Arbitral Analytics:

How Moneyball Based Litigation/Judicial Analytics Can Be Used to Predict Arbitration Claims and Outcomes

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To begin, this paper will cover the three main legal research databases, and after reviewing their analytics, the lesser known and more novel analytics will be discussed in greater detail since they have not been integrated into any current analytics database. First, the main databases can filter decisions by claim type (e.g. contracts, patents, etc.).[23] Second, you can further filter the results to show dispositive motions, discovery issues, orders, or other miscellaneous materials; you can then review the percentages of granted, denied, or partial status for each type of motion.[24] Third, you can further refine the most cited cases within the claim type or the dispositive motions, discovery issues, or orders.[25] Fourth, you can view all this data based upon a timeline, keyword, and the other courts potentially involved with the case or related cases.[26] Fifth, Bloomberg Law and Westlaw give more detail than Lexis Nexis by providing: the average filing-to-decision timeline and outliers the judge may have, case experience, full docket access with detailed analysis of assertions within each document, searchable filings, historical

[22] *See, e.g.*, Metsker, Trofimov, Petrov, & Butakov, *supra* note 20.

[23] LEXIS, *supra* note 5; WESTLAW, *supra* note 5; BLOOMBERG, *supra* note 5.

[24] *Id.*

[25] *Id.*

[26] *Id.*

analysis of parties and attorneys before the judge, expert witness challenges, appeal rates of judicial orders, and a Bloomberg Law exclusive news feed on that particular judge.[27]

Turning to published papers, Daniel Chen by S.T.L.A. Mulders have publications with significant detail and analysis as well as more data points than most other papers.[28]

Mr. Chen covers a broad array of data points for U.S. federal court cases (circuit and district), the U.S. Supreme Court, U.S. asylum cases, the New Orleans district attorney's office, and French courts: (1) judicial influences such as priming, deontological, economics, mood, interpellation, masculinity, mimicry, visual cues, gambler's fallacy, snap judgements, time, implicit egoism, hierarchy, and judge versus prosecutor;[29] (2) a change in dissenting opinions by judges before a U.S. presidential election;[30] (3) a change in the precedent valence with the party appointing the judge;[31] (4) rounding down of sentencing with the birthday effect;[32] (5) the correlation of the local football team's winning or losing to the judge's decision;[33] (6) a third-party review of the masculinity of an attorney's voice before the U.S. Supreme Court with

[27] *Id.*

[28] Chen, *supra* note 9; Mulders, *supra* note 11.

[29] Chen, *supra* note 9, at 17–20.

[30] *Id.* at 18–21 (discussing how dissenting opinions systematically increase prior to an impending U.S. presidential election followed by a stark drop after the election cycle has completed).

[31] *Id.* at 19–22. The valence precedent used in cases can vary because of elections, and the regression table is further proof of the effect's veracity. *Id.*

[32] *Id.* at 22, 24–25. The birthday effect only occurs on the defendant's birthday and no other surrounding day, and in French courts, the effect requires the defendant be present for the effect to appear. *Id.*

[33] *Id.* at 22–23. The football correlation disappears when a lawyer is present during an asylum hearing even with a win by the football team. *Id.* However, when the lawyer is not present, the football win increases asylum grants by 3.7%. *Id.*

correlations to judicial decisions;[34] (7) a correlation of implicit egoism when the first initial of the defendant's name matches the judge's first name initial;[35] and (8) predicting judicial outcomes based upon the judge's biographies.[36]

Mulders focused on analytics reflected in Dutch court cases, but they likely exist at the same rates and frequencies in U.S. courts.[37] However, without further research and proof, these data points should be guidelines instead of dispositive requirements when deciding between attorneys.

Turning to Mr. Mulder's results, he analyzed 1,269 cases out of the roughly 15,000 cases collected by his crawler software.[38] These cases provide some remarkably interesting results which align, to a degree, with those of Mr. Chen's paper discussed previously: (1) attorneys with less than five years' experience out-performed attorneys with decades of experience;[39] (2)

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[34] *Id.* at 23–29. The data shows a direct correlation between a lawyer's masculine voice and a judge's unfavorable decision as the masculinity rises. *Id.* Also, the masculinity is tied to the industry the lawyer represents with traditionally masculine industries such as mining, steel mills, oil and gas, manufacturing, lumber mills, heavy industries, etc. *Id.*

[35] *Id.* at 25–26. There is an increase of 8% longer sentences when the first initial, second letter of the name, full name match between the judge and the defendant, or the defendant's first letter of the name is rare (e.g., x, z, etc.). *Id.* Racially discriminatory labels such as "negro" amplify this effect with even more severe sentences. *Id.*

[36] *Id.* at 36–40. A judge moving from the left to the right on the U.S. political spectrum can have an 8% to 32% change in politically motivated ruling based upon the precedent and phrase usage; economics usage; and vote polarization with electoral dissent. *Id.*

[37] Mulders, *supra* note 11, at 1–45.

[38] *Id.* at 30.

[39] *Id.* at 16 (citing Shozo Ota, *Quality of Lawyers in Civil Litigation in the Era of Drastic Changes in Legal Education and Lawyer Population in Japan*, XVIII ISA WORLD CONG, SOCIO. (2014)); Ronald F. Wright & Ralph A. Peeples, *Criminal Defense Lawyer Moneyball: A Demonstration Project*, 70 WASH. & LEE L. REV. 1221 (2013). Younger attorneys tend to work harder, have better education, and suffer from "survivor bias" where only the winners survive the culling of young associates at law firms. Mulders, *supra* note 11, at 16.

membership in legal profession specialization boards increases the win rate;[40] (3) a potential win difference based upon gender;[41] and (4) a home field advantage.[42]

Both papers indicate analytics are here to stay, and every attorney should be checking their own analytics for strengths and weaknesses.

[40] Mulders, *supra* note 11, at 19–21. However useful this might be, there are scarcely any studies or research on this subject, so it should be taken with a grain of salt since it cannot guarantee a win or even receiving better cases. *Id.*

[41] *Id.* at 20. In Dutch courts, female plaintiffs' attorneys have an 8% win rate advantage over males in the same position, and this advantage is amplified when the client is also female. *Id.* at 37–38. The author suggests the reason females win more often is the leniency of male judges, different risk-taking strategies, and a higher drop-out rate for female attorneys—survival of the fittest—altering the statistical outcome. *Id.*

[42] *Id.* at 20–21. Generally, attorneys from the same district will enjoy an advantage since they are regulars within their local district courts, but this area is under studied and ripe for further research.

[43] Nancy Rapoport, *Client-Focused Management of Expectations for Legal Fees in Large Chapter 11 Cases*, 28 AM. BANKR. INST. L. REV. 39, 85–88 n.166 (2020) (citing Michael Rappa, Theodore Eisenberg, Joseph W. Doherty, Christopher Zorn, Elizabeth H. Johnson, Silvia H. Silverstein, Larry Bridgesmith, Owen Byrd, John Boswell, John W. O'Tuel, & Rob Tiller, *The Evolving Role of the Corporate Counsel: How Information Technology Is Reinventing Legal Practice*, 36 CAMPBELL L. REV. 383, 443 (2013)). For example, you may want certain attorneys for only dispositive motions and others for discovery disputes, but building a legal team is likely a key part of winning future disputes before particular judges or arbitrators.

[44] Metsker, Trofimov, Petrov, & Nikolay, *supra* note 20, at 267–70 (analyzing litigation outcomes based upon the implementation of Russian fire code statutory changes under Russian civil law).

Furthermore, governments worldwide are beginning to take notice of litigation analytics.[59] One pertinent example is Legal-Net for the Israeli Judicial Branch.[60] Legal-Net created significant productivity efficiencies throughout the entire judicial system, but more importantly, it allowed for extreme levels of transparency on every judge using the system.[61] Additionally, this transparency allowed for closer monitoring by presidents of courts, the Chief Justice, Administration of the Court, and the Ministry of Justice.[62] Legal-Net will automatically read judicial orders, timelines for rulings, unusual writing patterns, and many more analytics that can be used by monitoring groups for judicial behavior that does not match their peers.[63] Nonetheless, this provides ample opportunity for malevolent parties to burn judges instead of using it for benevolent purposes.[64] For example, it might be used by governments to ensure judges do not vary their opinions from the status quo or to prevent political change by citizens since judges know their work is being watched very carefully. Thus, the system wields never-before-seen and unprecedented power over the judicial branch.[65]

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[59] *See, e.g.*, Amnon Reichman, Yair Sagy, & Shlomi Balaban, *From a Panacea to a Panopticon: The Use and Misuse of Technology in the Regulation of Judges*, 71 HASTINGS L.J. 589, 591 (2020).

[60] *Id.* Legal-Net was designed to be a cloud-based judicial administrative software for intaking, filing, reviewing, and generally managing all court cases for the Magistrate and District courts of Israel. *Id.* at 598.

[61] *Id.* at 594–95.

[62] *Id.*

[63] *Id.* at 594–95, 625–27 (describing the judge's standard flow-chart process for cases which, when normal tolerances are violated, alerts the relevant oversight parties and the litigants to ensure the justice system prevents deviation from judicial standards).

[64] *Id.* at 594–95.

[65] *Id.* at 592.

In contrast, the United States has an extremely fragmented legal administrative software system that can vary from county to county within the same state.[66] Thus, a unified approach would likely bring similar efficiencies enjoyed by the Israeli Judicial Branch.

In summary, the background of litigation/judicial analytics stretches back over 100 years, and it is only the method of collecting and analyzing the data that has evolved.

[66] Natalie Gomez-Velez, *Internet Access to Court Records – Balancing Public Access and Privacy*, 51 LOY. L. REV. 365, 367–69 n.3 (2005).

[67] JUD. ARB. & MEDIATION SERVS., COMPREHENSIVE ARBITRATION RULES AND PROCEDURES RULE 15 (2014) [hereinafter JAMS Rules], https://www.jamsadr.com/rules-comprehensive-arbitration/; AM. ARB. ASS'N, COMMERCIAL ARBITRATION RULES AND MEDIATION PROCEDURES RULE 12 (2013) [hereinafter AAA Rules], https://www.adr.org/sites/default/files/Commercial%20Rules.pdf.

D. THE INTERNATIONAL REACTION TO LITIGATION ANALYTICS

In addition to the many extraction issues any analytics must overcome, analytics are beginning to catch the attention of international bar associations and governments who fear it might be used for nefarious purposes.[85]

The first and best example is the French Republic's relatively new law banning judicial analytics based upon court decisions.[86] Once the Justice Reform Act was adopted, it required anonymity to any party named in the case; the banning of any analytics for French judges or court clerks; and punishment up to five years in prison if a party is caught applying any kind of analytics to an identifiable judge's court decisions.[87] Furthermore, this law broadly covers academic research, legal technology corporations, law firms, and the general public for any kind of publicly available court information.[88] However, the Justice Reform Act does not ban

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[84] Jenkins, *supra* note 83.

[85] Grégoire Triet & Gide Loyrette Nouel, *Legal Tech, in View of the French Judicial "Analytics Ban."*, FICPI 18th F. 1, 1–16 (Oct. 11, 2019), https://ficpi.org/_/uploads/files/IP_PM_Session_7.3_-_Triet_.pdf.

[86] Loi 2019–222 du 23 mars 2019 de programmation 2018–2022 et de réforme pour la justice [Law 2019–222 of March 23, 2019 on the programming and reform for justice], LÉGIFRANCE: JOURNAL OFFICIEL DE LA RÉPUBLIQUE FRANÇAISE [J.O.] [OFFICIAL GAZETTE OF FRANCE], Mar. 24, 2019, p. 15–16 [hereinafter Justice Reform Act], https://www.legifrance.gouv.fr/eli/loi/2019/3/23/JUST1806695L/jo/article_33; McGill & Salyzyn, *supra* note 20, at 1 (citing the Justice Reform Act); Jason Tashea, *France Bans Publishing of Judicial Analytics and Prompts Criminal Penalty*, A.B.A. J. (June 7, 2019, 12:51 PM CDT), https://www.abajournal.com/news/article/france-bans-and-creates-criminal-penalty-for-judicial-analytics; *see also* Stewart & Stuhmcke, *supra* note 7, at 82.

[87] McGill & Salyzyn, *supra* note 20, at 1–2 (citing *France Bans Judge Analytics, 5 Years in Prison for Rule Breakers*, ARTIFICIAL LAW. (June 4, 2019), https://www.artificiallawyer.com/2019/06/04/france-bans-judge-analytics-5-years-in-prison-for-rule-breakers/); Triet & Nouel, *supra* note 85.

[88] McGill & Salyzyn, *supra* note 20, at 1–2.

litigation analytics when only the judicial entity is analyzed; thus, analytics is permitted when individual judges are not included.[89] The reasoning behind the Justice Reform Act was to limit judicial profiling based upon "questionable correlations," safety of the judicial branch, partiality allegations which may cause serious litigation issues, and to prevent forum shopping from becoming a common legal strategy.[90] In conclusion, the French government was concerned analytics could be used for nefarious purposes by the public, so it decided a blanket ban would be the ideal way to address the issue.[91]

Second, arbitral and litigation analytics are currently used by governments to ensure their interests are protected when international arbitration panels, arbitrations conducted by the United Nations, World Trade Organization (WTO) disputes, and treaties between countries which might include unique arbitration provisions similar to the New York Convention of 1958 are involved.[92] In fact, stylometric analysis of WTO arbitration decisions has uncovered members of the Secretariat, instead of arbitrators, contribute significantly to the drafting of arbitration decisions.[93] In one pertinent case cited by Damien Charlotin, Russia likely became the first

[89] Triet & Nouel, *supra* note 85, at 11–13 (discussing the judicial analytics ban, allowed analytics, and arguments for or against the ban on analytics).

[90] *Id.* at 11–13.

[91] *Id.* at 1–16; McGill & Salyzyn, *supra* note 20, at 1–2; Tashea, *supra* note 86.

[92] Alschner, *supra* note 4, at 217–31; Deeks, *supra* note 4, at 583–84, 594–95, 626 (discussing the development of data analytics; arbitral analytics; and treaty analytics in the European Union; Russia; China; Japan; the U.S.; and other countries; plus, its application to government arbitrations and treaty negotiations); Jeffery Commission & Giulia Previti, *The Increasing Use of Data Analytics in International Arbitration*, N.Y. L.J. (Nov. 20, 2020, 2:30 PM EST), https://www.law.com/newyorklawjournal/2020/11/20/the-increasing-use-of-data-analytics-in-international-arbitration/?slreturn=20210009011321; *Convention on the Recognition and Enforcement of Foreign Arbitral Awards*, U.N. CONF. INT'L COM. ARB. 1, 1–7 (July 6, 1958), http://www.newyorkconvention.org/11165/web/files/original/1/5/15432.pdf.

[93] Deeks, *supra* note 4, at 625–33 nn.273–74 (citing DAMIEN CHARLOTIN, IDENTIFYING THE VOICES OF UNSEEN ACTORS IN INVESTOR-STATE DISPUTE SETTLEMENT 392–426 (Freya Baetens eds., 2019)

country to use analytics to aid in setting-aside an arbitration award based upon billable hours, but stylometric analysis would have likely found the same result or better after further research found the arbitrator's award was mostly written by the Secretariat instead of the full arbitration panel.[94]

Finally, international legal scholars are exploring the ethical issues presented by litigation, judicial, and arbitral analytics.[95] In Australia, Pamela Steward and Anita Stuhmcke provide an excellent starting point for ethical guidelines on judicial analytics compared to the outright ban by the French government.[96] Steward and Stuhmcke suggest the courts should regulate and provide ethical guidelines similar to those found in Australian medical services such as the National Statement on Ethical Conduct in Human Research to aid in preserving the rule of law and in preventing "low correlation" analytics from interfering with the judicial or arbitral decision making process.[97] McGill and Salyzyn of Canada also contend that analytics aids in

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[hereinafter CHARLOTIN INVESTOR DISPUTE SETTLEMENT]); Damien Charlotin, *Who Writes WTO Panel and AB Reports? A Tentative Stylometric Analysis*, Medium (May 1, 2018) [hereinafter Charlotin Stylometric Analysis], https://medium.com/@damien.charlotin/who-writes-wto-panel-and-ab-reports-a-tentative-stylometric-analysis-565c18f0491d).

[94] Yukos Universal Ltd. (Isle of Man) v. The Russian Fed'n, PCA Case Repository 2005-04/AA227 (2020), https://www.italaw.com/cases/1175; Deeks, *supra* note 4, at 625–33 nn.273–74 (citing Charlotin Stylometric Analysis, *supra* note 93); RYAN WHALEN, COMPUTATIONAL LEGAL STUDIES: THE PROMISE AND CHALLENGE OF DATA-DRIVEN RESEARCH 57–60 (Ryan Whalen eds., 2020).

[95] Stewart & Stuhmcke, *supra* note 7, at 82–87; McGill & Salyzyn, *supra* note 20, at 2–3, 22–27.

[96] Stewart & Stuhmcke, *supra* note 7, at 86–87.

[97] *Id.* at 86 n.30 (citing NAT'L HEALTH AND MED. RSCH. COUNCIL, NATIONAL STATEMENT ON ETHICAL CONDUCT IN HUMAN RESEARCH 1, 9–99 (2018) [hereinafter NHMRC ETHICS]), https://www.nhmrc.gov.au/about-us/publications/national-statement-ethical-conduct-human-research-2007-updated-2018#block-views-block-file-attachments-content-block-1; AUSTL. GOV'T, DEP'T OF INDUS., SCI., ENERGY, AND RES., *AI Ethics Principles*, https://www.industry.gov.au/data-and-publications/building-australias-artificial-intelligence-capability/ai-ethics-framework/ai-ethics-principles (last visited Sept. 6, 2021)). More to the point, the ethical guidelines found in sections two through five grant researched parties the right to certain discoveries found in the research (e.g. Judge Smith analytics show a bias towards a disabled plaintiff). NHMRC ETHICS, *supra*. This will help a judge know when

establishing the rule of law, but advocate in addition for ethical guardrails and regulations to protect against publishing low correlation or poor quality analytics to the general public to review and apply to the judicial branch.[98] However, they are unsure of which regulatory body should pass laws or establish rules for the analytics industry to review and in turn, recommend a non-profit public legal organization that should "develop high quality, free judicial analytics tools for public use."[99]

In summary, international lawyers and governments around the world are actively using analytics to better determine which path they should take with their own society and how to approach international litigation, arbitration, or treaty negotiation.[100] However, this field is still in its infancy, so any solid conclusions would be premature.[101]

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something is published on their rulings, and it will prevent poor or inaccurate data from contaminating their reputation since they could challenge the findings. *Id.* Furthermore, highly sensitive research on cases involving national security (e.g. defense contractor litigation) would be immensely helpful to the U.S., but this should only be shared with Congress. *Id.* Finally, if the research does show a serious issue with a judge, should parties be notified of the ramifications this research might have on their judge? *Id.* The numerous avenues for moral, ethical, and political issues associated with lit-jud-arb analytics are nearly endless, so this question deserves hundreds of papers just to explore these issues.

[98] McGill & Salyzyn, *supra* note 20, at 22–24. Perhaps the Israeli Legal-Net company would be a great place for CanLII or another non-profit Canadian organization to begin their search for publicly available judicial analytics reporting tool. Reichman, Sagy, & Balaban, *supra* note 59, at 591; CANLII, *What's CanLII*, https://www.canlii.org/en/info/about.html (last visited Sept. 6, 2021).

[99] McGill & Salyzyn, *supra* note 20, at 24.

[100] Alschner, *supra* note 4, at 217–31; Deeks, *supra* note 4, at 583–84, 594–95, 625–33 nn.273–74; McGill & Salyzyn, *supra* note 20, at 2–3, 22–27; Reichman, Sagy, & Balaban, *supra* note 59, at 591; Stewart & Stuhmcke, *supra* note 7, at 82–87; Triet & Nouel, *supra* note 85, at 11–13; WHALEN, *supra* note 94.

[101] KNOWLEDGE@WHARTON, *The Next Legal Challenge: Getting Law Firms to Use Analytics*, UNIV. OF PA.: WHARTON (Nov. 22, 2019), https://knowledge.wharton.upenn.edu/article/getting-law-firms-to-use-analytics/.