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International Arbitration in the Digital World

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1 Prologue

International arbitration is one of the most popular forms of alternative dispute resolution mechanism when disputing parties fail to resolve the dispute on their own, and want a third party to suggest a resolution, and at the same time, limit the time as well as the expense of litigation over which they have absolutely no control. Arbitration crucially depends on the parties' agreement to resolve disputes through private adjudication by a single arbitrator or a tribunal of more than one, appointed in accordance with rules of a specific arbitration institution that the parties themselves have agreed to adopt, usually by including an arbitration clause in their contract. Another factor that favours international arbitration as an attractive dispute resolution mechanism is that like judgment in litigation, arbitration award is enforceable and cannot be challenged in a court of law, except on procedural grounds. Thus, some of the main advantages of arbitration are that it is like litigation in effect but unlike litigation, in that it is considered to be informal, expedient, economical, private, and confidential in nature, and at the same time, gives sufficient freedom to disputing parties in the way it is actually conducted. However, in actual practice over the years, it has encountered several challenges, including its large-scale colonisation by litigation practitioners, giving rise to hybrid (often contested) identities and discourses of *arbitigation* (litigation and arbitration) making it similar to litigation that it was intended to replace [1]. In more recent years, arbitration has been facing new challenges as a result of an increasingly compelling present-day digital environment in which it is

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practiced, and the accessibility of new technologies that have made online arbitration an attractive option.

Technology has become an integral part of our daily lives. It is constantly evolving and has a significant impact on the world [2]. While the use of new technologies provides many advantages, an unprecedented reliance on innovation-driven technologies also raises doubts and poses threats. It is worth noting that the interaction between technology and arbitration should not be seen as a question for the future, but rather as something that is happening right now. The constant development of new technologies is creating many new challenges. These challenges relate to how technology can be properly integrated to best meet the needs of arbitration. Therefore, such new technologies should provide tools to improve the process of conducting arbitral proceedings. It is worth adding that the international arbitration community has always been very attentive to ways of improving the efficiency of arbitration itself and thus its quality. Indeed, the various stakeholders in international arbitration are taking steps to balance the duration and cost of proceedings with the need to maintain the transparency and predictability of these factors [3].

2 Different Approaches to the Use of New Technologies in International Arbitration

Currently, there are three distinct ways in which international arbitration interacts with technology. According to the first, both arbitrators and parties make use of new technologies during the arbitral process. This includes the use of online and electronic tools to support the entire arbitral proceedings. Obviously, this leads to savings in both costs and time through communication based on e-mails and submissions made electronically through special dedicated online platforms. Procedural hearings have also moved into the digital world. As such, they have been held either by telephone or by videoconference. On the other hand, hearings of witnesses or hearings on the merits are conducted in the traditional way, mostly physically [3].

With regard to the second interaction, the development of technologies in arbitration is in full swing. For example, it is common to see the emergence of online dispute resolution (ODR) platforms to facilitate the dispute resolution process. They provide services in a simple, fast, flexible and also efficient way. However, it should be noted that there are some challenges associated with ODR, such as how to guarantee the basic principles of dispute resolution. Despite such concerns, ODR platforms are widely used for low-value transactions. In addition, ODR platforms also offer interesting services, including three stages of the process: negotiation, facilitated settlement and a third/final stage with an adjudication [3].

The final, third interaction between arbitration and technology relates to the use of artificial intelligence (AI) in arbitration. Data mining has become the new normal and has even entered the field of law. Indeed, AI may have an impact on international arbitration itself. This raises the question of whether, when drafting an arbitration clause, we would make a distinction between AI arbitration and human arbitration. It is worth adding, however, that technology should not be seen as a threat to arbitration [3].

In the case of international arbitration, such digital solutions could be useful in providing greater efficiency, accessibility, and productivity. This means that technology can provide some solutions, from the assessment to the remote hearings and to the decision. Indeed, it should be noted that dispute resolution mechanisms also require a certain level of legal analysis in order to provide a fully professional procedure. However, despite the many advantages, there are concerns about the use of technology in arbitration. These concerns mainly relate to confidentiality and data protection. Some scholars even stress the negative consequences of the use of artificial intelligence (AI) in arbitration [4].

3 The Present Issue

This special issue is an attempt to outline the current state of digitalisation in international arbitration and the emerging challenges as well as opportunities related to the use of new technologies in international arbitration. Indeed, in addition to the many benefits resulting from the rapid development and advancement of new technologies, many new legal challenges are emerging. This special issue therefore aims to address these challenges and offer some solutions. Digitalisation, although significantly developed in the course of the Covid-19 pandemic, is already seen as the dominant solution in future dispute resolution. The articles in this issue provide an overview of different approaches to digitalisation and the use of new technologies in international arbitration. Against this background, this issue seeks to address some of the most challenging issues arising from the conduct of arbitral proceedings in the digital world.

Chen Lei, Professor of Law, International Arbitrator and Fellow of the European Academy of Sciences and Arts, opens this special issue. In his article entitled "Will Virtual Hearings Remain in Post-pandemic International Arbitration?", he stresses that the Covid-19 pandemic could be seen as a catalyst for the introduction of virtual hearings in international arbitration. However, it should be noted that the promotion of the use of virtual hearings in international commercial dispute resolution has become more complicated, mainly due to concerns about cybersecurity issues and potential breaches of confidentiality. It remains to be seen whether virtual hearings will prevail in the post-Covid era. Indeed, the development and advancement of new technologies also pose new challenges and may even impede face-to-face connections. Chen Lei draws attention to the lack of research on the psychological impact of remote hearings on arbitrators, witnesses, and counsel. This analysis leads him to conclude that face-to-face hearings will continue to exist, especially in the case of more complex and high-value disputes, where there is a need for greater interaction and personal support. On the other hand, international arbitration functions as an adaptable and market-responsive dispute resolution mechanism. This means that the parties should be allowed to determine the most appropriate patterns for the conduct of the proceedings [5].

Magdalena Łągiewska in her paper entitled "New Technologies in International Arbitration: A Game-Changer in Dispute Resolution?" focuses on the development and rapid advancement of innovation-driven technologies in international dispute

resolution. On the one hand, these technologies offer cost-effective and time-efficient solutions through online case filing, e-evidence, and remote hearings. On the other hand, they may also raise new challenges, such as e-arbitration agreements, e-awards, cybersecurity, and data protection. In light of this, it prompts reflection on the potentially transformative impact of these technologies on the dispute resolution landscape. It also raises the question of whether these new technologies will revolutionise the field of dispute resolution. This analysis suggests that the emergence of new technologies should be seen as an opportunity to establish a lasting new standard for international arbitration [6].

In the next contribution, entitled "Advocacy for Online Proceedings: Features of the digital world and their role in shaping communication in remote international arbitration", Juan Pablo Gómez-Moreno points out that the outbreak of Covid-19 pandemic disrupted traditional face-to-face dispute resolution proceedings. As a result of the pandemic, there has been a rapid shift from traditional procedures to the use of digital technologies to conduct remote hearings in international arbitration. On the one hand, this shift has opened up new possibilities for improving procedures and efficiency. On the other hand, it has also raised concerns about the transparency and authenticity of virtual proceedings. This study examines the impact of digital technologies on legal semiotics and communication in international arbitration. It therefore examines the interactions between such innovations and persuasion. The research takes a practice-oriented approach by examining a practice that is widely used in international arbitration, namely remote hearings. It therefore focuses on cognitive processes such as memory and attention and their impact on the behaviour of counsel, arbitrators, and witnesses during remote hearings. The study highlights key issues, findings, barriers, and future avenues for research arising from the integration of such digital technologies in the field of international arbitration. It also considers how participants in virtual hearings are affected by the characteristics of the digital environment [7].

In their article titled "Assessing Credibility in Online Arbitration Hearings: Determining Facts and Justice by Zoom", João Ilhão Moreira and Zhang Liwen examine the impact of online hearings on fact-finding in disputes. The Covid-19 pandemic has led to the widespread adoption of online hearings in arbitral proceedings, prompting inquiries into their limitations. The authors analyse the potential drawbacks of online hearings in terms of assessing witness credibility. The text draws insights from cognitive psychology research on truthfulness determination and lie detection. The literature review indicates that discerning truthful statements from deceptive ones according to verbal and nonverbal cues is a challenging issue. It also suggests that considering cues like fidgeting, gaze aversion, vocal pitch, or body posture may not be significantly helpful in credibility assessment. In contrast, analysing the substance of testimony appears to be the most relevant approach. Therefore, research does not require face-to-face interaction with witnesses for fact-finding. João Ilhão Moreira and Zhang Liwen conclude that in-person hearings may persist in practice due to cultural norms related to hearing dynamics. They facilitate communication among parties, legal representatives, and the tribunal, which can be hindered by Zoom fatigue [8].

Daniel Brantes Ferreira and Elizaveta A. Gromova analyse the admissibility of leaked and hacked evidence in arbitration proceedings. With the increasing reliance on digital technologies in judicial and arbitration proceedings, parties are now using digital evidence as a new form of evidence. Therefore, it is necessary to establish protocols for adjudicators to admit and evaluate this novel form of evidence. This paper discusses digital evidence in the context of international arbitration proceedings, with a specific focus on the admissibility of hacked and leaked evidence in the second stage. A literature review confirms that there is a considerable body of research on evidence in arbitration, including discussions on electronic evidence within individual jurisdictions and specific types such as electronic signatures. However, most studies focus on arbitration rules and neglect admissibility issues. According to Daniel Brantes Ferreira and Elizaveta A. Gromova, there is a lack of systematic and comprehensive research on the comparative admissibility of hacked and leaked digital evidence in arbitration. Similarly, there are questions regarding the enforcement of awards that rely on illegally obtained digital evidence, which may potentially violate domestic public policy under the terms of the New York Convention (Art. V, 2, b). Therefore, this study proposes a framework for digital evidence in international arbitration based on criteria for admissibility and relevance. The paper offers guidelines for designing arbitration procedures to evaluate hacked and leaked evidence. It compares international arbitration rules with national procedural laws through comparative legal analysis. Using the legal modelling methodology, the paper outlines model guidelines for arbitral tribunals to assess the admissibility and relevance of digital evidence, including hacked and leaked evidence. The paper concludes by stating that the admissibility of such evidence depends on the arbitrator's discretion. Therefore, it emphasizes the importance of thorough analysis of evidence and well-reasoned awards [9].

Wang Jiawen examines "Joinder Mechanism in International Commercial Arbitration: A Trend in the Digital Age?". The remarkable development and use of technology in recent years has spurred the emergence of new methods and formats in the field of international commercial dispute resolution. The post-Covid era has even led to an increased demand for dispute resolution methods that are efficient, adaptable, and cost-effective. As a result, online arbitration has become increasingly popular. In addition, the process of globalisation has made international commercial disputes increasingly complicated by the involvement of third parties. Interestingly, according to arbitration institutions worldwide, approximately 40% of arbitration cases now involve more than two parties. On the one hand, the growing prevalence of multi-party arbitrations has become more significant. On the other hand, both digitalisation and globalisation have facilitated multi-party projects. In addition, there are many new risks that arise in multi-party disputes. Although arbitration itself is widely recognised as being business-friendly, its consensual nature does not easily lend itself to multi-party disputes. Similarly, the efficiencies brought about by digitalisation and the consequent increased accessibility to resolution of multi-party commercial disputes still leave a gap in the case of the fundamental requirement of party consent in arbitration. This study examines the joinder mechanism in international commercial arbitration and its significance in the context of digitalisation by examining its inter-

action with traditional arbitration theories and principles, with focus on the rules of leading arbitral institutions such as the ICC, LCIA, HKIAC and SCAI [10].

The last paper by Milcar Jeff Dorce is in French and is entitled "Les tiers financeurs comme nouveaux acteurs du champ social arbitral: Reflexions à propos des implications ethiques". This article discusses the emergence of a new type of entity within social arbitration, widely known as third-party funders. It focuses in particular on the potential ethical implications for investment arbitration. Third-party financiers are defined as specialised service providers who finance proceedings and have a vested interest in the outcome and enforcement of the awards they support. The growing presence of third-party funding in international arbitration raises ethical concerns that are largely unregulated by the legal frameworks of most arbitral institutions. As there are many interactions between third-party funders and other stakeholders in international arbitration, this article aims to highlight the ethical implications that third-party funding may have on both the attorney-client relationship and the independence and impartiality of arbitrators. The article concludes that the introduction of third-party funding into disputes may disrupt the arbitral process, in particular by creating potential conflicts of interest for arbitrators. It may therefore have a significant impact on the final award and exacerbate concerns about the legitimacy of the arbitration process. It is therefore necessary to analyse the ethical issues and provide insights into the need for precise regulation of this emerging phenomenon in contemporary arbitration practice. It is argued that, in order to maintain ethical standards, disclosure of the identity of third-party funders and funding arrangements should be encouraged under certain circumstances. Indeed, this is essential to maintain the integrity of the proceedings and the impartiality and independence of the arbitrators [11].

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