Introduction

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Arbitration Unplugged?

Technological innovations have transformed the way in which people and businesses interact and have permeated almost every aspect of our lives. Count the number of screens that surround you and you will get only a slight idea of how 'tech-enabled' our professional and private lives have become. We have certainly not reached the technological finishing line (and probably never will). The future seems to be that of more and increasingly powerful information technology (IT) applications.

It is therefore surprising that arbitration has, in comparison, undergone only modest changes. In promoting arbitration, the mantra is that arbitration is an efficient and fair procedure that is freely tailored to specific requirements of the dispute and the needs of the parties involved, and this much more so than could be expected of a regular court proceeding. One of the main characteristics of arbitration is that it is not bound by a preconceived set of rules; eliminating unnecessary formalities saves on time and costs. This is exactly where technology can play a much greater role than it has taken up so far. The question is only how fast arbitration will adapt: Are we waiting for the generation of digital natives to modernize arbitration? Or is the generation of digital immigrants, which currently still make up the large majority of the arbitration community, ready to reinvent themselves and break free from some of the preconceived notions of what an adjudicative process should be?

Tales of Innovation and Arbitration

This book aims to explore how arbitration is catching up with the rapid changes in our electronically connected world. We are immensely grateful to our authors who undertook to establish how technology could be used to optimize efficiency and identify the most significant challenges that arbitration practitioners will encounter along the way. To that end,

they report on recent developments, predict future trends and analyze their impact from a practical, a legal and a technical point of view.

Our authors will not stop at merely improving the 'efficiency' of the process. They also ponder how technology can be used in international (commercial) arbitration without jeopardizing the legitimacy and quality of the process and the parties' right of due process. They also consider potential threats to the confidentiality and security of the information stored or communicated. Finally, our authors even examine whether and in what circumstances a technology-assisted or even technology-based arbitration could outdo the traditional human-driven equivalent, thereby abolishing the system of adjudication as we know it.

Why Read This Book?

There are three main indications, from both an academic and a practical point of view, that the work of our authors is of utmost relevance for all generations of lawyers, the digital natives and the digital immigrants.

Firstly, there is a factual reality that simply cannot be ignored and that results from the immensely successful application of new information and communication technologies (ICTs). This trend has dramatically altered the ways in which people or businesses interact. Digital technology has created ubiquitous connectivity and increased the potential for business opportunities on a global scale. It has boosted virtual mobility and has reduced the practical constraints of geographic distance. One could even say that it has made national borders meaningless, though at the same time, resulting in an increasingly complex legal reality.

As the number of cross-border transactions has multiplied, this has given rise to a multitude of cross-border disputes. For a long time, this was where the 'technology push' encountered its limits: while interpersonal dealings started to occur increasingly 'online', resolving potential disputes often remained an 'offline' or face-to-face endeavour. Technology has thus for a long time been underutilized for the actual conduct of dispute resolution proceedings. This has, however, effectively changed over the last ten years, as the use of ICTs in the service of dispute resolution has become unavoidable. Businesses rightly expect that the dispute resolution mechanism which they select lives up to the standards of virtual mobility and connectivity they are used to in their day-to-day dealings.

Secondly, many legislative proposals and working groups' activities currently focus on the use of new ICTs in dispute resolution. The work of the Hague Conference on Private International Law in the context of evidence taken abroad, for instance, reveals that there is a lively debate

on the use of information technology and a revision of the Evidence Convention to allow, for instance, video-conferencing in state court proceedings. The recent EU instruments resulting in the Online Dispute Resolution (ODR) Regulation are an illustration of another equally important trend, namely to refer (consumer) disputes to online dispute resolution. In this context, there is also a concern that the European legislature shows for a party's right to 'human decision-making', for instance in the context of general data protection, where one has the right to object to automated decision-making and where automated decision-making is allowed under certain circumstances. According to Article 22(3) of the General Data Protection Regulation, a party has 'at least the right to obtain human intervention on the part of the controller, to express his or her point of view and to contest the decision'. Furthermore, there is the initiative of the UNCITRAL Working Group III on Online Dispute Resolution.[1]

Similarly, several arbitration institutions have made significant efforts to modernize arbitration proceedings and to bring them up to speed with technological innovation. An example is the Netherlands Arbitration Institute, which allows and effectively promotes an e-arbitration procedure. This is in line with a trend that is now firmly anchored in the Netherlands Arbitration Law, which explicitly allows the electronic conduct of arbitration proceedings (Article 1072(b) DCCP). We also notice a revival of the ICC Commission on Arbitration and ADR's Task Force on Information Technology in Arbitration, which has presented an enlightening report on Information Technology in arbitration in light of current developments.

Thirdly, as we observe that practitioners increasingly rely (or have to rely) on technology and the Internet to optimize the efficiency of the arbitration procedure, various actors in the arbitration field have echoed the sentiment that scientific research into this development is urgently needed. That is why in October 2015 the Transnational Law Center (University of Ghent) and the Institute for Civil Procedure and Insolvency Law (University of Graz), in cooperation with the Belgian Centre for Arbitration and Mediation (CEPANI) and the Vienna International Arbitration Centre (VIAC), set up a survey on the use of technology in the context of arbitration ('the Survey'). The results of the Survey confirmed that there is indeed very strong interest in technology as a tool to optimize the arbitration procedure. However, the Survey also confirmed the hypothesis that, although most lawyers are technophiles, their use of

[1] See www.uncitral.org/uncitral/commission/working_groups/3Online_Dispute_Resolution.html.

technology is often limited to a functional integration of the most common means of technology into their law practice.

Structure and Topics

This book comprises of the presentation of the results of our survey and two main parts. Part I deals with the use of new ICTs in international arbitration. In this part, the authors discuss the online and electronic tools and services of which the main actors in arbitration (may) avail themselves, already now or in the future, in view of a more efficient and cost-effective procedure, or as a means to facilitate access to justice. They will also deal with security issues, both of a technical and a human nature. In a distinct line of arguments, our authors will analyze how arbitration institutions, legislatures and the practitioner deal with the implementation and application of new ICTs.

In Part II, our book focuses on the relationship between arbitration and the Internet. Our authors analyze the validity of electronic arbitration agreements and awards, as well as Online Arbitration (OArb). This second section also addresses two questions: how the Internet, and more particularly social media, affect arbitrators and their behaviour; and how online legal sources and the Internet of machines determine the strategy that counsel might adopt during an arbitration.

Survey on the Present Use of ICT in International Arbitration

To prepare our book, we found it necessary to go out in the field and collect data on the present use of technology in international arbitration, as this has helped us in the detection of the questions that are of real practical importance. The results of the Survey presented in Chapter 1 provide a significant justification for this book. We understood that arbitration practitioners were integrating new technologies into their practices, but in rather spontaneous and reactive ways, which leave much room for improvement. Above all, they fail to take advantage of the full potential, which new technologies are already providing to other service industries.

Part I: The Use of Technology in International Arbitration

In Chapter 2 Mohamed Wahab and Ethan Katsh provide us with an insightful perspective on what has been called the new 'growth industry'

of dispute resolution. On the one hand, the implementation of new technologies leads to additional disputes and even new categories of disputes such as domain name disputes, which are settled online, through a system of non-binding 'arbitration'. On the other hand, technology is used to assist ADR, to perform ADR, and to facilitate dispute prevention. This is not a matter of mere convenience. Quite to the contrary, technology fills in the need for efficiency that, together with trust, is essential for any dispute resolution mechanism. The 'liquid expectations' paradigm compels arbitration practitioners to apply technological processes that have been seen to have value in other contexts. Laws, jurisprudence and legal systems of different countries are openly accessible online. Tablets and iPads are replacing paper-based documents. Naturally, it is easier, faster and more cost-efficient to send a 300-page document through email by a mouse click than sending it by post. Driven by the need to be at least as e-proficient as their clients, lawyers have taken arbitration proceedings online. Online platforms, chatrooms and video-conferencing technologies are increasingly used for electronic synchronous or asynchronous interaction between parties and their arbitral tribunals. One might say this is a matter of due course and simple market pressure.

However, the process will not stop at merely taking arbitration 'online'. The possibility of (partly) replacing human interaction by Artificial Intelligence (AI) in the context of arbitration might no longer be an imaginary tale. It is conceivable that more and more data will not only be submitted, but also processed, categorized and searched electronically. This may make it much easier to reconstruct historical events and may gradually diminish the relevance of oral evidence. The question of 'Who said what to whom?', which vexed generations of lawyers in arbitration and litigation, may thus be replaced by a compilation of email correspondences which is generated automatically.

At this point, two important caveats need to be made, which are information security and the human factor. This will be dealt with in Chapter 3 by Philipp Schaumann and Max Burger-Scheidlin.

We all have to live with the fact that there is no such thing as 100 per cent security. The challenge is, rather, that the measures taken be commensurate with the skills of the possible attackers. The most dangerous species among those attackers are professional players such as companies that specialize in the retrieval of sensitive information, organized crime organizations that target bank accounts of private citizens and companies alike, and governmental services of many countries that either spy on their own citizens and businesses or that engage in industrial espionage in order to

help their own industries. Unfortunately, there is a large market for attack tools (programs that can perform attacks), and even attacks-as-a-service (where the whole attack is outsourced).

To protect their businesses, it is imperative for all arbitration practitioners to learn how to apply basic security hygiene. Everybody needs to learn that emails are dangerous and clicks on attachments are only to be done with considerable caution. Everybody needs to select and to protect his or her passwords carefully. Everybody needs to update his or her security software regularly. Another important aspect of basic security hygiene is regular data backup. If emails are synchronized to the smartphone, it is necessary to carefully evaluate the reliability of the provider.

Law firms face additional challenges. They need a strict and effective separation of their internal networks from the Internet through well-managed firewalls. Even within the organization, it may be advisable to secure highly sensitive information against internal attackers (e.g. the young 'intern'). Today, obtaining illicit access to internal data is basic spycraft not only for government services, but also for information-retrieval services. Other issues to be dealt with are email communications (consider digital signatures and encryption), instant messaging and telephone calls, which seem to be the weakest link as they can be intercepted at relatively low cost. US telephone companies have been giving metadata (who called whom, at what time, and how long) to US government services regularly, and the same can be expected in other countries from the local telephone companies as well. Switzerland, by contrast, seems to have strict and extensive data privacy regulations that restrict access by law enforcement or other governmental services.

As crucial as all technical safeguards may be, true security ultimately boils down to the human factor. This brings us to Max Burger-Scheidlin, who specifically asks office managers what the working environment is in their organizations: Is it heavy, emotionally dank and stagnant, or crisp, emotionally warm and invigorating? Will associates be proud of their work? Are they regularly working close to exhaustion? Are associates mature enough to keep confidential matters confidential under all circumstances? Is there a high staff turnover? Even in a digitized world, all these factors remain relevant.

Digitization, moreover, will not protect us against 'social engineering' attacks. Quite to the contrary, it will make them easier. For example, Burger-Scheidlin knows of a case where a specialized boutique law firm handling a number of major, sensitive cases experienced repeated breakdowns of its air-conditioning system during a hot summer. The

maintenance engineer had to come in frequently. Later, a review by security specialists revealed that the air-conditioning system was housed in the same utility room as the firm's telephone exchange and computer servers, and that there had been no one supervising the engineer during his repairs to the air-conditioning system.

Against the background of a constantly evolving electronic environment, it is perhaps no surprise that arbitration institutions prefer to stay on the safe side and to use ICT with circumspection. This will be explained by Erik Schäfer in Chapter 4. While using ICT in their daily communications, arbitral institutions regularly notify the Request for Arbitration (or Statement of Claim) to the Claimant by courier, against written proof of receipt. The same applies to the award. This is sound practice considering that arbitration institutions are chosen by the parties over ad hoc arbitration as they are expected to provide a higher level of procedural security.

Some arbitral institutions have also extended their services by offering online file repositories that are administered under the auspices of the respective institutions. For example, WIPO maintains a facility called ECAF, The American Arbitration Association maintains a facility called AAA WebFile, and the ICC International Court of Arbitration had maintained a facility called NetCase, which is currently being relaunched. By doing so, however, arbitral institutions might become Internet Service Providers which could trigger a host of special statutory duties regarding system availability, data integrity and data authenticity. Users may not be ready to pay for this additional offer. It is also apparent that arbitral institutions (have to) take a broader view, as they are rightly concerned about the 'equality of arms'. The party disposing of more technological resources should not per se be structurally favoured by the system over a party that does not have such resources.

The cautious approach of institutions is perhaps complimentary to that of law firms which usually wholeheartedly embrace new ICT solutions. Erik Schäfer concludes that currently, it seems more likely that the usage of ICT, particularly in commercial and investment arbitration, will be driven more by the parties' representatives and less by the arbitral institutions.

In Chapter 5, we shift our focus from the arbitral institution to the legislature. Annet Van Hooft and Julia Kroes refer to the law of a technophile jurisdiction, namely the Netherlands. One of the main goals of the 2015 Arbitration Act was to create an environment where arbitration can take place electronically, from the conclusion of the arbitration agreement up until the notification of the award (Article 1072(b) of the Dutch Civil Procedure Code). This seems to be only one aspect of a much broader

initiative in the Netherlands to introduce wholly digital court proceedings, which has been implemented in stages as from 1 January 2017. As of 2019, every party (other than natural persons acting in a personal capacity) will be obliged to conduct the entire civil proceeding in electronic form. This is expected to result in significant cost savings, speedier proceedings and increased accessibility to judges. Interestingly, the Dutch legislature has also simplified the substance of the Civil Procedure Code to bring it in line with the new technologies, for example by introducing more uniform and shorter time limits. The next round of revisions of the major rules of arbitration will show whether the application of ICT technologies will also impact the 'substance' of the arbitration rules. At the very least, it can be expected that arbitration proceedings regarding small claims will become entirely digitized.

In Chapter 6, Sophie Nappert and Paul Cohen examine how ICTs have been and will be affecting the processes and procedures of international arbitration, and they reflect on the (conceivably diminishing) role of the 'human mind' in arbitration. They get under the hood of the arbitration practitioner and examine, more precisely, how the technological advances affect the role of arbitrators and counsel. To examine why technology has not reached its full potential in arbitration, but is rather slowly permeating the arbitration procedure, Sophie Nappert and Paul Cohen focus on video-conferencing. They identify video-conferencing as the single one technology that has the greatest potential for cost savings, and that might have the greatest transformative impact on the arbitral process in the near future. In the past, traditionalists rightly had reservations, stating that everything that one expects from a hearing, formal decorum as well as the informality of personal interaction, is missing from a virtual hearing. As technology continues to develop, however, we will see the release of virtual reality headsets that will represent a step-change in current technology. With their three-dimensional, immersive quality, the headsets will provide a more realistic, real-time feel to a virtual meeting than even today's high-definition video-conferences. Before long, the high costs of these devices will also decrease, as it is the case with all new technologies.

Yet the impact of new technologies will not only be supportive but also transformative of the process. Technology is reaching a phase in which devices can not only compensate for human shortcomings in decision-making, but also substitute their own, more accurate evaluation of the facts. Doctors today, for instance, are increasingly beset by competition from diagnostic tools that perform better on many metrics than

human physicians. If we have reached this point, then we must rightly ask ourselves what we want from the arbitral process and what it can deliver. Unimpeachable decisions by humans, or do we need appeals or reviews of computer-generated decisions? What is the place of equity and empathy in a technology-dominated arbitration world? And what will be the place of lawyers when we are increasingly dealing with machines?

Part II: Arbitration, Arbitrators, Counsel and the Internet

In Part II, we move on to the relationship between arbitration and the Internet, starting with electronic arbitration agreements and electronic arbitration awards.

In Chapter 7, Reinmar Wolff explains how electronic arbitration agreements and electronic arbitral awards test the boundaries of traditional form requirements. Arbitration agreements must typically be concluded in writing and may have to be submitted to court. Arbitral awards usually have to be rendered in writing and have to bear the arbitrators' signatures, have to be delivered to the parties, and have to be submitted to court in order to be recognized and enforced. A multitude of national laws and international treaties govern these issues, where the need for harmonization was (and is) obvious. In his analysis, Reinmar Wolff consistently takes an approach which is aiming to achieve this harmonization. This is extremely helpful. The utility of a high-speed train link (online arbitration proceedings) is greatly diminished if certain parts of the railway (arbitration agreements or arbitral awards) are not even electrified.

In Chapter 8, Amy Schmitz considers the use of OArb for resolution of disputes in business-to-consumer transactions. She does so from the perspective of the United States, where pre-dispute arbitration agreements between consumers and businesses are considered valid. As unusual as this may be for the European practitioner, one cannot deny that OArb and other forms of 'quasi online arbitration' (which do not end by a definitive and enforceable decision of the conflict) may have huge benefits for the consumer: in many cases, consumers forego their rights rather than face the costs and hassles of an in-person process. Unlike traditional in-person dispute resolution methods, online dispute resolution allows parties to communicate from anywhere, using any type of Internet access at their convenience. Consumers do not have to travel, miss work, 'dress up' or arrange for childcare to attend hearings and meetings. Using computer-mediated communications may also empower individuals by allowing them to communicate from behind the buffer of their

lectronic devices. Race, gender, and disabilities play a lesser role. Thus, OArb can even expand the access to justice for the consumer. This has already become visible in the United States, where a number of quasi online arbitration sites have emerged. Sites such as BBB (Better Business Bureau), for example, offer an accreditation system for businesses that comply with their Code of Business Practice, or they offer any kind of dispute resolution services, from informal mediation to binding arbitration. Another example of growing relevance is eBay's Resolution Centre, which processes consumer claims related to website purchases free of charge. This will remain a growth sector in the United States especially for small claims, provided that the system can guarantee due process and fairness standards.

In Chapter 9, Pablo Cortés and Tony Coyle analyze the use of online arbitration and online dispute resolution in a business-to-consumer context from the very different European point of view. The regulatory framework in the European Union is set up by the Unfair Terms Directive which classifies as 'unfair' those contractual terms which 'exclude or hinder the consumer's right to take legal action . . . in particular by requiring the consumer to take disputes exclusively to arbitration not covered by legal provisions'. Furthermore, the European Court of Justice has found that consumer protection laws rank as an aspect of the 'public policy' of the EU, and thus trump enforcement of arbitration agreements between businesses and consumers.

On the other hand, the EU has passed legislation that encourages the use of high-quality consumer ADR/ODR schemes. According to the ADR Directive, all Member States must ensure the availability within their jurisdiction of ADR entities that comply with minimum legal standards when resolving disputes between traders and consumers. The hope is that this two-faceted approach will protect consumers while still encouraging high-quality consumer arbitration.

A more promising avenue may be that of 'Online Courts' as proposed by Lord Justice Briggs in the July 2016 Final Report of the Civil Courts Structure Review for the Judiciary of England of Wales, which are designed to cover civil and commercial monetary claims under £25,000. In the words of our authors, this is an 'impressively ambitious amalgam of computer technology, mediation and the traditional court system'. Another alternative to online consumer arbitration might be online adjudication in the form of the Uniform Dispute Resolution Policy (UDRP) for domain name disputes, which strongly resembles a 'documents only' arbitration.