlying foundational principles. *See generally* HANS KELSEN, THE PURE THEORY OF LAW (Max Knight trans., Univ. Cal. Press 1970) (1967).

[16] Int'l Crim. Ct., Independent Expert Review of the International Criminal Court and the Rome Statute System: Final Report, ¶ 436, ICC-ASP/19/16 (2020) [hereinafter Independent Expert Review]; Braga da Silva, *supra* note 2, at 961.

[17] ICC Expert Review, *supra* note 16, ¶ 554; *see also id.* ¶ R209 (recommending the establishment of a "Task Force comprising staff from both Chambers and the Registry's IT department . . . to identify working methods and potential technological tools that could be introduced in Chambers and proceedings").

relevant facets of the procedural framework have not been forthcoming, leaving judges to operate largely in a regulatory vacuum.[18] Inevitably, judges are reaching inconsistent views as to the veracity and authenticity of DOSI and even the standards they should apply.[19] In the absence of a detailed prescriptive framework governing DOSI, fact-finding without rules will continue at the ICC.[20]

Beyond the ICC's remit, the insights herein are significant for other jurisdictions that share the ICC's goal of redressing atrocity crimes and severe human rights violations. Domestic and hybrid courts are increasingly addressing atrocity crimes based on digital evidence.[21] International commissions of inquiry and fact-finding missions established by the United Nations Human Rights Council are also placing ever greater emphasis on digital materials.[22] Those other jurisdictions can draw guidance from this study regarding the implementation of their procedural frameworks. Such cross-fertilization of practices reduces the fragmentation of international law and allows for more seamless cooperation between institutions, particularly when sharing digital materials for use as evidence.

Following this introduction, Part I sets out the thesis of the article in detail. Part II then outlines Habermas's framework of communicative rationality, with Part III setting out the major critiques of his approach. Part IV highlights both the power and pitfalls of DOSI. Part V examines the flexible nature of the ICC's evidentiary rules, insofar as they apply to DOSI. Part VI applies Habermas's theory to deliberations regarding DOSI. Part VII explores the specific means of forging links between the judiciary and the DOSI sub-community. Based on this analysis, Part VIII sets out conclusions regarding the explanatory utility of Habermas's approach to deliberations on DOSI at the ICC and other institutions investigating atrocity crimes.

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[18] *See, e.g.*, Braga da Silva, *supra* note 2, at 943 (stating that "there is still a gap in how the ICC judges treat digital evidence, especially regarding the issue of its authenticity").

[19] *See infra* notes 164–166 (concerning the *Bemba* case).

[20] The expression "fact-finding without rules" is an allusion to Nancy Combs' seminal book, which highlighted the problematic evidentiary bases of judges' determinations in international proceedings. NANCY COMBS, FACT-FINDING WITHOUT FACTS: THE UNCERTAIN EVIDENTIARY FOUNDATIONS OF INTERNATIONAL CRIMINAL CONVICTIONS (2010).

[21] *See, e.g.*, *Transcript of the MH17 Judgment Hearing by the District Court of the Hague*, MH17 TRIAL (Nov. 17, 2022), http://www.courtmh17.com/en/insights/news/2022/transcript-of-the-mh17-judgment-hearing; Prosecutor v. Taylor, Case No. SCSL-03-01-T, Judgment, ¶ 1324 (May 18, 2012); Prosecutor v. Ayyash, Case No. STL-11-01/PT/TC, Decision on Motion for the Admission of Photos, Videos, Maps and Three-Dimensional Models, ¶ 6 (Jan. 13, 2014); *see also* Lindsay Freeman, *Prosecuting Atrocity Crimes with Open Source Evidence*, *in* DIGITAL WITNESS: USING OPEN SOURCE INFORMATION FOR HUMAN RIGHTS INVESTIGATION DOCUMENTATION, AND ACCOUNTABILITY 48, 52 (Sam Dubberley, Alexa Koenig, & Daragh Murray eds., 2019) (referring to cases in Germany, Finland, and Sweden in which the prosecution relied on electronically recorded images and videos disseminated through social media in securing convictions).

[22] *See* Daragh Murray, Yvonne McDermott, & Alexa Koenig, *Mapping the Use of Open Source Research in U.N. Human Rights Investigations*, 14 J. HUM. RTS. PRAC. 554, 555 (2022); Federica D'Alessandra & Kirsty Sutherland, *The Promise and Challenges of New Actors and New Technologies in International Justice*, 19 J. INT'L CRIM. JUST. 9, 26 (2021) (referring to the international investigative mechanisms for Iraq, Syria, and Myanmar).

I. THESIS: A FLEXIBLE AND INCLUSIVE FRAMEWORK TO ADDRESS THE DYNAMIC PHENOMENON OF DIGITAL OPEN-SOURCE INFORMATION

This analysis focuses on the ICC in particular because of its global jurisdiction and the fact that it is receiving an increasing amount of digital evidence.[23] As detailed below, judicial assessments of DOSI at the ICC are conducted on an almost completely unregulated basis.[24] The applicable rules and procedures governing evidence are highly permissive.[25] There are no specific provisions or legally binding regulations addressing DOSI.[26] This flexibility offers considerable advantages and is even necessary in the idiosyncratic field of atrocity crime investigation, where "there is an expectation that investigations and prosecutions will commence at the same time as conflicts continue to rage."[27] Yet such breadth also portends risks.[28] The most acute drawbacks are the possibility of errors, inconsistent and unequal approaches in different cases (or even within the same case depending on the evidence

[23] *See* Freeman, *supra* note 21, at 51–52.

[24] *See infra* Part V; *see also* ROBERT HEINSCH ET AL., LEIDEN UNIV., REPORT ON DIGITALLY DERIVED EVIDENCE IN INTERNATIONAL CRIMINAL LAW 32 (2019), http://kalshovengieskesforum.com/wp-content/uploads/2020/11/2021_Legal-Framework-and-Practice-in-International-Courts-and-Tribunals-for-Launch-Event_for-publication.pdf ("Currently, there is no established procedure for authenticating DDE in international criminal law."); *id.* at 38 (citing Prosecutor v. Lubanga, Case No. ICC-01/04-01/06, Decision on the Confirmation of Charges, ¶ 96 (Jan. 29, 2007)) ("The Court noted pre-trial in *Lubanga* that nothing in the Rome Statute framework 'expressly states that the absence of information about the chain of custody or transmission affects the admissibility or probative value of Prosecution evidence.'").

[25] Bartłomiej Krzan, *Admissibility of Evidence and International Criminal Justice*, 7 REV. BRAS. DE DIREITO PROCESSUAL PENAL 161, 171 (2021) ("The Statute's approach vis-à-vis the admission of evidence is to eschew most of the technical rules on admissibility in favour of a system of utmost flexibility."); *see also* Freeman & Llorente, *supra* note 2, at 182.

[26] For discussion on the flexible procedural framework at the ICC, see *infra* Part V.

[27] Alex Whiting, *The ICTY as a Laboratory of International Criminal Procedure*, *in* THE LEGACY OF THE INTERNATIONAL CRIMINAL TRIBUNAL FOR THE FORMER YUGOSLAVIA 83, 86, 94 (Bert Swart, Alexander Zahar, & Göran Sluiter eds., 2011). For a discussion of the advantages of the flexibility, see Gideon Boas, *Creating Laws of Evidence for International Criminal Law: The ICTY and the Principle of Flexibility*, 12 CRIM. L. F. 41, 55 (2001) ("The judges are in a position to take on board a much broader range of evidentiary material, hear arguments about the probative worth of the evidence and make a determination on the basis of the quality of the material, unencumbered by the usual concerns of unduly prejudicing non-judicial minds in the trying of fact in criminal cases.").

[28] *See* Freeman & Llorente, *supra* note 2, at 183–84.

or crime in question),[29] uncertainty in the law, and the introduction of biases, including unconscious and algorithmic biases.[30]

A positivist response would be to propose a set of mandatory rules to fill the void. However, the Rome Statute procedural framework has an open and flexible character in general, and it would be incongruous for the ICC's Assembly of States Parties to create a detailed prescriptive regime for DOSI while leaving other areas of substantive evidence lacking in specific regulation.[31] Moreover, a mandatory set of prescriptions may not keep pace with the rapid changes in digital technology and our developing understanding of the forensic benefits and challenges of this type of evidence.[32] Navigating the space between comprehensive codified rules and broad judicial discretion is a difficult endeavor that risks straying into contradiction. Nonetheless, given the pressing need to assess digital materials in a coherent and principled manner and the limited prospects of the ICC Assembly of States (or the ICC judges) agreeing on a set of DOSI regulations, the following examination of alternative pathways for the ICC's treatment of digital open-source materials is imperative.[33]

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[29] Already inconsistent approaches and views regarding DOSI are being taken by chambers in various cases and even within the same case, as detailed below. *Compare* Prosecutor v. Bemba, Case No. ICC-01/05-01/08-2721, Decision on the Admission into Evidence of Items Deferred, ¶ 120 (June 27, 2013), http://www.icc-cpi.int/sites/default/files/CourtRecords/CR2013_04725.PDF, *with* Prosecutor v. Bemba, Case No. ICC-01/05-01/08-A, Judgment on the Appeal of Mr. Jean-Pierre Bemba Gombo Against Trial Chamber III's "Judgment Pursuant to Article 74 of the Statute", ¶ 183 (June 8, 2018), http://www.icc cpi.int/sites/default/files/CourtRecords/CR2018_02984.PDF.

[30] For discussion on the power and pitfalls of DOSI at the ICC, see *infra* Part IV. *See also infra* Part VII (on DOSI team practices designed to address automation and unconscious biases).

[31] It is unlikely that the ICC Assembly of States Parties will legislate a set of regulations in this respect. The Assembly of States Parties has occasionally adopted ad hoc guidelines, such as on the use of gratis personnel. *See* Magda Karagiannakis, *Article 44*, *in* ROME STATUTE OF THE INTERNATIONAL CRIMINAL COURT: ARTICLE-BY-ARTICLE COMMENTARY 1534, 1542 (Kai Ambos ed., 4th ed. 2022). However, there is no indication that such a process would be used for digital evidence.

[32] For example, the risk of biases in machine learning are only starting to become apparent. *See* McDermott, Koenig, & Murray, *supra* note 2, at 86.

[33] To adopt any formal amendments to the Rules of Procedure and Evidence, a 2/3 majority of the State Parties is required under article 51(2), and amendments to the Rome Statute (passed by the 2/3 majority) require a 7/8 majority to take force for all States Parties under article 121. Rome Statute of the Int'l Crim. Ct. arts. 51(2), 121, July 17, 1998, 2187 U.N.T.S. 90 [hereinafter Rome Statute]. Judges can technically adopt provisions by a 2/3 majority on a provisional basis under the article 51(3) process. *See id.* art. 51(3); Kritika Sharma, *The Curious Case of Rule 165 of the Rules of Procedure and Evidence: The Effect of Control Exercised by the Assembly of States Parties over the International Criminal Court*, 20 INT'L CRIM. L. REV. 285 (2020). Alternatively, the judges could attempt to adopt guidelines as part of the Regulations of the Court, which only require an absolute majority of the judges for an amendment. *See* Int'l Crim. Ct., Regulations of the Court, ICC-BD/01-05-16 (last amended Nov. 12, 2018) [hereinafter ICC Regulations]. However, the Regulations are supposed to address the "routine functioning" of the Court, such as time limits and page limits, and do not have any other provisions directed towards substantive evidentiary questions, apart from arguably regulation 55. *See id.* reg. 55; Christopher Staker & Dov Jacobs, *Article 52*, *in* THE ROME STATUTE OF THE INTERNATIONAL CRIMINAL COURT: A COMMENTARY 1352, 1356 (Otto Triffterer & Kai Ambos eds., 3d ed. 2016) [hereinafter TRIFFTERER & AMBOS COMMENTARY] ("In the event that provisions of the Regulations purported to regulate matters going beyond the 'routine functioning' of the Court, they would be *ultra vires*."). Similarly, the judges could adjust the Chambers Practice Manual. However, while this is the most granular of the generally applicable regulatory instruments at

In lieu of traditional prescriptive regulatory responses, and in order to avoid the alternative of judges simply operating on a completely untethered basis, the thesis of this article argues that Habermas's framework of communicative rationality may be applied to ICC judicial deliberations regarding DOSI to resolve this issue.[34] Habermas has already been identified as an important reference point in the search for a sociology of international criminal justice.[35] Moreover, there are several features of Habermas's communicative rationality that support its particular application to the novel and emerging phenomenon of DOSI before the ICC. In character, Habermas's dialectical approach lends itself to judicial deliberations, which involve the exchange of views designed to reach an outcome.[36] Moreover, because of its flexible nature, focused on the process rather than any specific outcome thereof, his approach is apt to address dynamic issues, such as digital evidence.[37] Most significantly, Habermas's framework is highly inclusive, emphasizing the opening of the communicative process to all relevant actors in order to form an epistemic community and generate well-founded legal decisions and governing norms.[38] That openness to external specialists is important for the creation of robust yet flexible standards to assess the authenticity and weight of digital evidence.[39] In this way, Habermas's inclusive approach can provide a conceptual legitimization[40] of the judges' exercise of power in a space largely unregulated by traditional prescriptive legal

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the ICC, which sets down several detailed procedural guidelines regarding matters such as the confirmation of charges proceedings and the disclosure of evidence between the parties, it does not address how a chamber should weigh evidence or conduct its deliberations. *See* INT'L CRIM. CT., CHAMBERS PRACTICE MANUAL (6th ed. 2022), http://www.icc-cpi.int/sites/default/files/2022-11/chamber-manual-eng-v.6.pdf [hereinafter PRACTICE MANUAL]. Moreover, the Manual is only instructive and not mandatory. *See id.* at 3 ("[T]his section is not intended as a binding instrument on ICC trial judges."). On the nature of the Manual as a legal instrument, see Yvonne McDermott, *The International Criminal Court's Chambers Practice Manual: Towards a Return to Judicial Law Making in International Criminal Procedure?*, 15 J. INT'L CRIM. JUST. 873 (2017).

[34] HABERMAS BFN, *supra* note 1, at 4. Habermas notes constraints on the parties engaging in a similar process of rational discourse in the courtroom due to their frequently antagonistic stance vis-à-vis each other, but also notes that, from the judges' perspective, the parties nonetheless contribute to the search for an impartial judgement. *Id.* at 231.

[35] Kjersti Lohne, *Towards a Sociology of International Criminal Justice*, *in* POWER IN INTERNATIONAL CRIMINAL JUSTICE 47, 56 (Morten Bergsmo, Mark Klamberg, Kjersti Lohne, & Christopher B. Mahony eds., 2020); *see also* MICHAEL STRUETT, THE POLITICS OF CONSTRUCTING THE INTERNATIONAL CRIMINAL COURT 22, 39 (2008).

[36] *See infra* note 63.

[37] *See infra* note 61; *see also* STRUETT, *supra* note 35, at 41.

[38] *See* HABERMAS BFN, *supra* note 1, at 230; *see also* STRUETT, *supra* note 35, at 21 (noting that Habermas's framework "is useful because it provides us with a theoretically well-grounded basis for evaluating the rationality of normative arguments").

[39] *See* Freeman, *supra* note 21, at 51–52.

[40] HABERMAS BFN, *supra* note 1, at 38–39 ("The law itself derives its binding force from the alliance between the positivity of law and its claims to legitimacy."); *id.* at 173 (noting that an independent judiciary must apply the law "in a way that guarantees both the certainty of law and the rational acceptability of court decisions"); *see, e.g.*, JÜRGEN HABERMAS, LEGITIMATION CRISIS 87 (1973); *see also* DAVID INGRAM, HABERMAS: INTRODUCTION AND ANALYSIS 211 (2010). On the nature of legitimacy, see THOMAS M. FRANCK, FAIRNESS IN INTERNATIONAL LAW AND INSTITUTIONS 7–8 (1995); JUTTA BRUNNÉE & STEPHEN J. TOOPE, LEGITIMACY AND LEGALITY IN INTERNATIONAL LAW: AN INTERACTIONAL ACCOUNT 53–54 (2010).

instruments.[41] As such, the focus on Habermas's communicative rationality responds to the observation that "legitimacy – trust in institutions – is deeply sociological; it is a dialectic and continuous process of claims by power-holders, and the support of such claims by a diversity of constituencies."[42]

Habermas's emphasis on systems theory,[43] prioritizing the process of decision-making above the contents of the decisions themselves, is particularly apposite to DOSI, which is constantly re-inventing itself and thereby necessitates a flexible but robust set of parameters to channel it into judicial decisions. Conversely, deontological approaches, such as Kant's categorical imperative, are more focused on absolute rules than systems and processes, and therefore have less promise as frameworks for constantly evolving areas.[44] Habermas's emphasis on inclusivity,[45] differentiates him from jurists such as Dworkin, who posits a Herculean judge, acting monologically and hermetically with "virtue and a privileged access to the truth."[46] In comparison, Habermas's open and adaptable approach provides a more suitable framework for a dynamic area such as digital information, which lies far beyond the exclusive domain of any one established profession or sector of society.

By superimposing Habermas's framework of communicative rationality on this type of evidence, the underlying goal of this article is to contribute to a functional deliberative dialogue that will strengthen both fact-finding and norm-generation based on the emerging use of DOSI in international criminal proceedings.[47] The analysis also fits into the

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[41] *See* HABERMAS BFN, *supra* note 1, at 4 ("Communicative reason is not an immediate source of prescriptions. It has a normative content only insofar as the communicatively acting individuals must commit themselves to pragmatic presuppositions of a counterfactual sort.").

[42] Lohne, *supra* note 35, at 49 (citing David Beetham, *Revisiting Legitimacy, Twenty Years On*, *in* LEGITIMACY AND CRIMINAL JUSTICE: AN INTERNATIONAL EXPLORATION 19 (Justice Tankebe & Alison Liebing eds., 2013)).

[43] *See* Heinze, *supra* note 9, at 373 (citing Tony Prosser, *Constitutions as Communication*, 15 INT'L J. CONST. L. 1039, 1047 (2017)).

[44] *See* Heinze, *supra* note 9, at 373.

[45] *See* HABERMAS BFN, *supra* note 1, at 230 ("[L]egal discourse cannot operate self-sufficiently inside a hermetically sealed universe of existing norms but must rather remain open to the pragmatic, ethical, and moral reasons brought to bear in the legislative process and bundled together in the legitimacy claim of legal norms.").

[46] HABERMAS BFN, *supra* note 1, at 223–24 (arguing as a counterpoint to Dworkin, that instead "Hercules could conceive of himself as a member of the interpretation community of legal experts").

[47] The present article focuses on assessing digital open-source evidence in light of Habermas's framework. A broader issue is whether Habermas's approach could apply to all types of evidence, including more "traditional" forms such as witness testimony and written documents. However, there is less imperative to explore the applicability of Habermas's framework in this wider respect. The Court has rules of procedure and evidence and jurisprudence addressing the more "traditional" forms of evidence, which although broadly framed, do provide a measure of guidance in that respect. Conversely, DOSI is not addressed in the Rules. Moreover, it often has forensically relevant differences, necessitating adaptation from the traditional assessment of traditional evidence, including that it may be generated outside of the Courtroom (see *infra* Part VI.A); it often requires a level of technological knowledge to understand; and that the modes and methods of its creation and modification are rapidly changing. More traditional evidentiary sources, such as testimony, DNA, and other real evidence, are less rapidly mutable in form. Consequently, Habermas's flexible approach has particular resonance for the emerging field of DOSI that does not automatically translate to other forms of evidence.

important broader exegetical movement aiming to address the normative legitimacy of the ICC, against the backdrop of the "acute ontological anxiety" of the international criminal justice project.[48]

II. HABERMAS'S FRAMEWORK OF COMMUNICATIVE RATIONALITY

> The key insight from [Habermas's] theory of communicative action is that while it may be impossible to state at the outset which normative claims can be considered "true" or valid, it is possible to identify processes through which norms can be justified discursively as having validity in a given social context.[49]

Habermas provides a theoretical framework in which societal actors "seek to reach common understandings and coordinate their actions through reasoned argument, consensus, and cooperation, rather than through strategic action taken strictly in pursuit of individual goals."[50] He sees rationality and legitimacy as reliant on the conduct of communicative interactions between relevant subjects.[51]

Habermas contends that "reaching understanding" (*Verständigung*) among participants requires efforts to generate a "communicatively achieved agreement."[52] He explains:

> [A] communicatively achieved agreement has a rational basis; it cannot be imposed by either party, whether instrumentally through intervention in the situation directly or strategically through influencing the decisions of opponents…what comes to pass manifestly through outside influence…cannot count subjectively as agreement. Agreement rests on common convictions.[53]

Habermas identifies four predicates for the establishment of communicative rationality: First, no one capable of making a relevant contribution should be excluded; second, each participant should have an equal voice; third, they should be internally free to speak their honest opinion without deception or self-deception; and fourth, there should be no sources of coercion built into the process and procedures of discourse.[54]

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[48] *See* Lohne, *supra* note 35, at 52; THE LEGITIMACY OF INTERNATIONAL CRIMINAL TRIBUNALS (Nobuo Hayashi & Cecilia M. Bailliet eds., 2017); Darryl Robinson, *The Identity Crisis of International Criminal Law*, 21 LEIDEN J. INT'L L. 925 (2008).

[49] STRUETT, *supra* note 35, at 35–36.

[50] Roger Bolton, *Habermas's Theory of Communicative Action and the Theory Social Capital* 1 (Williams Coll. Dep't Econ., Working Paper No. 2006-01, 2006), http://web.williams.edu/Economics/papers/Habermas.pdf; 1 JÜRGEN HABERMAS, THE THEORY OF COMMUNICATIVE ACTION: REASON AND THE RATIONALIZATION OF SOCIETY 86 (1991).

[51] *See* HABERMAS, *supra* note 50, at 286–87; DAVID S. OWEN, BETWEEN REASON AND HISTORY: HABERMAS AND THE IDEA OF PROGRESS 37 (Lenore Langsdorf ed., 2002); *see also* BRUNNÉE & TOOPE, *supra* note 40, at 14–15 (noting Fuller's account that law is authoritative only when it is mutually constructed).

[52] HABERMAS, *supra* note 50, at 287; OWEN, *supra* note 51, at 38.

[53] HABERMAS, *supra* note 50, at 287.

[54] James Bohman & William Rehg, *Jürgen Habermas*, STAN. ENCYCLOPAEDIA OF PHIL. (Aug. 4, 2014), http://plato.stanford.edu/entries/habermas/#HabDisThe.

Habermas's communicative rationality provides a paradigm suitable for interactions between autonomous individual actors (in the present context, judges and specialists),[55] who must cooperatively generate defensible decisions and normative approaches.[56]

The following analysis transposes Habermas's ideal communicative conditions onto judicial deliberations. As a matter of terminology, the term "deliberations" has two senses. On the one hand, there are judicial deliberations, namely, the closed and non-public process whereby judges exchange views and reach their determinations on relevant issues of law and fact in cases before them.[57] On the other hand, there is the broader form of deliberations, namely, exchanges of information with a view towards reaching a decision among interested actors. Habermas's theories refer the term in this latter, broader, sense, whereby deliberation is the process in which rules and institutions are legitimated discursively.[58] Yet his approach of communicative rationality also has explanatory utility when transposed to judicial deliberations in the narrower sense. Adjudicative processes entail communicative processes designed to generate decisions that legitimate their housing institutions,[59] both with internal and external audiences.[60]

In accessing external legitimation, Habermas encourages the formation of a broad epistemic community. For present purposes, this can be seen as comprising three distinguishable groups, or "sub-communities."[61] First, there are the judges on a particular case involving

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[55] For an account of autonomous actors operating through institutions, see LON L. FULLER, THE MORALITY OF LAW 221 (1969). *See also* BRUNNÉE & TOOPE, *supra* note 40, at 20.

[56] *See* Thomas Risse, *"Let's Argue!": Communicative Action in World Politics*, 54 INT'L ORG. 1, 6–7 (2000) ("When actors deliberate about the truth, they try to figure out in a collective communicative process (1) whether their assumptions about the world and about cause-and-effect relationships in the world are correct (the realm of theoretical discourses); or (2) whether norms of appropriate behaviour can be justified, and which norms apply under given circumstances (the realm of practical discourses)."); *see also* Jürgen Habermas, *The Constitutionalization of International Law and the Legitimation Problems of a Constitution for World Society*, 15 CONSTELLATIONS 444, 446 (2008) [hereinafter *Constitutionalization of International Law*].

[57] In this respect, it is instructive that empirical studies showing the positive impact of deliberative communication have been conducted in small groups. Jürgen Habermas, *Political Communication in Media Society: Does Democracy Still Enjoy an Epistemic Dimension? The Impact of Normative Theory on Empirical Research*, 16 COMMC'N THEORY 411, 414 (2006); *see also* INGRAM, *supra* note 40, at 210 ("Habermas's theory reminds us that judicial decisions are examples of small-scale democratic dialogue.").

[58] IAN JOHNSTONE, THE POWER OF DELIBERATION: INTERNATIONAL LAW, POLITICS AND ORGANIZATIONS 31 (2011).

[59] *Cf.* FRANCK, *supra* note 40, at 7 ("The fairness of international law, as of any other legal system, will be judged, first by the degree to which the rules satisfy the participants' expectations of a justifiable distribution of costs and benefits, and secondly by the extent to which the rules are made and applied in accordance with what the participants perceive as right process.").

[60] *See* INGRAM, *supra* note 40, at 210 (noting that judges communicate with one another, as well as with lawyers and experts, in fashioning their opinions and have a keen awareness of public opinion).

[61] *See* Jutta Brunnée & Stephen J. Toope, *Interactional Legal Theory: The International Rule of Law and Global Constitutionalism*, *in* HANDBOOK ON GLOBAL CONSTITUTIONALISM 170, 177 (Anthony F. Lang & Antje Wiener eds., 2017) ("[T]here exist multiple, overlapping communities of legal practice… More particularized communities grow within specific issue areas.").

DOSI who must ultimately apply the law to the facts and determine the verdict, while also addressing questions regarding the admissibility and reliability of evidence. Second, there are judges in other chambers and other courts addressing atrocity crimes. These judges must apply consistent procedures or approaches to DOSI to avoid undermining the consistency and legitimacy of international criminal law. Third, broadening the circle further, there are specialists who have experience and proficiency working with DOSI in forensic proceedings. This third category includes forensic scientists, investigators, technicians, and other specialists involved in the generation and analysis of DOSI. In relation to DOSI, a range of technical skills and professions can offer contributions to its forensic analysis. However, because the procedural approach under international criminal law tends to focus on types of evidence rather than types of specialists, these groups are approached globally for present purposes.

To explore the applicability of Habermas's conception to DOSI adjudication, each of these sub-communities is assessed below. They are examined in terms of their "lifeworlds" (*Gemeinsame Lebenswelt*), their roles, and their communicative capacity both within their sub-community and more broadly within the entire epistemic community.[62] In particular, the analysis looks both at how judges can incorporate the specialist DOSI into their factual and normative deliberations and at how the digital specialist community itself can ensure that its work is amendable to use in judicial proceedings, whenever possible.[63]

III. CRITIQUES OF HABERMAS'S COMMUNICATIVE RATIONALITY

There are critiques of Habermas's approach that must be borne in mind when testing its applicability to a novel domain such as the adjudication of evidence based on DOSI.

First, Habermas's approach to law has been called normatively "empty"[64] on the basis that it does not provide substantive guidance on contested legal issues. Along the same lines, he has been accused of engaging in narrow "proceduralism."[65] However, his conception of proceduralism is not any type of sterile abdication to institutional authority, but rather focuses on a process of communication between

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[62] *See* discussion *infra* Part VII.

[63] Carsten Stahn, *United in Diversity: International Criminal Justice and the Invisible Community of Courts* 4 (TOAEP, Policy Brief Series No. 131, 2022), http://www.toaep.org/pbs-pdf/131-stahn ("Lawyers could make better use of the work of social scientists to get a more informed and realistic understanding of the social-political context in which crimes are committed.").

[64] Mathieu Deflem, *Law in Habermas's Theory of Communicative Action*, 116 UNIVERSITAS 267, 277–78 (2008) (citing, *e.g.*, Rainer Döbert, *Against the Neglect of Content in the Moral Theories of Kohlberg and Habermas*, *in* THE MORAL DOMAIN: ESSAYS IN THE ONGOING DISCUSSION BETWEEN PHILOSOPHY AND THE SOCIAL SCIENCES 71 (Thomas E. Wren ed., 1990)).

[65] NIKOLAS KOMPRIDIS, CRITIQUE AND DISCLOSURE: CRITICAL THEORY BETWEEN PAST AND FUTURE 186 (2006).

relevant actors to prompt opinion formation.[66] In fact, it is precisely the quality of providing a morally defensible procedural approach, rather than pre-empting any specific concrete moral decision of a relevant actor,[67] that makes Habermas's theory of communicative rationality suitable for superimposition on judicial processes.[68] As an institution addressing crimes in a range of cultural, political, and legal contexts, the ICC's legal parameters should focus on fair procedures rather than a comprehensive ex ante prescriptive response to every specific scenario that may arise.[69]

Second, Habermas's orientation towards consensus-based outcomes could be criticized as leaving no space for dissent.[70] International judicial proceedings, including those before the ICC, explicitly provide for, and frequently feature, dissenting or separate opinions.[71] However, it is not clear that Habermas would preclude dissenting opinions altogether. If opinions are formed through the structured argumentative process and recorded reasons are given for the dissent, the existence of dissenting or separate opinions could arguably be seen as fitting within his communicative framework for rationality.[72]

Third, a broader critique of Habermas's work, from the perspective of critical legal studies, contends that his espousal of a neutral form of reasoning is in fact illusory and amounts to the use of law as a protective shield to entrench existing hierarchies.[73] In this respect, Habermas is accused of inevitably deferring to the concrete norms already present in a given legal structure.[74] For his part, Habermas has argued that, although

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[66] *See* WILLIAM OUTHWAITE, HABERMAS: A CRITICAL INTRODUCTION 141 (2009) (referring to HABERMAS BFN, *supra* note 1, at 408); *see also* FULLER, *supra* note 55, at 96–97 (describing a "procedural version of natural law").

[67] *See* HABERMAS BFN, *supra* note 1, at 4; *see also* OUTHWAITE, *supra* note 66, at 53–54.

[68] *See* HABERMAS BFN, *supra* note 1, at 178 (noting that the judicial process leaves open the space for "argumentation" and that "by virtue of its comparatively high degree of rationality, judicial deliberation and decision making offer the most thoroughly analyzed case of an intermeshing of two types of procedure; here we find just that intersection of institutional procedure and an argumentation process whose internal structure eludes legal institutionalization"). Similarly, Lon Fuller sought to provide an account of law that "did not require fundamental shared commitments to a single political morality, nor the existence of centralized political authority." BRUNNÉE & TOOPE, *supra* note 40, at 21 (referring to FULLER, *supra* note 55, at 221).

[69] *See* Greenwalt, *supra* note 5, at 1083.

[70] Bohman & Rehg, *supra* note 54 ("For Habermas, reasonable political discourse must at least begin with the supposition that legal questions admit in principle of single right answers . . . or at least a set of discursively valid answers on which a fair compromise, acceptable to all parties, is possible.").

[71] Rome Statute, *supra* note 33, art. 74(3) ("The judges shall attempt to achieve unanimity in their decision, failing which the decision shall be taken by a majority of the judges."); *id.* art. 74(5) ("When there is no unanimity, the Trial Chamber's decision shall contain the views of the majority and the minority."); *see also id.* art. 83(4) ("When there is no unanimity, the judgement of the Appeals Chamber shall contain the views of the majority and the minority, but a judge may deliver a separate or dissenting opinion on a question of law.").

[72] In this respect, Habermas's emphasis on "normative consensus" has a closer alignment to the process of judicial deliberations than a Kantian approach of abstract universalizability. As Kant's approach is more focused on the generation of deontological rules, it is less anchored on the formation and adjustment of viewpoints through the process of communication among potentially interested parties. *See* OUTHWAITE, *supra* note 66, at 53–54.

[73] Deflem, *supra* note 64, at 277–79 (citing, *e.g.*, Robert Alexy, *On Necessary Relations Between Law and Morality*, 2 RATIO JURIS 167, 167–83 (1989)).

[74] *Id.* at 277–78 (citing, *inter alia*, Alexy, *supra* note 73).

scholars in the field of critical legal studies perform a valuable task in criticizing the law based on its own aspirations, they fail to offer an alternative justification or rationale for their criticism.[75] In Habermas's view, these "totalising critiques" of reasoning, themselves rely upon reason, thereby undermining their own foundations, a limitation that has been referred to as the "performative contradiction."[76] It has been argued that Habermas's rebuke of this critique ignores the distinction between the conclusions drawn by reason and the processes associated with reasoning – the latter not being "compromised by the possibility of a world that resists singular determination."[77] Nonetheless, Habermas's approach is essentially procedural in orientation, setting out the parameters of the reasoning process rather than identifying the contents thereof. Moreover, because of its emphasis on drawing relevant communities into the reasoning process, Habermas's communicative rationality allows for other communities to introduce their lexicon and taxonomies to other participants. In practice, this mitigates against claims that his theories rely on an exclusive validity of any substantive conclusions reached. At the broader level, Habermas's approach to international governance – epitomized in his writing on institutional cosmopolitanism, "leaves room for a pluralistic order," in contrast to other commentators such as Kant.[78]

A variation of the critical legal studies critique, which is conceptually linked to it, is the third world approaches to international law argument, whereby Habermas's approach rests on a particular form of Western bias.[79] This argument accuses Habermas of adopting a linear, Eurocentric style of thinking.[80] In this respect, his approach has been spurned as "covertly ideological, concealing forms of patriarchal and economic domination."[81] This dovetails with feminist critiques of his work, which also allege that his approach will perpetuate harmful inequities in society and entrench

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[75] Victoria Ridler, *World and World: The Imperium of Reason and the Possibility of Critique*, 2 J. CRITICAL GLOBALISATION STUD. 82, 88–89 (2010) (citing JÜRGEN HABERMAS, THE PHILOSOPHICAL DISCOURSE OF MODERNITY: TWELVE LECTURES 125, 185, 294 (Frederick Lawrence trans., Polity Press 1991) (1987)); *see also* Deflem, *supra* note 64, at 278–89 (citing, *inter alia*, Christine A. Desan Husson, *Expanding the Legal Vocabulary: The Challenge Posed by the Deconstruction and Defense of Law*, 95 YALE L.J. 969 (1986)); David Ingram, *Dworkin, Habermas, and the CLS Movement on Moral Criticism in Law*, 16 PHIL. & SOC. CRITICISM 237 (1990); David M. Rasmussen, *Communication Theory and the Critique of the Law: Habermas and Unger on the Law*, 8 PRAXIS INT'L 155 (1988); OWEN, *supra* note 51, at 25.

[76] Ridler, *supra* note 75, at 89.

[77] Ridler, *supra* note 80, at 89.

[78] Heinze, *supra* note 9, at 373 (citing Armin von Bogdandy & Sergio Dellavalle, *Universalism Renewed: Habermas' Theory of International Order in Light of Competing Paradigms*, 10 GERMAN L.J. 5, 19 (2009)).

[79] Asad G. Kiyani, *Third World Approaches to International Criminal Law*, 109 AM. J. INT'L L. UNBOUND 255, 255–59 (2015). Although it goes beyond the confines of this paper, it is important to be cognisant of biases in the framework applied to digital evidence, as the underlying material itself can be influenced by algorithmic biases. *See, e.g.*, Nema Milaninia, *Biases in Machine Learning Models and Big Data Analytics: The International Criminal and Humanitarian Law Implications*, 102 INT'L REV. RED CROSS 199 (2020).

[80] *See* Shelton A. Gunaratnem, *Public Sphere and Communicative Rationality: Interrogating Habermas's Eurocentrism*, 8 JOURNALISM & COMMC'N MONOGRAPHS 93 (2006).

[81] *See* Bohman & Rehg, *supra* note 54.

existing power distributions.[82] Habermas's ideal of normative reason is criticized by feminist scholars as "illusory and oppressive."[83] Couture notes that, in pursuing rational consensus, emotions and embodiment are usually denied, which "regularly translates into a denial of the relevance of [women] to social issues."[84]

These are important issues of which to take note. Habermas himself has expressed self-awareness of the potential biases that his identity would imbue in him, noting that "even a universalistic principle has to be shown to do more than just 'reflect the prejudices of a contemporary adult white male Central European of bourgeois education.'"[85] Whilst the risk of cementing and exacerbating Eurocentric views via the ICC's court procedures is not exclusively linked to judicial deliberations regarding DOSI, the unformed nature of the regulatory space in this respect highlights the risk of Western ideas colonizing this area and crowding out other approaches. At the same time, because Habermas requires equal access to the discourse for participants, his approach could serve as a vehicle to ensure that non-Western views are given the opportunity to be aired as part of the process of communicative rationality. The present article seeks to accentuate the inclusive aspect of Habermas's approach by expanding the range of actors engaging with the judiciary and contributing to the epistemological bases of their deliberations.

IV. THE POWER AND PITFALLS OF DIGITAL OPEN-SOURCE INFORMATION

Just as Habermas's approach calls for a broadening of the epistemic community to foster a more democratic and inclusive decision-making process, the advance of digital technology has also had a democratizing impact on the collection and use of digital forensic materials.[86] The increased availability and prevalence of digital information in the twenty-first century is now flowing into judicial proceedings and portends a forensic revolution in the coming years and decades.[87] In this respect, the

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[82] *See, e.g.*, Pauline Johnson, *Distorted Communications: Feminism's Dispute with Habermas*, 27 PHIL. & SOC. CRITICISM 39 (2001).

[83] Tony Couture, *Feminist Criticisms of Habermas's Ethics and Politics*, 34 DIALOGUE 259, 269 (1995).

[84] *Id.* at 269.

[85] OUTHWAITE, *supra* note 66, at 53 (citing Jürgen Habermas, *Moral und Sittlichkeit: Hegels Kantkritik im Lichte der Diskurskethik*, 39 MERKUR 1041, 1042 (1985) (Ger.)).

[86] *See* William H. Wiley, *International(ised) Criminal Justice at a Crossroads: The Role of Civil Society in the Investigation of Core International Crimes and the 'CIJA Model*,' *in* QUALITY CONTROL IN FACT-FINDING, 547, 572–83; Molly K. Land, *Democratizing Human Rights Fact-Finding*, *in* THE TRANSFORMATION OF HUMAN RIGHTS FACT-FINDING 399, 402 (Philip Alston & Sarah Knuckey eds., 2016); *see also* McDermott, Koenig, & Murray, *supra* note 2, at 87.

[87] McDermott, Koenig, & Murray, *supra* note 2, at 86. Although digital evidence was used at the International Criminal Tribunal for the Former Yugoslavia ("ICTY") and International Criminal Tribunal for Rwanda ("ICTR"), which focused on conflicts in the 1990s, digital documentation of atrocities was relatively limited as mobile phones with cameras and connections to the Internet were not as ubiquitous as they have become in recent years. In this light, the conflicts in the former Yugoslavia and Rwanda could be seen as the last major

process resembles the forensic trajectory of photography, which was originally doubted when first submitted as evidence in the nineteenth century,[88] but soon became a regular feature in proceedings.[89]

Similarly, the potential for digital open-source material to constitute critical evidence has been widely recognized, and demonstrated to be able to provide: Video of the *corpus delicti* (or at least part of the actus reus);[90] Contextual and linkage information, such as satellite images of troop movements,[91] the impact of attacks (such as the widespread burning of villages),[92] mass graves,[93] and population displacement;[94] Evidence of intent, via perpetrators' statements regarding locations, conduct, and attitudes, which can be gleaned from sources such as Telegram and Facebook.[95]

The use of this type of material imports evidentiary benefits. Digital evidence, such as photographs or videos, can be highly accurate and show precisely what is happening.[96] If stored properly, this technology will not degrade or become influenced over time, unlike human memory.[97] As further DOSI comes to light, the new materials can be triangulated with existing information to either increase confidence in the reliability of the original information, address misinterpretations of its content, or expose potentially doctored or fake materials.[98] This can lead to reduced reliance

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analogue mass atrocity events. Contrastingly, subsequent conflicts such as those in Syria and in Ukraine have seen huge amounts of digital evidence of atrocities captured and made available for use in investigations and prosecutions. *See* Freeman, *supra* note 21, at 51.

[88] Braga da Silva, *supra* note 2, at 941–42. *See generally* Jennifer L. Mnookin, *The Image of Truth: Photographic Evidence and the Power of Analogy*, 10 YALE J. L. & HUMANITIES 1, 18, 20–21 (1998).

[89] Braga da Silva, *supra* note 2, at 942.

[90] SARA FERRO RIBEIRO & DANAÉ VAN DER STRATEN PONTHOZ, U.K. FOREIGN & COMMONWEALTH OFF., INTERNATIONAL PROTOCOL ON THE DOCUMENTATION AND INVESTIGATION OF SEXUAL VIOLENCE IN CONFLICT 153 (2d ed. 2017); *see, e.g.*, McDermott, Koenig, & Murray, *supra* note 2, at 86 (citing Prosecutor v. Al-Werfalli, Case No. ICC-01/11-01/17, Warrant of Arrest, ¶¶ 11–22 (Aug. 15, 2017); Prosecutor v. Al-Werfalli, Case No. ICC-01/11-01/17, Second Warrant of Arrest, ¶¶ 17–18 (July 4, 2018)).

[91] *See, e.g.*, *Satellite Images Show More Russian Military Deployments in Eastern Ukraine*, AXIOS (Apr. 13, 2022), http://www.axios.com/2022/04/13/satellite-images-russian-military-deploy-ukraine.

[92] RIBEIRO & PONTHOZ, *supra* note 90, at 153; *see, e.g.*, *A Visual Guide to the Russian Invasion of Ukraine*, BLOOMBERG (last updated Oct. 10, 2022), http://www.bloomberg.com/graphics/2022-ukraine-russia-us-nato-conflict (referencing Russian Forces Advance in Mariupol entry from Mar. 30, 2022) [hereinafter *Visual Guide*].

[93] *See, e.g.*, *Visual Guide*, *supra* note 92.

[94] *See, e.g.*, *Maxar Technologies' Continued Satellite Image Captures of the Russian-Ukrainian War*, SATNEWS (Mar. 2, 2022), http://news.satnews.com/2022/03/02/maxar-technologies-continued-satellite-image-captures-of-the-russian-ukrainian-war.

[95] *See, e.g.*, Mari Siato, *Love Letter, ID Card Point to Russian Units that Terrorized Bucha*, REUTERS (May 5, 2022), http://www.reuters.com/investigates/special-report/ukraine-crisis-bucha-killings-soldiers.

[96] *See, e.g.*, Radosa Milutinovic, *UN Court Screens Video of Serbian Unit Shooting Bosniaks*, BALKAN TRANSITIONAL JUST. (Nov. 8, 2017, 3:32 PM), http://balkaninsight.com/2017/11/08/un-court-screens-video-of-serbian-unit-shooting-bosniaks-11-08-2017 (discussing the Scorpions video showing the execution of Bosnian Muslim men used in the Srebrenica trials at the ICTY).

[97] McDermott, Koenig, & Murray, *supra* note 2, at 86-87.

[98] Freeman & Llorente, *supra* note 2, at 169. Unlike analogue material, for which copies will have discernible differences from the original, digital copies may be essentially indistinguishable from the original. *Id.*

on witnesses and, in turn, can alleviate the risk of their re-traumatization or insecurity.[99] This can also help speed up trials and avoid unduly lengthy proceedings.[100] Additionally, the use of photos and videos democratizes the collection of evidence, as it broadens the range of actors who can capture and collect evidence far beyond the international investigators who have typically gathered evidence for international tribunals in the past.[101]

These qualities of DOSI are particularly important for the ICC, given its operational constraints. The first and most obvious limitation on the ICC's activity is its lack of a police force and subsequent delays in obtaining evidence.[102] Because of this, the ICC essentially relies on the cooperation of state parties for arrests and collection of evidence.[103] Moreover, investigations often begin months or years after the commission of the crime.[104] As time elapses, the likelihood of obtaining and retaining cogent evidence diminishes, particularly with regard to testimony. Human memories fade, documents disappear, and accounts become tainted and compromised by exposure to other accounts and the media.[105] Second, investigators are sometimes unable to access certain regions, or even entire countries, due to security conditions or hostile regimes.[106] Third, investigations are inherently complex, typically

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[99] McDermott, Koenig, & Murray, *supra* note 2, at 86–87. *E.g.*, Ho Hock Lai, *Liberalism and the Criminal Trial*, 2010 SING. J. LEGAL STUD. 87, 88 ("The orality principle is a substantial hurdle for the prosecution because witnesses are often reluctant to testify openly for fear of reprisals."); *see also* OPEN SOC'Y JUST. INITIATIVE, WITNESS INTERFERENCE IN CASES BEFORE THE INTERNATIONAL CRIMINAL COURT 2 (2016), http://www.justiceinitiative.org/uploads/8a5f5b90-7b75-44b6-ac31-2108a264fe97/factsheet-icc-witness-interference-20161116.pdf.

[100] *See* Prosecutor v. Bemba et al., Case No. ICC-01/05-01/13, Judgement Pursuant to Article 74 of the Statute, ¶ 225 (Oct. 19, 2016), http://www.icc-cpi.int/sites/default/files/CourtRecords/CR2016_18527.PDF; *see also* Prosecutor v. Bemba, Case No. ICC-01/05-01/13, Judgement on the Appeals of Mr. Jean-Pierre Bemba Gombo et al. Against the Decision of Trial Chamber VII Entitled "Judgement Pursuant to Article 74 of the Statute", ¶ 621 (Mar. 8, 2018), http://www.icc-cpi.int/sites/default/files/CourtRecords/CR2018_01638.PDF; HEINSCH ET AL., *supra* note 24, at 35.

[101] *Compare* Wiley, *supra* note 86, at 572–83, *with* D'Alessandra & Sutherland, *supra* note 22, at 14.

[102] Sang-Hyun Song, *Introductions to the Third Edition*, *in* TRIFFTERER & AMBOS COMMENTARY, *supra* note 33, at xiii, xv.

[103] BRUCE BROOMHALL, INTERNATIONAL JUSTICE AND THE INTERNATIONAL CRIMINAL COURT: BETWEEN SOVEREIGNTY AND THE RULE OF LAW 155–58 (2003).

[104] For example, in November 2017, the ICC Prosecutor requested to open an investigation into the events in Afghanistan dating back to 2003. On March 5, 2020, the Appeals Chamber authorized the Prosecutor to commence its investigation. Situation in the Islamic Republic of Afghanistan, Case No. ICC-02/17-OA4, Judgment on the Appeal Against the Decision of the Authorisation of an Investigation, ¶¶ 4, 79 (Mar. 5, 2020).

[105] COMBS, *supra* note 20, at 5 ("[A] review of all of the completed SCSL ["Special Court for Sierra Leone"] cases and a handful of ICTR cases shows that more than 50 percent of the prosecution witnesses appearing in these trials testified in a way that was seriously inconsistent with their pretrial statements.").

[106] For example, most territory in the Central African Republic is outside of Government control and largely inaccessible to the Office of the Prosecutor ("OTP") investigators. *See October 2018 Monthly Forecast: Central African Republic*, SEC. COUNCIL REP. (Sept. 28, 2018), http://www.securitycouncilreport.org/monthly-forecast/2018-

involving large-scale or widespread offenses conducted according to some form of policy and often are linked to armed conflict. Fourth, atrocity crimes are often perpetrated in States or areas with weakened governmental institutions, infrastructure, and record-keeping, making it all the more difficult to establish precise dates and times, locations, identities of victims, and even names of perpetrators.[107]

DOSI is not free of drawbacks. These include legal uncertainty and variability in outcomes across cases and even within the same case,[108] interpretive errors in weighing evidence, and the introduction of conscious and unconscious biases.[109] If digital materials are gathered through automated processes, selection biases can be acute, resulting in a skewed picture of the range of crimes and victims. For example, such automation bias arises in particular where the algorithm fails to account for social, cultural, or political factors, which may influence the documenting or reporting of crimes.[110] As for risk factors to individuals, DOSI investigations can lead to the identification and targeting of potential witnesses depicted in media through facial recognition software, and of researchers through metadata, as well as the risk of vicarious trauma to researchers exposed to large volumes of graphic materials.[111]

In terms of risks arising from the DOSI materials themselves, Freeman and Llorente note that "[d]igital material can be faked, forged, or altered — intentionally or unintentionally— in a number of different ways, sometimes remotely and often in a manner that is difficult to detect without specialized software or forensic expertise."[112] DOSI is highly reliant on tools and applications that are automated and may not be fully understood or even accessible for the specialists working on them. Digital evidence often cannot "speak for itself," and thus its use in court requires further information from experts or other relevant actors regarding its authenticity and contents.[113] However, those actors may have their own biases and knowledge gaps. Separating misinformation and disinformation from reliable evidence can be technologically

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10/central_african_republic_2018_10.php. Across the border in Sudan, the situation is also complicated and dynamic from the security perspective. *See* U.S. DEP'T OF STATE, BUREAU OF DEMOCRACY, HUM. RTS. & LAB., SUDAN 2021 HUMAN RIGHTS REPORT 1–3 (2021); Koenig, McMahon, Mehandru, & Bhattaharjee, *supra* note 4.

[107] *See* WILLIAM A. SCHABAS, AN INTRODUCTION TO INTERNATIONAL CRIMINAL COURT 261, 265 (4th ed. 2011); Freeman, *supra* note 21, at 53.

[108] For a discussion of *Bemba* and news media clips, see *infra* Part VI.A.

[109] *See generally* Milaninia, *supra* note 79. Existing biases can be exacerbated through machine learning, potentially leading to over-looking crimes against certain groups. McDermott, Koenig, & Murray, *supra* note 2, at 86–87.

[110] Milaninia, *supra* note 79, at 207–08, 215.

[111] SAM DUBBERLEY & GABRIELA IVENS, UNIV. ESSEX, HUM. RTS. CTR., OUTLINING A HUMAN-RIGHTS BASED APPROACH TO DIGITAL OPEN SOURCE INVESTIGATIONS: A GUIDE FOR HUMAN RIGHTS ORGANISATIONS AND OPEN SOURCE RESEARCHERS 21 (2022); Murray, McDermott, & Koenig, *supra* note 22, at 572; Kristina Hellwig, *The Potential and the Challenges of Digital Evidence in International Criminal Proceedings*, 22 INT'L CRIM. L. REV. 965, 986 (2022).

[112] *See* Milaninia, *supra* note 79.

[113] Freeman & Llorente, *supra* note 2, at 165.

demanding.[114] The difficulty will only increase as invidious means of mimicking real footage continue to be developed.[115] Given that there are no requirements of technical knowledge to become a judge,[116] it is imperative that technical specialists participate in the communicative process in order to mitigate these risks. As Carsten Stahn has noted:

> Technological advancement exceeds our knowledge and comprehension. Decades ago, forensic science innovated criminal justice. It created a whole scientific community. Today, digital evidence is the new frontline. We see this in Bucha and other contexts. It requires [courts] to read evidence in a different way. The existing pool of expertise is still limited – [the international criminal justice cadre] lack a scientific community. This creates imbalances.[117]

Given the lack of any specific requirements imposed on judges to obtain technical training, they remain vulnerable to mistaken reliance or non-reliance on DOSI. Considering these threats, it is important to examine how the ICC's regulatory framework sets out protections to detect and exclude misleading or false digital materials.

V. THE BROAD FRAMING OF THE ICC'S EVIDENTIARY RULES APPLICABLE TO DIGITAL OPEN-SOURCE INFORMATION

The core ICC instruments and jurisprudence were conceived before the huge volume of digital evidence was anticipated.[118] They focus on traditional forms of evidence such as witness testimony and convey a general presumption in favor of "in-person" testimony,[119] which accords with the approach taken by other international tribunals.[120] Although

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[114] Misinformation is false information spread without there necessarily being any intended purpose to cause harm whereas disinformation is false information "deliberately created or disseminated to cause harm." Freeman & Llorente, *supra* note 2, at 167.

[115] Freeman & Llorente, *supra* note 2, at 165 (citing Hany Farid, *Digital Forensics in a Post-Truth Age*, 289 FORENSIC SCI. INT'L 268, 268–69 (2018); Alex Engler, *Fighting Deepfakes when Detection Fails*, BROOKINGS (Nov. 14, 2019), http://www.brookings.edu/research/fighting-deep).

[116] Note that the ICC judges' code of ethics does require judges to take "reasonable steps [to] maintain and enhance the knowledge, skills and personal qualities necessary for judicial office," as discussed below. Int'l Crim. Ct., Code of Judicial Ethics art. 7(2), ICC-BD/02-02-21 (Jan. 19, 2021) [hereinafter Code of Judicial Ethics].

[117] Stahn, *supra* note 63, at 4.

[118] Freeman & Llorente, *supra* note 2, at 165.

[119] Rome Statute, *supra* note 33, art. 69(2). *But see* Prosecutor v. Ongwen, Case No. ICC-02/04-01/15, Decision on Prosecution's Request to Submit 1006 Items of Evidence, ¶ 14 (Mar. 28, 2017) (holding that there is no requirement that evidence be tested with a witness in order for it to be submitted); Prosecutor v. Yekatom, Case No. ICC-01/14-01/18, Decision on the Third Prosecution Submission Request (Call Data Records), ¶ 29 (July 5, 2022) (holding the same).

[120] *See, e.g.*, Prosecutor v. Prlić, Case No. IT-04-74-T, Decision on Admission of Evidence, ¶ 1 (Int'l Crim. Trib. for the Former Yugoslavia ["ICTY"] July 13, 2006) ("As a general rule, the party seeking to tender evidence shall do so through a witness who can attest to its reliability, relevance and probative value. The evidence must be put to the witness at trial.").

largely discretionary,[121] the procedural framework sets down certain mandatory requirements, such as an undertaking as to the truthfulness of the evidence before testifying,[122] and methods to submit written statements.[123] By contrast, the rules set out little guidance for the assessment of DOSI.[124] While the adoption of guidelines for the treatment of DOSI would potentially be useful, and could be achieved through the amendment of various instruments,[125] the following survey proceeds on the basis of the ICC's current regulatory framework, which is unlikely to be amended in the near future.

The ICC's key regulatory provisions illustrate the open framing of its evidentiary regime and wide ambit for judicial deliberations. For example, article 64 of the Rome Statute, which is entitled "Functions and Powers of the Trial Chamber," provides in paragraph (8)(b) that, subject to rulings of the Presiding Judge, the parties may present evidence to the Trial Chamber.[126] Article 64 (9) holds that the Trial Chamber shall have, inter alia, the power on application of a party or on its own motion to: "(a) [r]ule on the admissibility or relevance of evidence; and (b) [t]ake all necessary steps to maintain order in the course of a hearing."[127] Article 69 (3) states that "[t]he Court shall have the authority to request the submission of all evidence it considers necessary for the determination of the truth,"[128] and article 69(4) provides a significant degree of discretion, which is amplified in the Rules of Procedure and Evidence.[129] Unlike domestic courts in common law systems, for example, international courts do not have a general prohibition against hearsay being entered into evidence.[130] While it is uncontestable that "[a]uthentication, provenance, and preservation all influence the weight" that judges accord to DOSI,[131] these characteristics

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[121] *Id.* at 182 ("The founding documents of the ICC gave ample flexibility to the Judges to conduct proceedings in the manner they best see fit."); Donald K. Piragoff & Paula Clarke, *Article 69*, *in* TRIFFTERER & AMBOS COMMENTARY, *supra* note 33, at 1715.

[122] Rome Statute, *supra* note 33, art. 69(1).

[123] ICC Rules of Procedures, Rule 68.

[124] *E.g.*, HEINSCH ET AL., *supra* note 24, at 32 ("Currently, there is no established procedure for authenticating [digitally derived evidence] in international criminal law."). The e-Court Protocol refers to metadata and chain of custody, but "is limited to harmonizing the format of digital evidence, and how it is stored in the Court's systems, and does not address issues of probative value of digital evidence." Aida Ashouri, Caleb Bowers, & Cherrie Warden, *An Overview of the Use of Digital Evidence in International Criminal Courts*, 11 DIGIT. EVIDENCE & ELEC. SIGNATURE L. REV. 115, 117–18 (2014).

[125] *See supra* note 42.

[126] Rome Statute, *supra* note 33, art. 64(8)(b).

[127] *Id.* art 64(9).

[128] *Id.* art. 69(3); *see also* ICC Regulations, *supra* note 33, reg. 43 ("Subject to the Statute and the Rules, the Presiding Judge, in consultation with the other members of the Chamber, shall determine the mode and order of questioning witnesses and presenting evidence so as to: (a) Make the questioning of witnesses and the presentation of evidence fair and effective for the determination of the truth; (b) Avoid delays and ensure the effective use of time.").

[129] Braga da Silva, *supra* note 2, at 944; *see* Rome Statute, *supra* note 33, art. 69(4).

[130] MATTHEW GILLETT, PROSECUTING ENVIRONMENTAL HARM BEFORE THE INTERNATIONAL CRIMINAL COURT 164–65 (2022) (citing, *inter alia*, Prosecutor v. Lubanga, Case No. ICC-01/04–01/06, Transcript (Feb. 12, 2009); Prosecutor v. Lubanga, Case No. ICC-01/04–01/06–1399, Decision on the Admissibility of Four Documents (June 13, 2008); Prosecutor v. Zlatko Aleksovski, Case No. IT-95–14/1-AR73, Decision on Prosecutor's Appeal on Admissibility of Evidence, ¶ 15 (ICTY Feb. 16, 1999)).

[131] HEINSCH ET AL., *supra* note 24, at 41.

are not regulated by the ICC's procedural framework in any detailed way. Instead, vast latitude is left for judges to determine not only the veracity and weight of particular evidence, but also the basic standards and approach that should apply to weighing it.[132]

When it comes to the ICC's judicial deliberations, its prescriptive instruments are virtually silent. No process is set down for deliberations in the Statute or Rules, so judges must determine their internal procedures for themselves.[133] The Chambers Practice Manual provides no instructions as to the conduct of deliberation, and ICC judges have not issued any other form of guidance as to the conduct of deliberations.[134] Moreover, deliberations are held *in camera* and therefore without public disclosure.[135] The Code of Judicial Ethics requires that "[j]udges shall respect the confidentiality of consultations which relate to their judicial functions and the secrecy of deliberations."[136] Over the years, allegations have been raised of improper or problematic judicial conduct in deliberations in other international courts.[137] However, these allegations have not resulted in any official statements on the structure or parameters of deliberations. Consequently, judicial deliberations constitute the black box of international criminal justice.

A typical vehicle with which to inform judges on technical matters such as digital evidence is expert witness evidence, usually consisting of a report followed by testimony.[138] In relation to experts, the provisions of the ICC's framework are pitched broadly. Whereas regulation 44 requires that the "Registrar shall create and maintain a list of experts accessible at

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[132] *See* Prosecutor v. Katanga, Case No. ICC-01/04-01/07, Decision on the Prosecutor's Bar Table Motions, ¶ 13 (Dec. 17, 2010); HEINSCH ET AL., *supra* note 24, at 30–31.

[133] Some minimal guidance is set out in Rule 142(2) of the ICC Rules of Procedure and Evidence, which states "when there is more than one charge, the Trial Chamber shall decide separately on each charge. When there is more than one accused, the Trial Chamber shall decide separately on the charges against each accused." INT'L CRIM. CT. RULES OF PROC. & EVID. 142(2). However, no specific procedure for the deliberations is provided. *See id.*

[134] *See* PRACTICE MANUAL, *supra* note 33.

[135] *See* Rome Statute, *supra* note 33, art. 74(4) ("The deliberations of the Trial Chamber shall remain secret."). The same secrecy would ensure the sanctity of the deliberations of the Appeals Chamber pursuant to article 83(1). *Id.* art. 83(1) ("For the purposes of proceedings under article 81 and this article, the Appeals Chamber shall have all the powers of the Trial Chamber."); *see also* INT'L CRIM. CT. RULES OF PROC. & EVID. 142(1). This contrasts with the general presumption of public proceedings expressly set out in the Rome Statute. *See* Rome Statute, *supra* note 33, art. 64(7) ("The trial shall be held in public."); *id.* art. 67(1) ("The accused shall be entitled to a public hearing."); *id.* art. 74(5) ("The decision or a summary thereof shall be delivered in open court."); *id.* art. 76(4) ("The sentence shall be pronounced in public."); *see also id.* art. 68(2) ("As an exception to the principle of public hearings provided for in article 67, the Chambers of the Court may, to protect victims and witnesses or an accused, conduct any part of the proceedings in camera or allow the presentation of evidence by electronic or other special means.").

[136] Code of Judicial Ethics, *supra* note 116, art. 6.

[137] *See* Charles Jalloh, *The Verdict in the Charles Taylor Case and the Alternate Judge's Dissenting Opinion*, EJIL: TALK! (May 11, 2012), http://www.ejiltalk.org/the-verdict-in-the-charles-taylor-case-and-the-alternate-judges-dissenting-opinion; Mohamed Badar & Polona Florijančič, *The Disqualification of Judge Frederik Harhoff: Implications for the Integrity of the International Criminal Tribunal for the Former Yugoslavia*, *in* 4 INTEGRITY IN INTERNATIONAL JUSTICE 951, 989 (Morten Bergsmo & Viviane Dittrich eds., 2020).

[138] ICC Regulations, *supra* note 33, reg. 44(5); Braga da Silva, *supra* note 2, at 950; *see also* ARTHUR APPAZOV, EXPERT EVIDENCE AND INTERNATIONAL CRIMINAL JUSTICE (2016).

all times to all organs of the Court and to all participants," it adds a significant caveat whereby "[t]he Chamber has discretion to allow the introduction of expert evidence from persons who are not on the list of experts."[139] The Chamber has virtually untrammeled powers regarding the mode and nature of expert evidence, as exemplified by regulation 44(5), which provides that "[t]he Chamber may issue any order as to the subject of an expert report, the number of experts to be instructed, the mode of their instruction, the manner in which their evidence is to be presented and the time limits for the preparation and notification of their report."[140]

The result of these core provisions is an open and discretionary procedural regime that is essentially bereft of restrictions or specific binding frameworks when assessing DOSI.[141] Without specific regulatory guidance addressing this form of technical evidence at the international courts, judges must generate parameters each time it arises. Establishing a coherent framework for DOSI will require the judges to understand the nature, utility, pitfalls, and weight of such materials. Without regulatory prescription providing such guidance, alternative means of fostering judicial awareness and appreciation of the nuances of digital evidence must be sought. To this end, the following parts examine the utility of Habermas's communicative rationality as a guiding conceptual framework for the judicial assessment of DOSI evidence.

VI. APPLYING HABERMAS'S COMMUNICATIVE RATIONALITY TO DIGITAL OPEN-SOURCE INFORMATION

This part examines whether Habermas's communicative rationality can provide a conceptual lens to understand and potentially legitimize the process of judicial deliberations regarding DOSI. In doing so, it looks at the actors, viewpoints, and processes that judges should take cognizance of to ensure the continued applicability of that legitimizing effect.[142]

A. *The New Digital Paradigm*

As a prefatory matter, it can be asked why Habermas's theoretical framework, or any theoretical model for that matter, is needed to address judicial treatment of DOSI. Here, it must first be recalled that a paradigm shift is occurring, with DOSI becoming a prevalent feature in judicial fact-finding.[143] Judges applying international criminal law have been increasingly drawn out of their truth-determining comfort zones, such as hearing testimony in the courtroom, and are now conducting a

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[139] ICC Regulations, *supra* note 33, reg. 44.
[140] *Id.* reg. 44(5). In the Chambers Practice Manual, no other significant restrictions are placed on how a chamber may weigh evidence. *See* PRACTICE MANUAL, *supra* note 33.
[141] *See, e.g.*, HEINSCH ET AL., *supra* note 24, at 32–33.
[142] *But see* HABERMAS BFN, *supra* note 1, at 5 ("Normativity in the sense of the obligatory orientation of action does not coincide with communicative rationality. Normativity and communicative rationality intersect with one another where the justification of moral insights is concerned.").
[143] Freeman, *supra* note 2, at 283.

qualitatively different type of truth-assessment based on materials generated and captured out of court.[144] This is not to say that the testimony-oriented model was forensically superior. To the contrary, the transcripts and judgements of international courts have plenty of examples of witnesses providing testimony of questionable reliability, often identified through implausible dates, event durations, distances, and numerical estimations.[145] Nonetheless, the transition to a new mode of truth presentation inevitably entails incongruities with the procedural framework and raises the risk of mistaken reliance on misleading materials and erroneous findings.

The traditional common law conduct of trials could be likened to a crucible form of truth-testing. The "crucible" approach to trials, which was particularly characteristic of the common law tradition and heavily favored in early international criminal procedures, was anchored in the principle of orality, and rested on three fundamental precepts:[146]

> 1) Directness: Based on the best evidence rule (including the general presumption against admitting hearsay),[147] materials placed before the factfinders were required to be the "purest" form of the evidence available and thereby the most direct account regarding the fact in issue. Second-hand and third-hand accounts are afforded little weight or excluded from the record altogether to limit the risk of misconstrued or mispresented information being conveyed to the judges.[148] Other indirect forms of evidence, such as documents and records of interactions, were traditionally seen as categorically less weighty than oral accounts from eyewitnesses to the event in question.[149]
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> 2) Immediacy: Based on the principle of in-person evidence, witnesses provided their accounts in court with as few filters and other intervening factors as possible.[150] The accused's right to

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[144] This is different from the conduct of proceedings remotely, which has occurred during COVID-19.

[145] COMBS, *supra* note 20, at 28–34.

[146] *See* Michele Caianiello, *First Decisions on the Admission of Evidence at ICC Trials: A Blending of Accusatorial and Inquistorial Models?*, 9 J. INT'L CRIM. JUST. 385, 392 (2011).

[147] The "best evidence rule" holds that "the Trial Chamber will rely on the best evidence available in the circumstances." Prosecutor v. Blagojević, Case No. IT-02-60-T, Decision on the Admission into Evidence of Intercept-Related Materials, ¶ 25 (ICTY Dec. 18, 2003); Prosecutor v. Martić, Case No. IT-02-60-T, Decision Adopting Guidelines on the Standards Governing the Admission of Evidence, ¶ 7 (ICTY Jan. 19, 2006).

[148] *See* DERMOT GROOME, THE HANDBOOK OF HUMAN RIGHTS INVESTIGATION 39 (2d ed. 2011).

[149] *See, e.g.*, *Butera v Dir. Pub. Prosecutions for the State of Victoria* [1987] 164 CLR 180, ¶ 15 ("A witness who gives evidence orally demonstrates, for good or ill, more about his or her credibility than a witness whose evidence is given in documentary form. Oral evidence is public; written evidence may not be. Oral evidence gives to the trial the atmosphere which, though intangible, is often critical to the jury's estimate of the witnesses.") (Austl.).

[150] Notably, Habermas refers to the "taking of evidence in face-to-face interaction." HABERMAS BFN, *supra* note 1, at 236.

> confront witnesses providing evidence against them was fundamental in most circumstances.[151]
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> 3) Competence of the court: In this traditional paradigm of witnesses providing oral evidence, the factfinder, whether judge alone or a jury, was considered well-equipped to assess credibility and make findings. The factfinder can rely on their normal cognitive abilities and life experience to evaluate a person's account. Together with the factors of directness and immediacy, this allows the factfinders the best opportunity to determine the credibility of the witnesses before them.[152]

Scholars have noted this impressionistic judicial activity. Agirre notes that "at trial judges are expected to listen and observe directly the expressions and conduct of witnesses, and this direct appreciation is considered as an epistemic guarantee and part of the 'principle of immediacy,' particularly in common-law procedure."[153] Frank states that for witnesses, "their demeanour, while testifying, counts heavily in appraising their credibility – their observable demeanour, as 'wordless language,' being an important part of the evidence."[154] Some consider it problemtic, such as Volger who notes the risks and observes that "[t]hese aspects of the English trial methodology have over many years offended continental Positivist sensibilities as illogical, excessively theatrical and showing little respect for the serious pursuit of truth."[155]

The recent shift to ever greater quantities of DOSI being presented to the ICC challenges these precepts of immediacy, directness, and competence of the court.[156] By allowing for evidence, such as videos, audio, and social media activity (most of which would constitute hearsay from a traditional viewpoint) to be "freely" admitted and assessed, the ICC's procedural framework removes the immediacy and directness

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[151] *See* Crawford v. Washington, 541 U.S. 36, 68–69 (2004) (providing the right to confront witnesses providing evidence against oneself as a constitutional right); *see also* R v. Davis [2008] UKHL 36, [2008] AC 1128 (appeal taken from Eng.) (Lord Bingham holding that the right of confrontation was a "long-established principle of the English common law").

[152] *See, e.g.*, *Butera v. Dir. Pub. Prosecutions,* 164 CLR 180, ¶ 15.

[153] Xabier Agirre Aranburu, *The Contribution of Analysis to the Quality Control in Criminal Investigation*, *in* QUALITY CONTROL IN CRIMINAL INVESTIGATION, *supra* note 9, at 117, 209 (citing Richard Volger, *The Principle of Immediacy in English Criminal Procedural Law*, 126 ZEITSCHRIFT FÜR DIE GESAMTE STRAFRECHTSWISSENSCHAFT 239, 239 (2014) (Ger.)).

[154] JEROME FRANK, COURTS ON TRIAL: MYTH AND REALITY IN AMERICAN JUSTICE 22 (1973); Agirre Aranburu, *supra* note 153, at 210.

[155] Volger, *supra* note 153, at 239.

[156] When looking at the traditional categories of evidence, it is unclear under what category DOSI will qualify. For example, the Leiden Guidelines state that a video will be admitted as "real" evidence." SOFIA AALTO-SETÄLÄ, LUCA CAROLI, JULIA FREYTAG, MRAIA F. JARAMILLO GOMEZ, & JOSHUA LIM, LEIDEN GUIDELINES ON THE USE OF DIGITALLY DERIVED EVIDENCE IN INTERNATIONAL CRIMINAL COURTS AND TRIBUNALS 14 (citing Prosecutor v. Katanga, Case No. ICC-01/04-01/07-2635, Decision on the Prosecutor's Bar Table Motions, ¶ 24 (Dec. 17, 2010)), http://leiden-guidelines.com/assets/Leiden%20Guidelines%20on%20the%20Use%20of%20DDE%20in%20ICCTs_20220404.pdf (last visited Feb. 25, 2023) [hereinafter LEIDEN GUIDELINES].

requirements and takes the court into an area where it has not typically been competent to discern reliable evidence from misleading accounts.[157]

Moreover, whereas testimony sees the witness seated before the judges, when it comes to DOSI, the truth-determining moment no longer occurs inside the courtroom. Instead, the delivery of the account is dispersed between the initial capture of the DOSI, its editing and transfers, and the later moment when it is replayed in front of the judges. The recording could occur in the midst of a conflict,[158] in a studio, or in the netherworld of digital algorithms.[159] The person capturing the digital material may have consciously or unconsciously added an extra layer of interpretive film on top of the content.[160] They may do multiple takes, edit the footage, and even adjust the information captured by a device. The range of efforts to create false narratives ranges from crudely changing the metadata to designing sophisticated deepfakes.[161]

From a procedural perspective, relaxing the supervisory restrictions under which key evidence is recorded involves risks. With each loosening of an evidentiary protection, there is a corresponding increase in the chance for evidence to be misinterpreted or for the court to be intentionally misled.[162] Inside the courtroom, witnesses testify under the pressure of an oath, subject to cross-examination and under the menacing possibility of being held in contempt. Outside of the courtroom, these judicial control mechanisms do not apply. As the judicial credibility assessment is effectively outsourced and distributed among the persons recording, editing, and potentially re-adjusting the footage or other digital evidence, the risk of error increases. Moreover, the compelling nature of photographic or video imagery means that ignorant factfinders might feel reflexively compelled to rely on digital contents without questioning the provenance and surrounding circumstances relating to that evidence.[163]

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[157] In *Lubanga*, the Trial Chamber noted that "the probative value of a hearsay statement will depend upon the context and character of the evidence in question" and that "[t]he absence of the opportunity to cross-examine the person who made the statements, and whether the hearsay is 'first-hand' or more removed, are also relevant." Prosecutor v. Lubanga, Case No. ICC-01/04-01/06-2842, Judgment Pursuant to Article 74 of the Statute, ¶ 28 (Mar. 14, 2012); *see also* HEINSCH ET AL., *supra* note 24, at 35.

[158] *See* Independent Expert Report, *supra* note 16, ¶ 555 ("As courts come to terms with the range of benefits that increasing use of digital technology may bring to their work, there is now an active debate around the question of when is the best time for evidence to be captured in the interests of producing a reliable account of events. What is more likely to be accurate: (i) a video recording of an event; (ii) a statement made by an eyewitness in the weeks following an event; or (iii) the oral evidence in court of the witness 18 months after the event? It is not far-fetched to envisage, in the not too distant future, the use of digital devices in the conflict area to make high-quality recordings of eye-witness accounts to be played in trial proceedings.").

[159] On algorithmic biases, see McDermott, Koenig, & Murray, *supra* note 2, at 89; Milaninia, *supra* note 79, at 207–08, 215.

[160] *E.g.*, LEIDEN GUIDELINES, *supra* note 156, at 14–15 (citing Prosecutor v. Lubanga, Case No. ICC-01/04-01/06-1399, Decision on the Admissibility of Four Documents, ¶ 28 (June 13, 2008)) ("[C]aution should be exercised when assessing a video since differences in personal perception may cause difficulties in reaching a definite finding.").

[161] Freeman & Llorente, *supra* note 2, at 167.

[162] Farid, *supra* note 115, at 278–79.

[163] *See* Riccardo Vecellio Segate, *Cognitive Bias, Privacy Rights, and Digital Evidence in International Criminal Proceedings: Demystifying the Double-Edged AI Revolution*, 21 Int'l Crim. L.Rev. 242, 255 (2021) (discussing the "seductive" potential of video-evidence).

The lack of structure or rules-based guidance regarding digital evidence at the ICC manifests factfinding deficiencies. These deficiencies are often caused or exacerbated by the absence of a common language for assessing DOSI. For example, in *Prosecutor v. Bemba*, the trial chamber ruled that "recordings that have not been authenticated in court can still be admitted, as in-court authentication is but one factor for the Chamber to consider when determining an item's authenticity and probative value" (including in relation to Radio France International ("RFI")/ Journal Afrique media recordings).[164] However, on appeal, the reliability of the evidence relied on by the trial chamber, including from RFI and Journal Afrique media recordings,[165] was called into doubt by the appeals chamber. As a result, the trial chamber's approach was overturned.[166]

These evidentiary challenges, combined with the lack of detailed guidance regarding emerging technologies, have the potential to undermine the reliability and, in turn, legitimacy of judicial decisions that rely on digital materials, necessitating a review of the conceptual basis of, and justification for, judicial deliberations. As discussed above, because of its focus on process rather than substance, Habermas's flexible and responsive theory of communicative rationality provides a particularly appropriate framework to address the growing role of DOSI before the ICC.[167]

B. *Communicative Rationality as a Source of Conceptual Coherence for Deliberations*

In lieu of detailed prescriptive guidance, Habermas's approach of communicative rationality provides a principled approach to deliberations in emerging and dynamic areas such as DOSI. The judges must inevitably carry out their adjudicative function by determining the reliability of the evidentiary materials before them. They cannot simply abdicate their duty on the basis that it is too hard to decide.[168] However, without prescriptive guidance, judges will be unable to formulaically apply rules to evidence. Judges also cannot legislate from the bench to fill the regulatory void, as that would be *ultra vires* and would undermine the separation of powers

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[164] Prosecutor v. Bemba, Case No. ICC-01/05-01/08-2721, Decision on the Admission into Evidence of Items Deferred in the Chamber's "Decision on the Prosecution's Application for Admission of Materials into Evidence Pursuant to Article 64(9) of the Rome Statute", ¶ 120 (June 27, 2013). It is questionable whether this constitutes DOSI as presently framed, but the principles are applicable by analogy nonetheless.

[165] *Id.* ¶¶ 123, 128, 183 (referring to video clips CAR-OTP-0031-0099, CAR-OTP-0031-0093, CAR-OTP-0031-0120, CAR-OTP-0031-0124).

[166] *See* Prosecutor v. Bemba, Case No. ICC-01/05-01/08-A, Judgment on the Appeal of Mr. Jean-Pierre Bemba Gombo Against Trial Chamber III's "Judgment Pursuant to Article 74 of the Statute", ¶ 183 (June 8, 2018), http://www.icc cpi.int/sites/default/files/CourtRecords/CR2018_02984.PDF ("[The evidence in question, on its face, appears for the most part very weak, often consisting of media reports including anonymous hearsay.").

[167] *See supra* Part I.

[168] *See, e.g.*, Rome Statute, *supra* note 33, arts. 66, 69, 74.

inherent in the ICC as a properly constituted legal entity.[169] At the same time, it would be injudicious for judges to simply bargain to reach an outcome. To resolve the impasse, Habermas's approach of communicative rationality provides a framework and concrete measures with which to generate defensible and rational determinations via judicial deliberations. This, in turn, can serve to enhance the legitimacy of the ICC's decisions, both internally and publicly.[170]

As noted above, Habermas's theory sees relevant actors arriving at common understandings and coordinating their actions through reasoned argument, consensus, and cooperation, rather than through purely strategic and individually motivated action.[171] Court proceedings seek to foster such an approach. In this vein, Habermas noted that legal proceedings provide a fertile substrate for the generation of communicative rationality.[172] He observed that legal procedures "define, protect and structure only the spaces in which argumentation is supposed to take place" but do so "without intervening in, and thereby regulating, the argumentation as such."[173] Because of this, "the universe of law can open itself from the inside, as it were, to argumentation processes through which pragmatic, ethical, and moral reasons find their way into the language of law without either inhibiting the argumentation game or rupturing the legal code."[174]

Procedural law funnels the views of the participants (typically the prosecution, defense, and victims' representatives) into a rational discourse, while leaving judges the discretion to exercise their own judgment and reach reasoned determinations on fact and law.[175] Flexibility is a prevalent feature of international criminal procedure and is often justified therein by the fact that cases are heard by professional judges rather than lay members of juries.[176] A similarly broad substantive latitude afforded to judges is a feature of Habermas's approach, which seeks to preserve the space and flexibility for judges to exercise their

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[169] The ICC has a designated legislature—the Assembly of State Parties—and the Rome Statute prevents chambers from creating rules that would bind other chambers. *See id.* art. 21(2) (establishing that a chamber may only follow interpretations of rules and principles taken in previous decisions); *see also id.* art. 51(3) (allowing the judges to provisionally adopt amendments to the Rules of Procedure and Evidence pending consideration by the Assembly of States Parties).

[170] HABERMAS BFN, *supra* note 1, at 172 (noting that legal discourse requires the court to "justify its judgment before a broad legal public sphere").

[171] HABERMAS *supra* note 50, at 86; Bolton, *supra* note 50, at 1.

[172] *See* HABERMAS BFN, *supra* note 1, at 178, 236–37 ("Procedural norms regulate participation and the distribution of roles in discursive processes of opinion- and will-formation; they limit the spectrum of admissible topics, questions, and arguments; and they link argumentation to decision making.").

[173] *Id.* at 178.

[174] *Id.*

[175] *Id.* at 235.

[176] Boas, *supra* note 27, at 55; *see also* MARK KLAMBERG, EVIDENCE IN INTERNATIONAL CRIMINAL TRIALS 418 (2013) (suggesting that the free evaluation of evidence could be considered a general principle of international law).

"professional ability" when it comes to weighing evidence and reaching decisions on its import.[177]

Other facets of communicative rationality are pertinent to criminal procedure. For example, pretrial proceedings "define the object of dispute, so that the trial itself can concentrate on clearly demarcated issues."[178] Disputed questions must be "finally resolved in a timely manner," requiring judges to actually reach an outcome in their deliberations.[179] More broadly, law has an "institutionalized self-reflection," with the rendering of published decisions and a system of review compelling fact-finding courts to provide "careful justification" for their determinations.[180] Importantly, "[t]he public interest in the harmonization or consistency of law highlights a concise move in the logic of adjudication: the court must decide each case in a way that preserves the coherence of the legal order as a whole."[181] In this way, communicative rationality presents itself as both the outcome of a well-balanced legal process and also as a guarantee of the legitimacy of the legal system itself. The legitimacy (and "fidelity" to the law) generated by communicative rationality is particularly apposite for international law, considering the oft-repeated criticism that this field of law lacks effective sanctions and is therefore not truly law.[182]

According to Habermas, it is the process of rationalizing discourse that gives written law its legitimacy.[183] The mere existence of a set of procedural principles that shape the space in which substantive adjudication may occur is insufficient, in and of itself, to legitimize the authority of law.[184] Whereas rules designed to ensure the "independence of the judiciary, constraints on individual discretion, respect for the integrity of the disputing parties, the written justification and official signing of the judgment, its neutrality, and so on" are "meant to guarantee the objectivity of the judgement and its openness to intersubjective review,"[185] a communicative process reinforcing the validity of those procedural principles is nonetheless required.[186] Habermas posits this in a theory of legal discourse, which mirrors and incorporates his theory of communicative rationality.[187]

Habermas's approach rests on the availability of validity claims. Essentially, actors involved in the deliberative process understand that their interlocutors will base their views on broader normative

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[177] HABERMAS BFN, *supra* note 1, at 236–37 ("The legal discourse of the court, on the other hand, is played out in a procedural-legal vacuum, so that reaching a judgment is left up to the judge's professional ability.").
[178] *Id.* at 235–36.
[179] *Id.*
[180] *Id.* at 236–37.
[181] *Id.*
[182] BRUNNÉE & TOOPE, *supra* note 40, at 34–35.
[183] JÜRGEN HABERMAS, BETWEEN NATURALISM AND RELIGION: PHILOSOPHICAL ESSAYS 103 (Ciaran Cronin trans., Polity Press 2008).
[184] HABERMAS BFN, *supra* note 1, at 236–37.
[185] *Id.* at 224.
[186] *Id.* at 224–25.
[187] *Id.* at 226.

principles.[188] The broadly-framed Rome Statute and its associated instruments,[189] serve as a broad set of parameters within which validity claims may be asserted.[190] For example, if a participant were to argue on a normative basis that DOSI that appears to have been obtained by torture should not be admitted, they could look to the Rome Statute as a basis for the validity of their claim by invoking Article 69(7)(b) ("admission of the evidence would be antithetical to and would seriously damage the integrity of the proceedings"). In response, another participant may point to Article 69(3) ("[t]he Court shall have the authority to request the submission of all evidence that it considers necessary for the determination of the truth") to offer an exception. By approaching torture-induced evidence on the basis of Habermas's views,[191] one could see the "universalizability of interests" whereby torture evidence should not ever be utilized, to avoid creating a perverse incentive to tolerate this odious practice.[192] This would match the approach adopted under international human rights law, which settled that evidence produced by torture is inadmissible.[193] The salient point is that the deliberative process would not devolve into a Weberian "free-for-all between irreconcilable claims."[194] Instead, it would occur against a structured backdrop of broader universal standards of value conducive to argumentative redemption.[195]

Against the institutional topography of international law, Habermas's theories have potential applicability. Although he has not written extensively on the ICC itself,[196] his writing touches on the relevance of atrocity crimes[197] to the conduct of international relations concerning

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[188] HABERMAS, *supra* note 50, at 8–42.

[189] For evidentiary assessments, the Rome Statute and Rules of Procedure and Evidence leave the process almost entirely up to the judges, whereas for specific matters such as the disqualification of a judge or the adoption of a code of judicial ethics, the provisions are slightly more procedurally prescriptive. *See, e.g.*, Rome Statute, *supra* note 33, arts. 40(4), 41(2)(c); INT'L CRIM. CT. RULES OF PROC. & EVID. 34.

[190] HABERMAS BFN, *supra* note 1, at 228 ("The argumentative process of the cooperative search for truth ideally closes the rationality gap between, on the one hand, the individual substantial reasons set out in fundamental incomplete sequences of argument that are at most plausible and, on the other, the unconditionality of the claim to the 'single right' decision.").

[191] *See, e.g.*, JÜRGEN HABERMAS, TRUTH AND JUSTIFICATION 228 (Barbara Fultner trans., 2003) ("We call the torture of human beings 'cruel' not only here for us, but everywhere and for everyone.").

[192] See Jürgen Habermas, *Law and Morality*, *in* THE TANNER LECTURES ON HUMAN VALUES 219, 225 (Kenneth Baynes trans., 1986).

[193] *See* Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment art. 15, Dec. 10, 1984, 1465 U.N.T.S. 85 (noting that an exception to this prohibition is if the fact of the statement being made is used against a person accused of the torture).

[194] OUTHWAITE, *supra* note 66, at 75.

[195] *See* HABERMAS BFN, *supra* note 1, at 228.

[196] *See Constitutionalization of International Law*, *supra* note 56, at 451 (referring explicitly to "an" International Criminal Court, albeit in relation to addressing State appeals against UNSC sanctions).

[197] More broadly, Habermas' work draws on the writings of Hannah Arendt. As a public witness to the Eichmann trial in the District Court of Jerusalem during the 1960's, she viewed the funnelling of barely countable horrors into the strictures of a criminal trial – and the potential incongruities and excesses that can eventuate in the process of adjudicating mass atrocity. Habermas relies on Hannah Arendt's view of "power as the potential of a common will formed

crisis moments.[198] Moreover, other authors have drawn broader connections between his writings and the ICC's processes, noting, for example, that under the Rome Statute, human rights violations "are no longer condemned and fought from the moral point of view in an unmediated way, but are rather prosecuted as criminal actions within the framework of state-organized legal order according to the institutionalized legal procedures."[199]

At the level of principle, the Independent Expert Review of the ICC observed that "the drafters of the Rome Statute clearly intended to foster among the judges a practice of deliberation that aims for consensus and legal certainty, but also leaves scope for sincerely-held opposing views which the judges have genuinely endeavored to reconcile by debate, including the consideration of potential compromise, distinguishing the facts and the wise exercise of judicial restraint."[200] This deliberative culture adheres to Habermas's structured and communicative approach. However, ensuring that the judges have sufficient access to specialized knowledge is axiomatic for the applicability of Habermas's approach, as discussed in the following section.

C. *Communicative Rationality as a Basis to Draw in Relevant Actors and Communities*

Communicative rationality rests on participants accepting a highly inclusive approach, allowing all relevant actors fair access to the deliberative process.[201] By applying Habermas's framework to the judicial treatment of DOSI, one can identify several insights concerning the internal deliberative judicial process and its openness to external inputs and cross-fertilization.[202]

First, the presumption against exclusivity can be conceptualized along three axes in relation to judicial deliberations. Most immediately, as between the judges assigned to a specific case, it is uncontroversial that any judge involved in a deliberation should be permitted to participate and not be excluded, so long as they are still serving as a judge and have not been removed from the case.[203] Broadening the scope, judges of other chambers and other courts applying international criminal law can engage

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in non-coercive communicative" (*Macht*), that is opposed to power as in "violence" (*Gewalt*). HABERMAS BFN, *supra* note 1, at 147–48.

[198] Habermas commented in detail on NATO's intervention in Kosovo in 1999, broadly supporting the use of force despite the lack of the UNSC mandate to do so, on the basis that it provided "emergency aid for a persecuted minority." Jürgen Habermas, *Bestiality and Humanity: A Ware on the Border between Legality and Morality*, 6 CONSTELLATIONS 263, 265 (1999). On this topic, he noted that "there can be no doubt about the facts that have emerged as 'crimes against humanity' out of the principles laid down by the war crimes tribunals in Nuremberg and Tokyo and which have made their way into international law." *Id.*

[199] Alexander Heinze, *Evidence Illegally Obtained by Private Investigators and Its Use Before International Criminal Tribunals*, 24 NEW CRIM. L. REV. 212, 233 (2021).

[200] Independent Expert Review, *supra* note 16, ¶ 624.

[201] *See supra* Part II.

[202] These insights arise from applying Habermas's four predicates for the applicability of his theory of communicative rationality. *Id.*

[203] Rome Statute, *supra* note 33, art. 74(1).

in a form of dialogue via their jurisprudence.[204] However, the punctuated and non-regular nature of such interactions limits this form of communicative action.[205] Moreover, judges may well be limited in their technical capacity regarding DOSI.[206] Accordingly, it is necessary to draw in a wider circle of specialists and other experienced professionals who can enhance the judges' appreciation of the technical issues at play.

Opening the circle more broadly to enhance that technical body of knowledge, the wider epistemic community should encompass forensic scientists, investigators, technicians, and other specialists involved in the generation and analysis of DOSI. It is this group of technical specialists who have both specific experiences using DOSI and either formal roles (such as in research laboratories or forensic investigation units) or demonstrated competence (shown through informal activities) in relevant technical areas. These individuals will compose the DOSI sub-community.

There is no definitive set of mandatory parameters to delineate members of the DOSI sub-community. Unlike medical doctors, forensic pathologists, DNA experts, and many other types of specialized professionals,[207] there are no formal qualifications that are established (and formally accepted by States in the same way as admission to the legal bar for example) to become a DOSI researcher or specialist.[208] At the conceptual level, the lack of accepted formal parameters to qualifying as a DOSI specialist highlights the tension between the democratizing effect of DOSI, by which anyone can theoretically provide relevant opinions, and the requirement of setting parameters in order to establish a distinct epistemic community and thereby enhance the legitimacy of processes

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[204] *See* Sergei Vasiliev, International Criminal Trials: A Normative Theory 124 (2014) (Ph.D. dissertation, University of Amsterdam), http://pure.uva.nl/ws/files/2260415/138942_A10.pdf ("By engaging in an informal and non-hierarchical dialogue with other judicial forums and by exchanging rationales with judges of other courts and decision-making bodies, international criminal judges benefit from, and potentially contribute to, the ius commune of IHRL"). The ICC Trial Chamber in *Katanga* noted that even though the ad hoc tribunals' jurisprudence is not binding on the ICC, it may be used to identify the content of relevant treaty law, customary international law, and general principles of law. Prosecutor v. Katanga, Case No. ICC-01/04-01/07, Judgment Pursuant to Article 74 of the Statute, ¶ 47 (Mar. 7, 2014); *see also* Prosecutor v. Gombo, Case No. ICC-01/05–01/08–3343, Judgment Pursuant to Article 74 of the Statute, ¶ 79 (Mar. 21, 2016).

[205] Habermas uses the term "action" not to mean merely a bodily movement but instead as "an intervention in of one or more agents in the world to achieve some end." OWEN, *supra* note 51, at 35 (citing HABERMAS, *supra* note 50, at 96).

[206] Braga da Silva, *supra* note 2, at 961; Freeman & Llorente, *supra* note 2, at 183.

[207] Although there are criticisms of the forensic science community, qualifications and objective markers of reliability have been developed in relation to frequently arising topics such as DNA and finger-print evidence.

[208] One suggestion is that a certification system should be established to enable members of the DOSI sub-community to demonstrate their qualifications, and to serve as a form of quality control for those persons seeking to provide their analyses to courts and other law enforcement institutions. Nicolas Hughes & Umit Karabiyik, *Towards Reliable Digital Forensics Investigations Through Measurement Science*, 2 WIREs FORENSIC SCI. e1367 (2020); Radina Stoykova*, Digital Evidence: Unaddressed Threats to Fairness and the Presumption of Innocence*, COMPUT. L. & SEC. REV., Sept. 2021, at 1, 12. There are various training courses offered by reputable institutions but there is no overarching qualification with the status of a traditionally recognized membership of a national profession.

produced in consultation with (or within) that community. However, some indicia which could be used as a guide for specialist standing are: Experience providing specialized analyses or opinions regarding the admissibility, reliability, or use of DOSI in litigation of complex cases; Experience or qualifications related to extracting and interpreting DOSI, including in technical areas such as engineering; Advanced degrees in relevant subjects, such as information technology, data analytics, law (focused on investigation and evidence) or criminology, and/or a demonstrated capacity to generate high quality assessments of DOSI.[209]

In applying these indicia to ascertain the members of the DOSI sub-community, judges would have to carefully ensure that a diverse range of experiences and views are maintained and that potential sub-community members were not excluded simply because their degrees were from less traditionally prestigious educational institutions or because they did not have experience in traditional formal Western-style investigative processes.[210] In fact, a diversity of language and cultural backgrounds would provide an important insulation against group-think and would accord with Habermas's conception of a broad and inclusive process of communicative rationality.[211]

Ensuring that relevant members of the DOSI sub-community can contribute to communicative exchanges regarding approaches to DOSI will be a challenge for the international courts. To fulfil the passive form of non-exclusivity, they must remove barriers that prevent members of the DOSI sub-community from being able to contribute to their views.[212] To rise to a more active form of non-exclusivity means seeking out relevant actors and drawing them into information-sharing contexts, such as workshops and roundtables, as discussed in further detail below.[213]

A second implication of Habermas's approach concerns issues of equal status and access. He considers that communicative action presupposes that actors "recognize each other as equals and have equal access to the discourse, which must also be open to other participants and be public in nature."[214] This presupposition has two facets. On the one hand, there is the issue of standing or status. Participants must proceed on a mutual recognition of formal equality in relation to participating in the discourse, meaning that no participant can exclude another participant simply based on their status or rank. In theory, judges working in a chamber on a case are equal as factfinders and have equal access to the

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[209] Compare this to the ICC Application form to be registered as an expert. *See Experts*, INT'L CRIM. CT., http://www.icc-cpi.int/get-involved/experts (last visited Apr. 5, 2023).

[210] *Cf.* KARIM A. KHAN, CAROLINE BUISMAN, & CHRISTOPHER GOSNELL, PRINCIPLES OF EVIDENCE IN INTERNATIONAL CRIMINAL JUSTICE 614–15 (2010) (citing Prosecutor v. Bizimungu, Case No. ICTR-99-50-T, Oral Decision on Qualification of Prosecution Expert Witness Jean Rubaduka (Mar. 24, 2004)).

[211] *See* BRUNNÉE & TOOPE, *supra* note 40, at 21 (referring to "the greatest challenge facing international law: to construct normative institutions while admitting and upholding the diversity of peoples in international society").

[212] Hellwig, *supra* note 111, at 983–87; *see* Murray, McDermott, & Koenig, *supra* note 22, at 557.

[213] *See infra* Part VII (discussing forging necessary links to the epistemic community).

[214] Risse, *supra* note 56, at 11.

discourse.[215] While it cannot be discounted that judges, at times, attempt to "pull rank" or otherwise use coercive pressure to prevail in discussion,[216] this would conflict with their required characteristics of integrity and independence and would run counter to the judicial ethos, whereby "[j]udges shall act at all times towards one another in a spirit of collegiality and professionalism."[217] Habermas's ideal conditions would support the notion of a flat judicial structure and a culture of fellowship rather than rank. Instilling such an ethos in judges, whether as part of their swearing in ceremony or otherwise, would benefit the constructive impact of their deliberations.

On the other hand, there is the issue of the accessibility of the discourse. Whereas "the deliberations of the Trial Chamber shall remain secret,"[218] the judges record their reasoning in written judgments, and "the decision or a summary thereof shall be delivered in open court."[219] In this light, the process can be seen as semi-open, in that it is open but subject to delays in revealing the reasoning behind certain outcomes.[220] Given the underlying presumption of open justice and transparency,[221] this fulfils the element sufficiently to render Habermas's approach applicable.

Nonetheless, when openness and equality are combined, an incongruity becomes apparent. External participants in the relevant discourse, whilst part of the broader epistemic community, do not have a formal vote in the outcome of judicial deliberation. In this sense, judicial deliberations can only be seen as imperfectly meeting the equal voice prerequisite of Habermas's construct for communicative action. That difference in role may be justifiable given the judges' unique duties and the need for finality of legal proceedings, but participants in the process should be cognizant of the potential power imbalance.

In contrast, the DOSI sub-community's lack of any formal parameters means that it has no inherent inequality or equality among its members in a traditional hierarchical sense.[222] In practice, the DOSI sub-community has been hailed as having a democratizing effect on the investigation of serious crimes and human rights violations.[223] Yet, there is nothing to

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[215] Rome Statute, *supra* note 33, art. 74(1) ("All the judges of the Trial Chamber shall be present at each stage of the trial and throughout their deliberations."); *id.* art. 74(3) ("The judges shall attempt to achieve unanimity in their decision, failing which the decision shall be taken by a majority of the judges.").

[216] By this, it is meant that judges may sometimes attempt to rely on their seniority, knowledge, or experience on a particular issue to promote their views instead of engaging in constructive discussion with their colleagues.

[217] Code of Judicial Ethics, *supra* note 116, art. 5(3); *see also* Bettina Julia Spilker, *Codes of Judicial Ethics: An Emerging Culture of Accountability for the Judiciary?*, *in* INTEGRITY IN INTERNATIONAL JUSTICE, *supra* note 137, at 741.

[218] Rome Statute, *supra* note 33, arts. 5(1)(a), 74(4).

[219] *Id.* art. 68(2).

[220] *Id.* (noting that some aspects of hearings are private to the parties and judges, for example if they concern a protected witness).

[221] *Id.* art. 67(1) ("[T]he accused shall be entitled to a public hearing.").

[222] *See, e.g.*, Madeline Roache, *Bellingcat Has Revealed War Crimes in Syria and Unmasked Russian Assassins. Founder Eliot Higgins Says They're Just Getting Started*, TIME (Mar. 2, 2021), http://time.com/5943393/bellingcat-eliot-higgins-interview.

[223] *See* Wiley, *supra* note 86, at 547; Braga da Silva, *supra* note 2, at 942.

prevent or exclude hierarchies from developing and even dominating within the DOSI sub-community, to the potential exclusion of other relevant actors who are competent to offer constructive input.

Similarly, the transparency of DOSI work tends to be high, but not because of any formal requirement or prescription. Well-known groups often publish their findings rapidly and on a provisional basis, subject to frequent updating and augmenting.[224] There is the potential for DOSI groups to have their own vested interests and even hidden backers.[225] Notwithstanding this, that risk endures with all groups and even the judges of international courts are not inherently immune from such potential interference, in spite of their oaths of office.[226] On a principled basis, the flat structure and transparency that have tended to characterize DOSI groups cohere with Habermas's precepts for communicative rationality, but the lack of any formalized safeguards to these values renders them vulnerable to deterioration and dissipation.

The third import of Habermas's approach is that his argumentative consensus is premised on actors providing their honest opinions without deception of themselves or others.[227] In addition to acting in good faith, this requires participants to premise their participation on a presumption of good faith on the part of other participants and thereby to have "the ability to empathize, that is, to see things through the eyes of one's interaction partner."[228] Communication skills are, of course, critical to the establishment of a good faith working methodology.[229] Openness and collegiality are essential to judges' ability to communicate effectively and align with Article 5(3) of the ICC Code of Judicial Ethics.[230]

A fourth insight arising from the application of Habermas's theory of communicative rationality is the predicate requirement that no coercion is brought to bear on any participant in the constructive discourse. The paradigm of digital evidence is particularly apposite in relation to this predicate, as it is essentially generated beyond the coercive reach of the court. Judges lack coercive powers to force digital evidence specialists to adopt any subjective viewpoint regarding submitted evidence and lack a generalized subpoena power to compel them to even appear for

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[224] *E.g.*, *A Post Mortem of Russia's Claim That Crucial MH17 Video Evidence Was Falsified*, BELLINGCAT (Mar. 10, 2020), http://www.bellingcat.com/news/2020/03/10/a-post-mortem-of-russias-claim-that-crucial-mh17-video-evidence-was-falsified.

[225] *See* Murray, McDermott, & Koenig, *supra* note 22, at 569 (describing an example of the Syrian Hero boy, which turned out to have been filmed on a set in a different country by a group with its own political motivations).

[226] *See, e.g.*, Letter from Judge Harhoff to the ICTY Appeal and Trial Chamber (June 6, 2013) (on file with author); *see also* Marko Milanovic, *Danish Judge Blasts ICTY President*, EJIL: TALK! (June 13, 2013), http://ejiltalk.org/danish-judge-blasts-icty-president.

[227] Bohman & Rehg, *supra* note 54.

[228] Risse, *supra* note 56, at 10; HABERMAS BFN, *supra* note 1, at 223.

[229] The importance of communication skills for the successful operation of the Court was emphasized in the recent ICC Independent Expert Review, which recommended "greater communication, appreciation of alternative or different points of view, promotion of common interest, and respectful disagreement, including the mutual sharing of individual or separate opinions before the finalization of the common decision." Stahn, *supra* note 63, at 3.

[230] *See* Code of Judicial Ethics, *supra* note 116.

testimony.[231] Digital specialists in turn cannot coerce judges to reach any determination as to the veracity of a piece of evidence, and so the relationship relies on a mutual interest in accurate verification rather than one of coercion.[232]

As a wider principle underlying Habermas's conception, he presupposes that "actors need to share a 'common lifeworld,'"[233] within which they can appeal to inter-subjective values to make validity claims.[234] Habermas's common lifeworld consists of "a shared culture, a common system of norms and rules perceived as legitimate, and the social identity of actors being capable of communicating and acting," which "provides arguing actors with a repertoire of collective understandings to which they can refer when making truth claims," and which is reproduced by "communicative action and its daily practices."[235]

In this respect, ICC judges are required to share common characteristics, as set out in the Rome Statute, including being "persons of high moral character, impartiality and integrity" and ones "who possess the qualifications required in their respective States for appointment to the highest judicial offices."[236] Moreover, judges operating at the ICC inculcate the normative legitimacy of the Rome Statute and core instruments.[237] Part of their oath to office is to faithfully apply the Rome Statute.[238] They also work together in plenary to address requests to disqualify a fellow judge, to adopt instruments such as the Regulations of the Court and the Chambers Practice Manual, and to address claims of misconduct by a fellow judge.[239] In this way, they occupy a common lifeworld, providing a basis for the assessment of validity claims, as set out above.

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[231] Göran Sluiter, *"I Beg You, Please Come Testify"—The Problematic Absence of Subpoena Powers at the ICC*, 12 NEW CRIM. L. REV. 590, 590 (2009).

[232] Even in relation to potentially false digital evidence, the judges' powers are limited. Whereas ICC Judges have the power to impose sanctions for contempt of court against those who give false testimony and against participants in litigation which engage in "presenting evidence that the party knows is false or forged," it is not clear how this provision would apply to those who alter digital evidence outside of the courtroom. Rome Statute, *supra* note 33, art. 74.

[233] *See* HABERMAS *supra* note 50, at 173; OWEN, *supra* note 51, at 45; OUTHWAITE, *supra* note 66, at 77; KENNETH BAYNES, HABERMAS 64–70 (2016).

[234] Bohman & Rehg, *supra* note 54 (as to inter-subjectivity); Risse, *supra* note 56, at 10 (as to validity claims); *see also* STRUETT, *supra* note 35, at 20.

[235] Risse, *supra* note 56, at 10; *see also* Bohman & Rehg, *supra* note 54 ("'Lifeworld' then refers to the background resources, contexts, and dimensions of social action that enable actors to cooperate on the basis of mutual understanding: shared cultural systems of meaning, institutional orders that stabilize patterns of action, and personality structures acquired in family, church, neighborhood, and school."); JOHNSTONE, *supra* note 58, at 17 (referring to lifeworld as "the repository of experiences, assumptions, and understandings that makes communicative action possible").

[236] Rome Statute, *supra* note 33, art. 36(3)(a).

[237] By analogy, Corneliu Bjiola created the expression "institutional lifeworld" to describe the collective understandings, rules, and diplomatic norms underpin International Organizations that engage in security functions, like the U.N., NATO, EU, and OSCE. *Cf.* Corneliu Bijola, *Legitimizing the Use of Force in International Politics: A Communicative Action Perspective*, 11 EUR. J. INT'L RELS. 266, 279 (2005); *see also* JOHNSTONE, *supra* note 58, at 20.

[238] *See, e.g.*, Code of Judicial Ethics, *supra* note 116, art. 3(2) ("Judges shall decide matters before them on the basis of facts and in accordance with the law.").

[239] *See* Rome Statute, *supra* note 33, arts. 41(2)(c), 52(1); INT'L CRIM. CT. RULES OF PROC. & EVID. 41; PRACTICE MANUAL, *supra* note 33.

However, this common lifeworld exposes a vulnerability of Habermas's approach, which is the potential to exacerbate existing biases towards established views and power structures.[240] Although the common characteristics listed above are essentially cosmopolitan, they nonetheless raise the risk of a narrow class of people being engaged in the decision-making and norm generation processes. To mitigate this risk, efforts should be made to ensure that individuals with different perspectives and cultural backgrounds are drawn into the dialogue to highlight blind spots and misunderstandings.[241]

Concerning intra-judicial relations, Dworkin's metaphor of jurisprudence as a chain novel, with multiple judges as writers contributing to a common plot, has been raised in relation to international tribunals, but decried as "imperfect" in light of the lack of a principle of precedent across the institutions.[242] Irrespective of the limitations of its applicability to international tribunals, Dworkin's metaphor highlights a deeper principle; for judges to contribute to anything with a common thread, there needs to be an intersubjective acceptance of the parameters within which the plot can develop.[243] Effective communication and ongoing judicial capacity enhancement are essential to developing a shared understanding and intersubjective basis of rationality. Without some form of shared understanding, there simply cannot be a continuity of narrative fit to justify the label of novel. This shared understanding is reliant on, and fundamental to, legitimate communicative action formulated by Habermas. As Stahn observes:

> Dworkin's metaphor may have the most value from a methodological point of view. Like our novelist, a judge is independent in his or her judgment. Even separate or dissenting opinions may contribute to a common plot. What is essential is the need to read, listen and engage with alterity as part of the process. Developing a community of practice requires the skill of "radical listening," namely the ability to engage with uncomforting positions or moderate one's own views.[244]

On these bases, parallels can be observed between judicial fact-finding and Habermas's model of argumentative rationality, whereby "the predominant mode of social action consists of mutually justifying validity claims oriented toward achieving collective understandings."[245] These parallels provide insights into the factors that must be enhanced to ensure the legitimacy and legitimizing effect of judicial deliberations.

Habermas's approach can provide conceptual and procedural justification for the judicial treatment of DOSI, but only where the larger specialist sub-community is drawn into the process of informing the

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[240] *See supra* Part III (on critiques of Habermas).
[241] *See* McDermott, Koenig, & Murray, *supra* note 2, at 102.
[242] Stahn, *supra* note 63, at 3 (citing RONALD DWORKIN, LAW'S EMPIRE 229 (1986)).
[243] Stahn, *supra* note 63, at 4.
[244] *Id.* at 3.
[245] Risse, *supra* note 56, at 14 ("Habermas's theory is rather silent on the question of how much of a common lifeworld people need to share in order to communicate in a reasonable manner.").

judiciary of relevant standards and techniques. Forging the necessary links with the DOSI sub-community is thus essential to organically establish a set of shared understandings and characteristics necessary to fulfil the Habermassian presupposition of the common lifeworld.[246] Examining how to establish these links is thus necessary to inculcate "fidelity" to norms of evidentiary assessment and to the system of law itself.[247]

VII. FORGING NECESSARY LINKS TO THE DIGITAL OPEN-SOURCE INFORMATION SPECIALIST SUB-COMMUNITY

Whereas the major precepts of Habermas's approach to communicative rationality are present with the judges involved in deliberations, there remains the challenge of technically assessing DOSI. To qualify for office at the ICC, judges are not required to have any special technical skill or awareness in this respect.[248] Judges may not even know what additional evidence or explanations they need to request to better understand DOSI,[249] leading to a paradigm of Rumsfeld's notorious "unknown unknowns."[250] Understanding the lexicon of the digital open-source community will assist in avoiding the "wrong" that Jean-François Lyotard warns of when "the genre of discourse by which one judges are not those of the judged genre or genres of discourse."[251]

Nonetheless, judges should seek to develop such capacity to carry out their judicial tasks. This development will be important not only for their "capacity to interrogate technology systems,"[252] but more profoundly for their ability to carry those understandings and lexicon into their *in camera* deliberations.[253] Such capacity development aligns with the ICC judges' code of ethics, whereby "[j]udges shall take reasonable steps to maintain and enhance the knowledge, skills and personal qualities necessary for

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[246] *Id.* at 14. *But see* Brunnée & Toope, *supra* note 61, at 9 ("[F]or a community of practice around international legal norms to emerge, it is not necessary to imagine the existence of a homogenous 'international community' sharing a common 'life world' . . . , vision or definition of 'the good life.'").

[247] *See* FULLER, *supra* note 55, at 39–41; Lon L. Fuller, *Positivism and Fidelity to Law: A Reply to Professor Hart*, 71 HARV. L. REV. 630 (1958); BRUNNÉE & TOOPE, *supra* note 40, at 21.

[248] *The Judges of the Court*, Int'l Crim. Ct., http://www.icc-cpi.int/sites/default/files/Publications/JudgesENG.pdf (last visited Apr. 5, 2023).

[249] Braga da Silva, *supra* note 2, at 961 ("The available record, coupled with the lack of exposure to digital evidence of international crimes, creates an urgent need to train judges and supporting staff."); *see also* Freeman & Llorente, *supra* note 2, at 183 ("When the interpretation of data requires the use of software to translate the data points into information that can be understood by humans, judges will need at least some minimal specialized training and expertise before drawing inferences from the data.").

[250] *See* David A. Graham, *Rumsfeld's Knowns and Unknowns: The Intellectual History of a Quip*, THE ATLANTIC (Mar. 27, 2014), http://www.theatlantic.com/politics/archive/2014/03/rumsfelds-knowns-and-unknowns-the-intellectual-history-of-a-quip/359719.

[251] JEAN-FRANÇOIS LYOTARD, THE DIFFEREND: PHRASES IN DISPUTE, at xi (Georges van den Abbeele trans., Univ. Minn. Press 1988) (1983). At the same time, Lyotard warns of the wrongs done when a "genre of discourse" is taken for a universal one. *Id.*

[252] Freeman & Llorente, *supra* note 2, at 186–87.

[253] Braga da Silva, *supra* note 2, at 949.

judicial office."[254] Habermas himself notes that the participant in the communicative rationality process should deploy interpretations that "follow standards [recognized] in the profession."[255] Reaching out to the digital open-source specialist sub-community is critical for the advancement of judicial knowledge in this technical field.

Standard digital evidence techniques include metadata reviews,[256] reverse image searches, chronolocation, social media awareness, and triangulation.[257] All such techniques can help to mitigate any negative impacts of the increasing use of DOSI and thereby allow greater judicial reliance on it.[258] However, training judges in DOSI techniques, while commendable,[259] will not be sufficient in light of the dynamic and rapidly changing technological landscape and range of materials that are being introduced to international criminal trials.

It is important to contemplate ways of incorporating specialized knowledge and awareness into judicial deliberations. From a Habermassian approach, an open dialogue between the ICC judiciary and the epistemic community addressing DOSI is needed. Specifically, Habermas allows for "epistemic communities" to "generate thoroughly normative, global background consensuses over supposedly purely scientific questions."[260] Drawing the specialized community into the process of determining appropriate standards and approaches for authenticating and weighing DOSI would compensate for the dislocation of factfinders outside the confines of their usual role when addressing DOSI. It would allow norms to be developed with a broader awareness of the standards applied in the DOSI sub-community, both in the technical industry and across other judicial institutions addressing this form of evidentiary material.[261] Richard Wilson has shown international judges usually referred to "common sense" in criminal trials when they assessed evidence about which they lacked expert knowledge.[262] Infusing that "common sense" with a measure of technical awareness mitigates the risk of deficiencies in the findings or technical analyses applied by the judges.

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[254] Code of Judicial Ethics, *supra* note 116, art. 7(2).
[255] HABERMAS BFN, *supra* note 1, at 224.
[256] *See* HEINSCH ET AL., *supra* note 24, at 35.
[257] Murray, McDermott, & Koenig, *supra* note 22, at 556–57.
[258] *Id.*
[259] In this light, it is recommended that judges and those involved in the deliberative process (such as legal officers) are encouraged to undertake capacity building in the area of DOSI and its analysis. It would also enable them to engage in constructive dialogue with the broader epistemic community, and thereby to establish norms based on mutual understanding and consideration, as discussed herein. *See* Freeman & Llorente, *supra* note 2, at 186.
[260] JÜRGEN HABERMAS, THE POSTNATIONAL CONSTELLATION: POLITICAL ESSAYS 109 (Max Pensky trans., MIT Press 2001) (1998).
[261] *Cf.* Allen Buchanan & Robert O. Keohane, *The Legitimacy of Global Governance Institutions*, 20 ETHICS & INT'L AFFS. 405, 432 (2006) ("[L]egitimacy depends crucially on the activities of external epistemic actors. Effective linkages between the institution and external epistemic actors constitute what might be called the transnational civil society channel of accountability.").
[262] Richard Ashby Wilson, *Expert Evidence on Trial: Social Researchers in the International Criminal Courtroom*, 43 AM. ETHNOLOGIST 730 (2016).

This is also important for coherence and consistency with other judicial institutions addressing DOSI.[263]

The question arises of how specialists and the DOSI sub-community should be included in a process that is, at least partially, closed: namely, judicial deliberations. One potential solution would be to insist that only expert witnesses explain any submitted DOSI to the judges.[264] Experts (and expert evidence) stand as the most significant conduit of technical knowledge, updated awareness, and dissemination of standards between the judiciary and the broader epistemic community.[265] Their evidence is typically presented during trial, but could also be secured through measures prior to trial, such as Article 56 proceedings, which can be used, *inter alia*, to preserve or test evidence in unique investigative circumstances.[266]

However, appearing as a witness is largely unidirectional. The witness is not given an "equal" role in the deliberative process, but instead is there to provide information to the decision-making judges. Moreover, bringing in specialists to explain DOSI evidence imports a host of additional problems: which person would speak on behalf of a digital collective (particularly as multiple people have been involved in an egalitarian effort to discover, collect and analyze important DOSI); what impact the lack of standardized approaches to digital verification would have; and the lack of a State-recognized certification system for "experts" on DOSI. These problems can be exacerbated in litigation, where witnesses are selected by the parties to prove the elements of their case. However, that risk is somewhat mitigated at the ICC, where judges can call for experts to provide testimony,[267] and even order experts to attend court at the same time to have the opportunity to contrast and compare their testimony or let them agree.[268]

Another method is to organize roundtables, workshops, and similar information exchange fora,[269] or more formalized bodies such as advisory committees to maintain a reciprocal cross-fertilization of knowledge to inform the deliberations of the judges.[270] The Office of the Prosecutor has a Scientific Advisory Board, which has met annually since 2014, as well

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[263] *See* Stahn, *supra* note 63, at 4 (coining the broader justice context the "invisible community of courts").
[264] *See, e.g.*, LEIDEN GUIDELINES, *supra* note 156, at 32.
[265] *See* INGRAM, *supra* note 40, at 210–11.
[266] Rome Statute, *supra* note 33, art. 56; *see also* Freeman & Llorente, *supra* note 2, at 185.
[267] This was done in the first two ICC cases. *See* Prosecutor v. Lubanga, Case No. ICC-01/04-01/06, Judgment Pursuant to Art. 74 of the Statute, ¶ 11 (Mar. 14, 2012); Prosecutor v. Katanga, Case No. ICC-01/04-01/07, Judgment Pursuant to Art. 74 of the Statute, ¶ 21 (Mar. 7, 2014).
[268] Court regulations allow a chamber to order a jointly commissioned expert report. *See* ICC Regulations, *supra* note 33, reg. 44.
[269] Stahn, *supra* note 63, at 2.
[270] The incorporation of specialised information feeds into Habermas's conception of argumentation as "the intention of winning the assent of a universal audience to a problematic proposition in a non-coercive but regulated contest for the better argument *based on the best information and reasons*." HABERMAS BFN, *supra* note 1, at 228 (emphasis added).

as a Technology Advisory Board.[271] The judges appear to have no similar standing committee or board focused on matters of digital technology, despite the fact that they are the ultimate decision-makers regarding its authenticity and reliability as evidence in ICC proceedings. Establishing an independent board of this nature to advise the judiciary and serve as a conduit between it and the specialist community would constitute a potential means for the judges to seek expertise on technical matters, expand their familiarity with DOSI evidence and its concepts, and avoid the pitfalls of over or under-reliance on digital evidence.

Parties have attempted to have judges take notice of standards and approaches applied in other jurisdictions, including in relation to digital and cyber-evidence.[272] However, the judges would have to be careful as extra-legal processes should not be used to surreptitiously channel materials that could constitute a form of de facto evidence to the judges to circumvent the strictures of trial procedures. Under Article 74(2) of the Rome Statute "[t]he Trial Chamber's decision shall be based on its evaluation of the evidence and the entire proceedings . . . [and t]he Court may base its decision only on evidence submitted and discussed before it at the trial."[273] Given that Article 74(2) is one of the few mandatory provisions in the Rome Statute regarding evidence, any deviation from its terms could potentially be fatal to the integrity of the trial proceedings.

On the other hand, if the information conveyed were of a technical nature, for example in the nature of quasi-legal standards and approaches to assessing DOSI, it would potentially fall in the grey area between evidence and "general principles of law derived by the Court from national laws of legal systems of the world," or could be considered non-legal and non-evidentiary information of a training and development nature and thereby not in violation of Article 74(2).[274] Trainings on technical matters, including digital evidence, are normal at the court and do not constitute an impermissible circumvention of the evidentiary

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[271] In 2014, the ICC's Office of the Prosecutor established a Scientific Advisory Board, with sixteen members all from outside of the ICC's staff, which provides recommendations to the Prosecutor on the most recent developments in new and emerging technologies and scientific methods and procedures that can reinforce the capabilities of the Office in the collection, management and analysis of scientific evidence. Press Release, Int'l Crim. Ct., The Office of the Prosecutor of the International Criminal Court Establishes a Scientific Advisory Board (June 27, 2014), http://icc-cpi.int/news/office-prosecutor-international-criminal-court-establishes-scientific-advisory-board. The Office of the Prosecutor also has a Technology Advisory Board, but there is little, if any, publicly available record of its activities. *See* INT'L CRIM. CT., OFF. OF THE PROSECUTOR, STRATEGIC PLAN 2019-2021, ¶ 46 (July 17, 2019), http://icc-cpi.int/sites/default/files/itemsDocuments/20190726-strategic-plan-eng.pdf. The Office of the Prosecutor also has a "Trust Fund for Advanced Technology and Specialized Capacity." Press Release, Int'l Crim. Ct., Statement of ICC Prosecutor, Karim A.A. Khan QC: Contributions and Support from States Parties Will Accelerate Action Across Our Investigations (Mar. 28, 2022), http://icc-cpi.int/news/statement-icc-prosecutor-karim-aa-khan-qc-contributions-and-support-states-parties-will-0.

[272] *See* Prosecutor v. Mbarushimana, Case No. ICC-01/04-01/10, Prosecution's Request in Terms of Rule 121(7) for the Postponement of the Confirmation Hearing to Preserve the Fairness of Proceedings, ¶ 52 n.69 (May 25, 2011) (citing a series of best practice guidelines).

[273] Rome Statute, *supra* note 33, art. 47.

[274] *Id.* art. 21.

rules.[275] But to avoid violating the terms of Article 74(2), at minimum any knowledge provided to the judges in relation to DOSI via extra-judicial proceedings would have to be de-particularized from the specific case.

These processes would contribute to the two-way (or multidirectional) exchange of ideas and experience regarding DOSI. The circulation of ideas and iterative generation of legal norms that eventually crystallized into codified instruments occurred in the early years of the formation of international criminal law, including in relation to crimes against humanity.[276] Whichever modes are chosen to involve the DOSI sub-community, it will be important that it extends laterally to other judicial mechanisms along the various "dimensions" of international criminal justice (domestic, international, hybrid and regional),[277] as well as to pierce this institutional membrane and reach individual specialists and other entities that are experienced in the evaluation of DOSI.

Nonetheless, as noted above, participants in the process must remain acutely aware of the risks of amplifying biases, and potentially entrenching existing inequities that harm those less well-served by legal processes, as set out in the discussion of critiques of Habermas above.[278] Participants should ensure that various actors with "different cultural schema and individual perspectives have a chance to review and analyse the evidence" in order to reduce the risk of biases being left undetected and unaddressed.[279] In a similar manner, these approaches could help to generate regulations for the judges to endorse, which would serve as informative, capacity building instruments to assist judges in their deliberations.[280] Of course, Habermas's approach will not directly offer the contents of those regulations, as it has been critiqued as being normatively empty,[281] but can instead set out a process for generating the relevant norms in an inclusive and defensible manner.

It is striking that the Chambers Practice Manual, most recently updated in 2022, has extensive instructions for judges to impose on parties, but very few rules for the judges to impose on themselves. The Manual makes no explicit mention of deliberations, apparently leaving these to the discretion of the judges. Moreover, the Manual also makes no detailed reference to technology, science, or any other technical matters that may be the subject of judicial deliberations.[282] This void could be

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[275] *See* Braga da Silva, *supra* note 2, at 962.
[276] *Id.* at 942 (citing Kerstin von Lingen, *Legal Flows: Contributions of Exiled Lawyers to the Concept of Crimes Against Humanity During the Second World War*, 17 MOD. INTELL. HIST. 507 (2020)).
[277] Stahn, *supra* note 63, at 2.
[278] *See supra* Part III (on critiques of Habermas).
[279] *See* McDermott, Koenig, & Murray, *supra* note 2, at 102.
[280] Stahn notes "[t]he development of procedures is a clear demonstration of a community of practice." Stahn, *supra* note 63, at 4; *see also* Braga da Silva, *supra* note 2, at 963 (suggesting the development of guides or primers designed to assist the judiciary in handling technical evidence); Freeman & Llorente, *supra* note 2, at 184 (focusing on the ICC Prosecution and suggesting the creation of Guidelines for Online Investigations in Compliance with article 54 (1)(a) of the ICC Statute).
[281] *See supra* Part III (on critiques of Habermas's approach).
[282] *See* PRACTICE MANUAL, *supra* note 33.

filled by a set of DOSI norms based on ongoing dialogue between the judiciary, other actors involved in court proceedings,[283] and the broader DOSI world of actors.[284]

More prospectively, judicial treatment of DOSI is potentially amenable to legal codification, most likely in largely permissive terms, but with guidance for commonly arising issues such as questions of metadata, file corruption, potential fakes, and privacy or security issues.[285] The increasing existence of parallel investigations and proceedings, most notable in relation to DOSI heavy situations such as Ukraine and Myanmar,[286] reinforces the imperative need for the development of consistent standards for assessing and relying on DOSI.

Notwithstanding the value of a set of binding DOSI norms, they would have to be flexible and dynamic, due to the fast-changing nature of this technology-driven field of practice. In this respect, they would potentially impede upon the need for certainty and clarity of legal regulations. Predictability and accessibility of the law are hallmarks of a defensible legal system and are necessary to allow individual and State actors to conduct themselves in a law-abiding manner.[287] Identifying a workable approach to generating such regulations will constitute a challenge, but the present analysis highlights that an inclusive approach, incorporating the views of the specialist community in an epistemic process, will enable the emerging positions and approaches to benefit from a conceptual defensibility. Through the application of these norms as legal framework in specific cases, the paradigm would fit with Habermas's conception of "law as [a] medium by which communicative power is transformed into administrative power."[288] In turn, the DOSI sub-community will be alerted to issues that arise from a judicial perspective regarding their work.[289]

For their part, the digital open-source community should seek to ensure ideal conditions for communicative action. Specialists and specialist groups should be cognizant of the demands of judicial processes and should make accommodations where possible to facilitate the use of their work in judicial deliberations. This will assist in fostering a common base of understandings, approaches, and even lexicons between the judiciary and the DOSI specialists. It will provide a basis to view them as participants in a common epistemic community, rather than entirely

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[283] Stahn, *supra* note 63, at 2 ("The 'invisible community' of international criminal justice comprises not only institutions, but also dialogue between lawyers in different roles, as law-makers, counsel or judges.").

[284] Efforts have been made in this regard; *see for example the* BERKELEY PROTOCOL, *supra* note 10

[285] *See supra* Part V; *supra* note 13 (concerning amending the ICC legal instruments).

[286] *Id.*

[287] Brunnée & Toope, *supra* note 61, at 6.

[288] HABERMAS BFN, *supra* note 1, at 150 (bearing in mind that Habermas's conception related to the role of communicative power in societal wide structures rather than in the specific context of judicial activity in international criminal proceedings).

[289] *See* Freeman & Llorente, *supra* note 2, at 186 ("In pointing out the deficiencies in the evidence, Chambers can provide the parties with valuable guidelines that can help them determine the quality of their information prior submission to the prosecutor or the Court.").

distinct communicative groups whose activities happen to come into contact while litigating atrocity crimes. To assist judicial deliberations, and contribute to a developing lexicon, DOSI specialists should include explanations in their reports of any tools utilized, such as forensic software used to detect manipulated evidence,[290] and should note any major limitations inherent in using those tools.

As specialists increasingly explain their activities regarding DOSI to judicial audiences, it will be important to make consistent use of digital tools. Tools such as reverse image search platforms, which keep a trail of the investigative steps undertaken, will help address questions that judges and other interested specialists have regarding the selection of search terms, searched platforms, trails followed, analytical tools utilized,[291] and other matters relating to the comprehensiveness, selectivity, and analytical steps taken when gathering DOSI evidence.To address the risk of automation (and similar unconscious) biases influencing their results, teams should research whether the tools they use can import such biases and adopt mitigation strategies to account for those when designing and implementing their investigations.[292]

The adoption and communication of a relatively consistent and thereby defensible (and comprehensible) methodology underlying the findings will assist the uptake of their work by the judiciary. The common lexicon of the judicial and specialist epistemic community will be strengthened, which will in turn reinforce the legitimacy of judicial decision making.[293]

Additionally, although the evidentiary rules are broadly-framed at the ICC, DOSI teams should be cognizant of the need to protect participants within the ICC's processes,[294] as encapsulated in Article 68 of the Rome Statute on "protection of the victims and witnesses and their participation in the proceedings."[295] They should pay close heed to privacy protections and the prohibition against torture-induced evidence.[296] Violations of

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[290] *See* Freeman & Llorente, *supra* note 2, at 165.

[291] *See, e.g.*, WALLACE FAN, PEACE AND JUST. INITIATIVE, HOW TO ORGANIZE A COLLABORATIVE OSINT PROJECT FOR LITIGATION PURPOSES: TAKEAWAYS FROM PROJECT TOLLGATE 3 (2022), http://www.peaceandjusticeinitiative.org/wp-content/uploads/2022/05/DVU-Blogpost-Takeaways-from-Project-Tollgate.pdf (referring to the use of SunCalc to conduct shadow analysis relevant to establishing and checking dates and times and Hunchly to track the investigative steps undertaken).

[292] Milaninia, *supra* note 79, at 233.

[293] Brunnée & Toope, *supra* note 61, at 3. In fact, the feedback from specialist actors outside the formal structures of the Court can strengthen the legitimacy of the Court's determinations and vice versa, as discussed above.

[294] See DUBBERLEY & IVENS, *supra* note 111, for various risk mitigation strategies.

[295] *See* Rome Statute, *supra* note 33, art. 68.

[296] *See* LEIDEN GUIDELINES, *supra* note 156, at 38 ("The ICC Appeals Chamber in *Bemba et al* held that intercepted communication received in the course of normal, administrative activities of the ICC Detention Centre would not violate the human right to privacy."); Prosecutor v. Bemba et. al., Case No. ICC-01/05-01/13-2275-Red, Appeals Judgment, ¶ 381 (Mar. 8, 2018); *see also* LEIDEN GUIDELINES, *supra* note 156, at 33 ("The ICTR Trial Chamber in *Renzaho* found that the tape of an intercepted call of Rwandan authorities (intercepted by Rwandan Patriotic Front (RFP) soldiers using a walkie-talkie and simultaneously recorded by a journalist on a small Sony tape) recorded 'by eavesdropping on an enemy's telephone calls

these rules may lead to the exclusion of evidence under Article 69(7) of the Rome Statute.[297] Digital open-source teams should accordingly adhere to the "do no harm" principle.[298] This includes the specialists and researchers themselves, who may be harmed by exposure to potentially shocking and distressing images.[299]

VIII. CONCLUSIONS

Bridging the gap between the highly discretionary procedural framework at the ICC and the growing demand for a principled forensic approach to digital open-source materials is a contemporary challenge that will continue to increase in the coming years. Confronting this challenge is imperative as the volume and significance of digital materials grows before the ICC and other institutions investigating atrocity crimes. Pending the adoption of any formal schema governing this technical field, Habermas's communicative rationality provides a coherent and defensible approach at the level of principle to anchor judicial deliberations. Nonetheless, the transubstantiation of technical best practices into litigation procedure entails significant adjustments to the juridical culture and processes currently prevalent before the ICC. Those adjustments will also bear significance beyond the ICC, as they can inform the approach of other institutions investigating war crimes, crimes against humanity, genocide, aggression, and other serious human rights violations.

Applying Habermas's conceptual framework to judicial deliberations concerning DOSI, the following insights emerge:

> 1) in this area of activities, judges occupy a role straddling fact-determination and norm-generation,[300] in which it is necessary to engage in deliberative action oriented towards mutual understanding regarding validity claims;

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during the course of a war' was 'certainly not within the conduct which is referred to in Rule 95.' However, the ICTR Trial Chamber determined it was not 'antithetical to and certainly would not seriously damage the integrity of the proceedings.'"); Prosecution v. Brdjanin, Case No. IT-99-36-T, Decision on the Defence "Objection to Intercept Evidence," ¶ 5 (ICTY Oct. 3, 2003). Interestingly, the Special Tribunal for Lebanon Chamber in *Ayyash* declined to admit information from the WikiLeaks website as evidence, noting that the "Trial Chamber is not satisfied that the documents have the necessary prima facie indicia of reliability—namely, authenticity and accuracy—for admission." Prosecutor v. Avyash, Case No. STL-11-01/T/TC, Decision on the Admissibility of Documents Published on the Wikileaks Website, ¶ 42 (May 21, 2015).

[297] *See* Rome Statute, *supra* note 33, art. 69(7).

[298] RIBEIRO & PONTHOZ, *supra* note 90, at 85.

[299] DOSI teams should incorporate practical measures to avoid and mitigate such potential harms, like red-flagging procedures for damaging content. DUBBERLEY & IVENS, *supra* note 111, at 21–22; McDermott, Koenig, & Murray, *supra* note 2, at 100–05; FAN, *supra* note 291, at 6.

[300] In Sherman v. United States, 356 U.S. 369 (1958), Justice Frankfurter of the U.S. Supreme Court endorsed the view of the judicial function as formulating standards for the administration of justice when it conducts its "supervisory jurisdiction." Hock Lai, *supra* note 99, at 92. Famous examples include the establishment of the Miranda rules of due process in the United States. *See* Miranda v. Arizona, 384 U.S. 436 (1966).

> 2) the judges' mutual understandings and norm generation in relation to DOSI cannot be hermetically sealed from the broader community of other judges, experts and specialists generating and evaluating DOSI (referred to herein as the DOSI sub-community) – in fact these can together form an appropriate epistemic community;
>
> 3) expert witnesses, roundtables, workshops and specialist advisory bodies are necessary means to maintain a conduit to the DOSI sub-community, and judges should make regular and early use of such expertise;
>
> 4) in turn, members of the DOSI sub-community should be cognizant of means of making their materials amenable to incorporation in communicative judicial deliberations.

Increasing reliance on DOSI challenges the foundational precepts of the Rome Statute system. Hidden reliability risks are imported but can be overlooked due to the compelling nature of what may be contained in DOSI such as a video of the events in question.

Habermas's theory of communicative rationality can assist in remediating the procedural gap regarding the judicial treatment of digital open-source materials. It has explanatory power and provides a conceptual basis for the specialist community to be attributed an inherent role in the deliberative process, and ultimately the ICC's truth-seeking functions.[301] It can mitigate the lack of a detailed set of prescriptions regarding digital evidence and thereby maintain flexibility in the court's overall evidentiary procedures and efficacy of judicial deliberations concerning materials that are generated and partially assessed outside the courtroom. Applying Habermas's theory to judicial deliberations also complements existing specialist-oriented guidelines from civil society for digital evidence, which typically contain no detailed analysis of the procedures governing the submission of digital evidence during litigation and its treatment by the judiciary in their deliberations.[302]

Because of its inherent flexibility and content neutrality, Habermas's approach provides a viable pathway for future challenges concerning DOSI. Instead of factfinders abdicating their role and awaiting amendments to the rules to add more detail, this approach allows them to understand that deliberating can be a legitimate and legitimizing approach to adapting to novel situations, even in the absence of specific rules. This is particularly important for dynamic areas, where the substrate changes

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[301] Hock Lai, *supra* note 99, at 90 (citing R v Nikolovski, [1996] 3 S.C.R. 1197 (Can.)) ("The ultimate aim of any trial . . . must be to seek and to ascertain the truth."); *see also* Tehan v. Shott, 382 U.S. 406, 416 (1966) ("The basic purpose of a trial is the determination of truth.").

[302] *See, e.g.*, BERKELEY PROTOCOL, *supra* note 10, INTERPOL GLOBAL COMPLEX FOR INNOVATION, 2019 GLOBAL GUIDELINES FOR DIGITAL FORENSICS LABORATORIES 53 (2019), http://www.interpol.int/content/download/13501/file/INTERPOL_DFL_GlobalGuidelinesDigitalForensicsLaboratory.pdf; AM. ASS'N FOR ADVANCEMENT SCI., GEOSPATIAL EVIDENCE IN INTERNATIONAL HUMAN RIGHTS LITIGATION: TECHNICAL AND LEGAL CONSIDERATIONS 32 (2018), http://www.aaas.org/sites/default/files/s3fs-public/reports/Geospatial%2520Evidence%2520in%2520International%2520Human%2520Rights%2520Litigation.pdf.

frequently. In this respect, Habermas's approach eschews the need for a static set of detailed prescriptions in favor of a framework based on necessary but flexible foundational principles.

The role of DOSI is not to supplant the role of judges in determining the veracity of submitted evidence or, more importantly, the accountability of the accused for their alleged crimes. As Habermas notes, "no science will relieve common sense, even if scientifically informed, of the task of forming a judgment."[303] He explains that science cannot do away with the dualism between justification and description, in other words between the "ought" and the "is."[304] DOSI can augment the content on which judges make their determinations, but cannot replace the judges' role of deciding on the intentionality and normativity of human conduct.[305]

As noted, adapting to the use of DOSI in international trials can be viewed as the product of communicative action (through both discussion and norm-generation) among judges, which will benefit from the deeper involvement of the epistemic community.[306] In turn, courts themselves are designed to play an epistemic role; particularly through criminal trials.[307] The Habermassian emphasis on connecting with the epistemic community is particularly applicable to judicial determinations of the authenticity and weight of DOSI.[308] The legitimacy of the judges' weighing of the evidence will, in part, depend on how it is received by the community of specialists and interested parties who gather and analyze DOSI on a regular basis.[309] By superimposing Habermas's approach on judicial deliberations in this manner, the epistemic community can be seen as contributing to, and holding the judiciary to account for, its findings, which is partial analogous to the general public's role in relation to the ruling structures in a State.[310] Analogously, Habermas notes the importance of "open court hearings" for the formation of public opinion to hold rulers to account.[311]

At the systemic level, maintaining an open conduit to the DOSI sub-community would displace Luhmann's critique of Habermas's approach on the basis that law is an "autopoietic system," closed to justificatory

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[303] JÜRGEN HABERMAS, THE FUTURE OF HUMAN NATURE 108 (Polity Press trans., Blackwell Publishing 2003).
[304] *Id.* at 107.
[305] *Id.* at 106–07.
[306] *Cf.* Davis, *supra* note 9, at 733.
[307] Hock Lai, *supra* note 99, at 88 ("[T]he court does play a useful epistemic role; introducing a neutral and independent party to vet the evidence, so to speak, may go some way to counteract the well-known problem of police 'tunnel vision' that distorts the evidence-gathering process.").
[308] HEINSCH ET AL., *supra* note 24, at 41–42.
[309] *Cf.* HABERMAS BFN, *supra* note 1, at 409 ("A legal order is legitimate to the extent that is secures the equally fundamental private and civic autonomy of its citizens; but at the same time, it owes its legitimacy to the forms of communication which are essential for this autonomy to express and preserve itself.").
[310] *See* Jürgen Habermas, Sara Lennox, & Frank Lennox, *The Public Sphere: An Encyclopedia Article*, 3 NEW GERMAN CRITIQUE 49 (1974).
[311] *Id.* at 50.

discourse.[312] As Stahn notes, "once we are in a field or institution, we are at risk of becoming entrapped in a micro-cosmos, where we lose sight of the broader picture."[313] At risk of creating a closed community despite addressing common threats, "it is necessary to break silos between institutions, working cultures and operating modes."[314] A more inclusive approach to the assessment of DOSI evidence will also help to stem the perception of law constituting a "one-way projection of authority."[315] Providing reasoning for factual and legal determinations assists in the public acceptance of the outcomes reached on the basis thereof.

International litigation procedure has been influenced by common law traditions in several significant respects, including orality and witnesses sworn in to vow to the authenticity and reliability of evidence. However, due to its collaborative nature, DOSI fits awkwardly into this procedural tradition. It is less amenable to single experts being presented to explain all aspects of its collection, as they may have only been involved in part of the collecting and analyzing of the digital materials, and their expertise may not cover all issues raised concerning the verification of the evidence. The democratizing trend that has opened access to DOSI to collaborative research has also made it less likely that one single person will be a sufficient repository of knowledge to testify about the collection of a significant body of evidence.

The rules of international institutions, such as the ICC, have considerable flexibility built in, despite their common law roots. However, the practice and jurisprudence has been generated according to the paradigm of witness-centered proceedings. Shifting to a dynamic and open procedure for the introduction of evidence will require a relaxation of established jurisprudence in several respects. At the same time, it will be important to maintain adjudicate coherence and to avoid relaxing any approaches in a way that compromises fair trial rights, human rights like privacy and freedom from torture, and the avoidance of inhumane and degrading treatment more generally.[316] Ensuring a common understanding among the judges and the broader epistemic community will alert all participants to the potential risks inherent in relying on digital materials and engender more thorough verification processes and controls to avoid harms that such materials may entail.

Critical factors, such as statements made on social media platforms by alleged perpetrators regarding their intent, will be of central importance to the outcome of cases. But there are risks in relying on such materials,

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[312] Niklas Luhmann, *Operational Closure and Structural Coupling: The Differentiation of the Legal System*, 13 CARDOZO L. REV. 1419, 1420 (1992); *see also* Deflem, *supra* note 64, at 279. *See generally* NIKLAS LUHMANN, A SOCIOLOGICAL THEORY OF LAW (1985).

[313] Stahn, *supra* note 63, at 1 (citing Thomas Skouteris, *The New Tribunalism: Strategies of (De)Legitimation in the Era of International Adjudication*, 17 FINNISH Y.B. INT'L L. 307 (2006)) (warning of a risk of a form of tribalism that could be termed "tribunalism").

[314] Stahn, *supra* note 63, at 1.

[315] BRUNNÉE & TOOPE, *supra* note 40, at 20 (citing FULLER, *supra* note 55, at 221).

[316] For a description of the concept of adjudicative coherence, see GILLETT, supra note 130, at 49-52.

arising from so-called deep fakes,[317] misinterpretation, de-contextualizing, and a lack of awareness of the technical factors that are significant to the authenticity of a piece of digital evidence. It is precisely when DOSI is at its most probative that its non-conformity to traditional procedural protections is likely to provoke challenges. Establishing a coherent approach to the adjudication and norm development regarding DOSI evidence is imperative to avoid factfinding without rules.

Whereas the judiciary may make accommodations for the incorporation of DOSI standards and technical knowledge into their work, specialist groups forming the DOSI sub-community should be cognizant of the demands of judicial processes and make accommodations where possible to facilitate the use of their work in judicial deliberations. Such accommodation would not so much signal the juridification of the DOSI sub-community, as it would constitute a melding of the best technical practices of verification with the legal procedures governing the use of digital materials in forensic determinations. [318] Habermas's emphasis on forming an epistemic community in which a broad circle of relevant actors can play a role in the communicative process of deliberation is particularly apposite to the ICC's growing reliance on digital open-source material.[319] With digital evidence constituting a powerful potential forensic tool, the judiciary and the wider epistemic community will benefit from a deepening engagement and exchange of information and practices, with a view towards enhancing the ICC's truth-seeking function concerning atrocities against vulnerable communities around the world.

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[317] HEINSCH ET AL., *supra* note 24, at 32 ("[D]igital evidence can be easily manipulated.").

[318] "Where social and economic activities come increasingly to be governed by legal rules at the expense of the values and principles that develop within those social and economic spheres themselves…" *Juridification*, OXFORD REFERENCE, http://www.oxfordreference.com/display/10.1093/oi/authority.20110803100027349 (last visited Apr. 5, 2023).

[319] *See* HABERMAS BFN, *supra* note 1, at 230.