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Introduction

1.1 Fundamentals of dispute resolution

One can argue that the resolution of disputes is one of the earliest forms of human endeavour. For example, Moses supposedly descended from Mount Sinai with the Ten Commandments and the 613 laws that can be found in the Torah. In addition to providing a framework in which Jews were to lead their life, these laws also gave guidance on how Jews should resolve disputes. But the resolution of disputes and disagreements occurred well before any biblical tracts existed. One such example is the admittedly very informal, but taken from the Torah, dialogue (or negotiation) between Abraham and God regarding criteria for the destruction of Sodom and Gomorrah. Obviously, people realised the importance of resolving disputes long before state-organised litigation originated.

Litigation has a long tradition, and is characterised by its formality and legal safeguards. Judges should be impartial and independent, and legal procedural law should guarantee the processes to be fair (cf., for example, fair-trial principle of Article 8 European Convention on Human Rights). In particular businesses often need faster outcomes than litigation can provide, and want the procedures to be confidential, whereas one of the principles underlying litigation is public hearing. Therefore, for more than a century arbitration has been used to resolve (international) disputes.

More recently, modern alternatives to litigation were heavily influenced by the National Conference on the Causes of Popular Dissatisfaction with the Administration of Justice, which took place in Minneapolis, Minnesota, from 7–9 April 1976. At this conference, then US Chief Justice Warren Burger encouraged the exploration and use of informal dispute resolution processes. Sander (1976) introduced the idea of the *Multi-door Courthouse*.[1]

[1] According to the United States Department of Justice, the term multi-door courthouse describes courts that offer an array of dispute resolution options or screen cases and then

Over twenty-five years later Frank Sander (2002) argued that an important evolution has been the development of the field of Dispute Systems Design, which has encouraged the exploration of systematic dispute processing ex ante. Our research on information technology to support Enhanced Dispute Resolution supports this process. Whilst there has been significant work on the use of information technology to support litigation and in the courts,[2] we discuss the use of information technology to support dispute resolution in general, as well as all its forms. However, we do not take into account specific legal particularities stemming from relevant Acts or case law, but focus upon alternative forms (to litigation) of dispute resolution.

In this book we wish to provide support for people to improve their performance in resolving disputes. Whilst we shall be focusing upon information technology tools, it is important to stress that to build such tools it is essential to master the process; namely of dispute resolution. Thus we commence with a brief discussion of four of the fundamental processes of dispute resolution: negotiation, mediation, arbitration and litigation.

1.1.1 Negotiation

Negotiation is a process where the parties involved modify their demands to achieve a mutually acceptable compromise (Kennedy *et al.* 1984). The essence of negotiation is that there is no third party whose role is to act as facilitator or umpire in the communications between the parties as they attempt to resolve their dispute (Astor and Chinkin 2002). It is the most cost-effective and efficient method of resolving disputes between parties, but it is a process that is not without problems.

People are likely to engage in positional bargaining and face several cognitive (psychological) biases, such as the tendency to be overly optimistic about their positions (Kahneman and Tversky 1995) and the tendency to devalue proposals made by adversaries (Ross 1995; Neale and Bazerman 1991).

Positional bargaining and these biases may result in the failure of a negotiation, leaving parties with the options, in a legal dispute, of going to court, opting for another Alternative Dispute Resolution procedure or not resolving the dispute at all. A facilitative negotiation process focuses

channel them to particular alternative dispute resolution processes. See www.usdoj.gov/adr/manual/Part3_Chap1.pdf (last accessed 24 June 2008).

[2] See, for example, Oskamp *et al.* (2004).

on the management and conduct of bargaining between the parties while the content is about the issues – the facts and substance in dispute.

1.1.2 Mediation

Folberg and Taylor (1984) define mediation as 'a process by which the participants, together with the assistance of a neutral person or persons, systematically isolate disputed issues in order to develop options, consider alternatives, and reach a consensual settlement that will accommodate their needs'. Mediation emphasises the separation of issues of the dispute and develops options for the disputants.

This is also reflected in the definition by Brown and Marriott (1999: 127):

> Mediation is a facilitative process in which disputing parties engage the assistance of an impartial third party, the mediator, who helps them to try to arrive at an agreed resolution of their dispute. The mediator has no authority to make any decisions that are binding on them, but uses certain techniques and skills to help them to negotiate an agreed resolution of their dispute without adjudication.

A mediator has no advisory or determinative role in regard to the content of the dispute or the outcome of its resolution, but may advise on or determine the mediation process, that is the steps and stages involved in the process, whereby resolution is attempted (Charlton 2000). In recent years it is argued that mediators, although they primarily facilitate the negotiation between the parties, may evaluate the content of the dispute (e.g. Riskin 1996; Brown and Marriott 1999).

Mediation is a non-binding process and most often voluntary. A third-party neutral, known as the mediator, assists the parties in formulating their own resolution of the dispute. It is a confidential process in which the confidentiality is protected by an agreement between the parties and the mediator or by statute (such as in Australia). The fundamental difference between negotiation and mediation is the presence of an impartial, neutral third party who is not a partisan for one of the disputants but rather assists both or all the parties towards reaching an agreement (Astor and Chinkin 2002).

Mediation is not suitable for all disputes or for all parties. The parties must be willing to do, and capable of doing, what the process requires of them. Astor and Chinkin (2002) explain that willingness, in the sense that the parties are volunteers, is often cited as one of the great strengths of mediation. It also implies that the parties are prepared to make a good

faith attempt to negotiate an outcome to their dispute. Capacity implies that the parties have an ability to express and negotiate for their own needs and interests.

According to Pryles (2002) mediation may be mandatory (for example in Belgium, several states in the United States, and many Australian jurisdictions), discretionary (in the sense that it may be undertaken at the discretion of a particular person) or voluntary (the parties to a dispute may voluntarily decide to attempt settlement through mediation).

1.1.3 Arbitration

Arbitration is an adversarial process whereby an independent third party, after hearing submissions from the disputants, makes an award binding upon the parties. An arbitrator can be part of a court-annexed scheme, or the parties may choose an arbitrator who is not necessarily legally qualified. In some jurisdictions, such as France and India, arbiters need to have a legal background. The choice of arbitrator may be based on his or her particular expert knowledge of the subject matter, for example an engineer or accountant. The arbitration process could be as close to judicial determination as one can get (Charlton 2000).

The English Arbitration Act 1697 provided a procedure whereby parties to a civil action could refer their matter to arbitration and have the ensuring award enforced as a judgment of the court. The establishment of the Institute of Arbitrators Australia in 1975 provided a professional organisation for the development of an arbitral identity and for the training of arbitrators (Astor and Chinkin 2002). The process includes many elements of courtroom trials: a formal hearing, examination and cross-examination of witnesses, the use of experts and the submission of evidence (Solovay and Reed 2003). Arbitration is an enforceable process and often subject to the governance of law enforcement (Astor and Chinkin 2002). Australia law on arbitration is based on international conventions, legislation (both federal and state) and the common law.

Mediation and arbitration are both Alternative Dispute Resolution (ADR) processes,[3] but have distinct purposes and hence distinct

[3] It actually depends on how one qualifies the term 'Alternative'. The process can be considered an alternative to public dispute resolution (e.g. litigation), in which case all private dispute resolution processes are considered ADR. This is how we see it, so arbitration is part of ADR. The term ADR is also used to denote an alternative approach to dispute resolution, hence a non-adversarial process that is not about winning and losing. Under that definition of ADR, arbitration is not part of it.

moralities. Astor and Chinkin (2002) argue that the morality of mediation lies in optimum settlement in which each party gives up what she values less, in return for what she values more. The morality of arbitration lies in a decision according to the law of contract. In most jurisdictions a court may not set aside or remit an award on the ground of error of fact or laws on the face of the award. One could say that arbitral awards are also binding for the judiciary. The New York Convention even guarantees that awards from arbitration processes abiding to the arbitration law of a state that signed the Convention (over 100 states) can be executed in any other state that signed the Convention. This is one reason why arbitration is popular for US companies. The United States does not have any treaties on the execution of foreign verdicts, but has signed the New York Convention.

1.1.4 Litigation

Black (1990) views litigation 'as a contest in a court of law for the purpose of enforcing a right or seeking a remedy'. ADR is commonly recognised as applying to processes that are alternatives to the traditional legal methods of solving disputes (Charlton 2000).

ADR and litigation are fundamentally different approaches for resolving disputes. Most ADR processes are concerned with bargaining and trade-offs, whereas litigation is primarily concerned with justice. Even arbitration, the most rigid ADR process, differs from court proceedings in that the rules of substantive and procedural law are relaxed, they can be adapted to the specific needs of the forum and institutionalised within the formal justice system (Solovay and Reed 2003).

It should be pointed out that in addition to negotiation, mediation, arbitration and litigation there are numerous other dispute resolution processes, as well as combined or hybrid dispute resolution processes. These are processes in which the dispute resolution practitioner plays multiple roles. For example, in conciliation and in conferencing, the dispute resolution practitioner may facilitate discussions, as well as provide advice on the merits of the dispute. In hybrid processes, such as med-arb, the practitioner first uses one process (mediation) and then a different one (arbitration).

Goldberg *et al.* (1985: 3) claim that:

> the 1960s were characterised by considerable strife and conflict. An apparent legacy of those times was a lessened tolerance for grievances and a greater tendency to turn them into lawsuits … One factor was the waning role of some of society's traditional mediating institutions – the

> family, the church and the community … The net result was an increased volume of legal claims, many of which had not been previously recognised. Courts began to find themselves inundated with new filings, triggering cries of alarm from the judicial administration establishment. At the same time, judicial congestion, with its concomitant delay, led to claims of denial of access to justice. One response to these problems was a demand for more judges and more courtrooms: another was a search for alternatives to the courts … The supporters of the alternative movement had four separate goals:
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> (1) to relieve court congestion as well as undue cost and delay;
> (2) to enhance community involvement in the dispute resolution process;
> (3) to facilitate access to justice;
> (4) to provide more 'effective' dispute resolution.

This observation is particularly interesting for it explains that mediation as introduced in the 1970s and 1980s was not primarily a new movement but a way to compensate for the loss of the traditional mediators (family, church, community).

1.2 Fairness and justice in Alternative Dispute Resolution

Walton and McKersie (1965) propose that negotiation processes can be classified as distributive or integrative. In distributive approaches, the problems are seen as *zero-sum* and resources are imagined as fixed: *divide the pie*. In integrative approaches, problems are seen as having more potential solutions than are immediately obvious and the goal is to *expand the pie* before dividing it. Parties attempt to accommodate as many interests of each of the parties as possible, leading to the so-called *win–win* or *all gain* approach. Although Walton and McKersie did not suggest one type of negotiation being superior to the other, Kersten (2001) notes that, over the years, it has become conventional wisdom that the integrative type allows for *better compromises*, *win–win solutions*, *value creation* and *expanding the pie*. Fisher and Ury (1981), Fisher *et al.* (1994) and Lax and Sebenius (1986) discuss these issues in detail.

Traditional negotiation decision support has focused upon providing users with decision support on how they might best obtain their goals. Such advice is often based on Nash's principles of optimal negotiation or bargaining (Nash 1953). Game theory, as opposed to behavioural and descriptive studies, provides formal and normative approaches to model bargaining. One of the distinctive key features of game theory is the

consideration of zero-sum and non-zero-sum games. These concepts were adopted to distinguish between distributive and integrative processes.

Limitations of game theory in providing prescriptive advice sought by disputants and their advisers on one hand, and the developments in multi-criteria decision-making and interactive methods on the other, provided the groundwork for negotiation analysis as discussed in Holsapple and Whinston (1996), Howard and Matheson (1981), Saaty (1980) and Raiffa (1982). Game theory has been used as the basis for the Adjusted Winner algorithm (Brams and Taylor 1996) and the negotiation support systems Smartsettle (Thiessen and McMahon 2000) and Family_Winner (Bellucci and Zeleznikow 2006).

Much negotiation outside the legal domain focuses upon interest-based negotiation. Expanding on the notion of integrative or interest-based negotiation, Fisher and Ury (1981) developed the notion of principled negotiation. Principled negotiation promotes deciding issues on their merits rather than through a haggling process focused on what each side says it will and will not do. Amongst the features of principled negotiation are:

(1) separating the people from the problem;
(2) focusing upon interests rather than positions;
(3) insisting upon objective criteria; and
(4) knowing your *BATNA* (*B*est *A*lternative *T*o a *N*egotiated *A*greement).

In the domain of legal negotiation, Mnookin and Kornhauser (1979) introduced the notion of bargaining in the shadow of the trial (or law). By examining the case of divorce law, they contended that the legal rights of each party could be understood as bargaining chips that can affect settlement outcomes. Bibas (2004) has claimed that some scholars (but not himself) treat plea-bargaining as simply another case of bargaining in the shadow of a trial. He notes that 'the conventional wisdom is that litigants bargain towards settlement in the shadow of expected trial outcomes. In this model, rational parties forecast the expected trial outcome and strike bargains that leave both sides better off by splitting the saved costs of trial … This shadow of trial model now dominates the literature on civil settlements'.

But does Alternative Dispute Resolution *provide more 'effective' dispute resolution*? Commentators such as Alexander (1997) and Raines and Conley Tyler (2007) have questioned whether such developments have always taken into account notions of justice and fairness. In particular, they worry whether this trend has led to certain parties being unjustly

treated. McEwen *et al.* (1995), Phegan (1995) and Zeleznikow (2009) examine these issues in the context of family law. Mack and Roach Anleu (1997 and 1998) consider issues of fairness in plea-bargaining.

For example, are accused persons disadvantaged in guilty plea negotiations because of a lack of available information on sentencing precedents? Are some parties before the Family Court accepting outcomes which are unjust to both themselves and/or their children? In addition to the standard problems associated with the use of information technology and decision support systems (such as usability), how can we ensure that the advice tendered by decision support systems providing negotiation advice is 'reasonable', 'consistent' and 'based upon publicly acceptable principles'?

Essentially, bargaining in the shadow of the law and the provision of BATNAs add notions of justice to interest-based negotiation. Druckman (2005: 276) postulates whether fairer negotiations are more endurable. To even approach this question we must develop techniques for deciding what is a 'fair' or 'just' negotiation. And when we can define a negotiation to have 'endured'. And it is equally important to make trade-offs between fairness and endurance and cost and speed. After all, if we complicate our processes by focusing upon fairness, we may escalate the cost and decrease the speed of systems to the extent that there are limited benefits for using information technology to support dispute resolution.

In his masterpiece, *Animal Farm*, the British novelist George Orwell (1945) developed the mantra 'four legs good, two legs bad'.[4] Similarly many governments have promoted the principle that 'negotiation is good and conflict is bad'.[5] This is not surprising, since most conflicts are destructive and normally solutions to conflicts contribute better to society than conflicts do.

In Australia, both the federal and state governments have strongly promoted Alternative Dispute Resolution as a preferred option to litigation. They have emphasised the benefits of greater speed; more flexibility in outcomes; that it is more informal and that it is solution- rather than blame-oriented. However there is little doubt that they view the major benefit to be the reduced cost in the provision of court and legal services. Prior to being allowed to appear before the Family Court of Australia, disputants must engage in compulsory mediation. In commercial disputes,

[4] Here Orwell was implying humans were evil whilst farm animals were kind.
[5] Significantly, in the final scene of *Animal Farm*, once the pigs have taken over the farm, they take on human features: 'four legs good, two legs better'.

Australian judges regularly suggest litigants undertake some form of mediation prior to the court further hearing the case. But is undertaking the process of negotiation desirable in all instances?

Consider for example the situation of the British Prime Minister, Neville Chamberlain, on returning from Munich in August 1938. Chamberlain claimed that we have 'peace in our time'. Yet within a little over twelve months:

(1) Kristallnacht in Germany and Austria on 9 and 10 November 1938 led to the destruction of Jewish property and synagogues as well as numerous deaths. Whilst this was not the commencement of Nazi anti-Semitism it was a significant escalation and milestone towards the 'Final Solution'.
(2) The Molotov–Ribbentrop Pact of June 1939 divided Poland into German (Western Poland) and Soviet (Eastern Poland) sectors.
(3) On 1 September 1939 Germany invaded Western Poland leading to the commencement of the Second World War.

Was Chamberlain correct in his views to accept the negotiations concluded in the Treaty of Munich? Were his negotiations successful? Most people would answer no, and that by acceding to Hitler's wishes Chamberlain encouraged German belligerence.

But even seventy years later, supporters (or apologists, depending upon one's viewpoint) of Chamberlain rationalise that he was correct in accepting the treaty, and won the United Kingdom vital time to prosecute the war.[6]

It is important that we develop measures for when to negotiate and when to continue conflicts. Mnookin (2003) considers the issue of when to negotiate. He develops a framework of six issues that should be considered in making a decision about whether to conduct a negotiation:

(1) identify your interests and those of the other parties;
(2) think about all sides' BATNAs;
(3) try to imagine options that might better serve the negotiators' interests than their BATNAs;
(4) ensure that the commitments made in any negotiated deal have a reasonable prospect of actually being implemented;

[6] As did the former Australian Prime Minister Sir Robert Gordon Menzies in the twenty-second Sir Richard Stawell Oration, 'Churchill and his Contemporaries', delivered at the University of Melbourne on 8 October 1955 – see www.menziesvirtualmuseum.org.au/transcripts/Speech_is_of_Time/202_ChurchillContemp.html (last accessed 23 July 2008).

(5) consider the expected costs – both direct and indirect (such as damage to reputation and setting adverse precedents) – of engaging in the negotiation process;
(6) consider issues of legitimacy and morality – the mere process of negotiating with a counterpart confers some recognition and legitimacy on them.

Alternative Dispute Resolution has many implications that are not immediately clear, and that could be undesirable. For example, in Australia and the United States bargaining about charges and pleas occurs. Because such bargaining is an alternative to judicial decision-making, we view it as a form of Alternative Dispute Resolution.

Under plea-bargaining practices, which is not the case in litigation, a participant cannot challenge a decision. Consider the case of an Australian resident, but Croatian citizen, who is offered a non-custodial sentence for a crime he did not commit, but of which he has been advised he is likely to be convicted. Whilst he may receive a charge or plea bargain that keeps him out of jail, he does not realise he will never be allowed to visit his family in the United States and will be deported to Croatia.

When using information technology to support dispute resolution we must focus upon the issue of providing 'fair' and 'just' negotiation support. But what do we mean by '*fair*'? Unlike most users of the word '*fair*' in relation to negotiation, we do not mean 'fairness' in meeting the interests of the disputants. We mean '*fair*' in meeting the concept of '*justice*'.

Brams and Taylor (1996) and Raith (2000) also examine fair-division in negotiation. However, their notion of 'fairness' is not related to the fairness of outcomes respective to societal values. Rather, they are concerned that their algorithms are equitable in distributing issues in dispute equally to both parties in a two-party dispute. Raith (2000) argues that:

> in contrast to 'normative' mathematical models of bargaining or 'descriptive' analyses of actual negotiations, negotiation analysis is a practically oriented field of research that can be characterized as 'prescriptive', meaning that the objective is to give procedural advice on how negotiators can reach a mutually beneficial outcome.

According to Brams and Taylor (1996):

> bargaining theories have proved inapplicable to the settlement of real-life disputes because of their divorce from theories of fair division. They show that, by viewing negotiation problems as problems of fair division, one can apply intuitive procedures to a variety of complex conflicts.