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Burden of Proof in Legal Dialogue Games

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Abstract

In recent years dialectics have received considerable attention in the field of Artificial Intelligence and law. A sub-branch of this field concentrates on the development of dialogue games. Many of these legal dialogue systems are fairly simple. As a consequence they are not very realistic as compared to actual legal procedures. In this paper I discuss a legal dialogue game (DiaLaw) and compare this model to a specific type of legal procedure, the Dutch civil summons procedure. The focus of the description is on the burden of proof in both dialogue game and actual procedure. The paper shows what computational dialectics can learn form legal practice.

1 Introduction

In recent years, argument and dialogue have received considerable interest in AI and law research (Gordon, 1993, Bench-Capon, 1992, 1995, 1998, Lodder 1997 etc). Part of this popularity is due to the recognition that there is more to law than logic to paraphrase Moles and Dayal (1992). Traditional AI and Law research has mainly focussed on the logical properties of reasoning with rules. The purpose of much of this research is the development of legal knowledge based systems. In legal domains everything, including the rules, is subject to debate. This fact makes the study of argument itself, of interest. Legal arguments may be convincing although unsound in terms of logic, and unpersuasive, although sound (Bench-Capon, 1995: 5). To understand legal argument we have to look at the rhetorical, procedural and contextual aspects of the process instead of the purely logical features of legal reasoning.

One strand in the study of legal argument in AI is concerned with the construction of *dialogue games*. Many of these legal dialogue games are inspired by the notion of procedural justice (Rawls, 1972). This notion, in short, holds that a legal decision is correct if the proper procedure was followed in reaching the decision (Alexy 1989, p.16). This procedure in many cases is a moderated dialogue. The rules guiding the dialogue are to ensure the rights and obligations of the participants. At the same time the rules are to ensure the parties stay within the bounds of the law. The parties are not free to decide anything they want. The court, the dialogue rules and the law are all important to limit the discretion of the parties. Dialogue games can be seen as a test to see if constraints on procedural justice can be monitored or checked by purely formal methods. They can be used to assist the moderator in actual discourse.

Much in a dialogue game depends on the actual dialogue rules implemented, since everything, from facts to rules and the procedure itself, is open to discussion. The dialogue rules so to speak determine the 'look and feel' of the game, and hence the realism of the model.

An important group of discourse rules deals with the distribution of the burden of proof. The players

in a dialogue game advance claims. They have to provide support for these claims if asked for by the opponent. Without such a rule, rational dialogue would not be possible. The opponent on the other hand can not keep asking the proponent to provide backing for his claim. This would result in an infinite regress. The rules pertaining to the burden of proof play an important role in regulating the process of justification of claims.

Every dialogue game incorporates rules regarding to the burden of proof for statements. Often, a simple rule is used: "Whoever advances a standpoint is obliged to defend it if asked to do so". Lodder (1998) for instance, uses this rule for the distribution of burden of proof in his DiaLaw. Alexy (1989, p. 192), uses a slightly more complex rule in his theory of rational discourse. He adds that no burden of proof exists if reasons which justify a refusal to provide a justification can be given. Both Alexy and Lodder claim their model to be universal and not tailored to a specific type of legal discourse.

This paper deals with the burden of proof from the perspective of the Dutch Civil Summons Procedure. I will show that burden of proof in a specific type of legal procedure differs from the simple model.

First, I briefly describe the nature of legal dialogue games. Next, I briefly describe the essentials of the dialogue rules in Lodder's DiaLaw. I will then describe the Dutch civic summons procedure, highlighting the distribution of proof. The final section offers a discussion of the findings and a conclusion.

2. Dialogue games

A dialogue game is a game in the spirit of chess in which two or more players take turns in making argument moves. Argument moves consist of an illocutionary act, such as 'claim', applied to a propositional content, such as a sentence like 'You owe me ? 100'.

The moves change the state of the game. An important effect of a move is that it changes the commitments of the players. A player who claims (or accepts) a certain fact to be true, is committed to this fact. Commitment is withdrawn if a player withdraws a claim. The dialogue game is played on a "playing board". The playing board is the record of all moves made by the players. Following Hamblin (1970), an important part of this playing board is the commitment store. The commitment store is a technical device to keep record of the players' commitments. The commitment store also allows us to define the object of a dialogue game. A dialogue game starts with a claim (the thesis) by one of the players, the proponent. The object of the game for the proponent is to commit the other player, the opponent, to the thesis. The opponent wins if the proponent withdraws the thesis, or becomes committed to a claim that is incompatible with the thesis.

Closely connected to the concept of commitment is the concept of burden of proof. At the core of rational discussions lies the rule that a speaker who asserts a certain statement must be prepared to defend this statement with supporting arguments (e.g. 'the general justification rule' in Alexy 1989, p. 192). The burden of proof is important because the player who bears the burden has to allocate (valuable) resources in to provide the proof. He may also fail in his proof, thereby running the risk of loosing the dialogue. The players may therefore try to shift the burden of proof to the other party.

Dialogue games are governed by dialogue rules. They can be grouped according to their function in the dialogue game. Several abstract argument frameworks have been presented for this purpose (e.g. Brewka & Gordon, 1994; Prakken 1995). A useful distinction in the light of this paper is that of Walton & Krabbe (1995). They distinguish four types of rule. "*Locution rules* indicate the types of permissible moves. *Commitment rules* govern which propositions go in or out of commitment stores

in each type of move. *Structural rules* define turn taking and which types of move are permitted or required after each move. *Win-and-loss* rules define the participants' aims in the dialogue – what counts as "winning" or "losing" sequence of moves" (1995, p. 149).

In the next section I briefly discuss one of the recent legal dialogue games to show the capabilities and shortcomings of a dialogue game more clearly.

2.1 DiaLaw

Lodder's DiaLaw is a general legal dialogue game (Lodder, 1998). DiaLaw is a two-person dialogue game. There is no arbiter. The program monitors the moves made by the players and keeps track of the players' commitments. The underlying logic is Hage (and Verheij's) Reason Based Logic (1985).

DiaLaw distinguishes four types of moves: claim, accept, question, and withdraw.

Claim is used to forward statements held to be justified by the proponent. A player may only claim statements to which he is not already committed. He may also not claim a sentence if he is committed to the negation of the sentence. A player who claims a sentence is committed to this sentence.

With *accept*, a player explicitly accepts a sentence claimed by the other player, thereby committing himself to the sentence. One can only accept sentences brought forward by the other player.

Question expressed doubt about a sentence adduced by the other player, it is therefore a reaction to a move by the other player. When a claim becomes questioned, the one who brought forward the claim has to defend it. The burden of proof always rests on the player who claims a sentence. A player may ask for justification of a statement, even if he is already committed to this statement. This, in my view, opens the way to an infinite regress in which the opponent questions every defence brought forward by the claimant.

Withdraw allows the players to take back claims, thereby lifting the burden of proof for these sentences. It is the inverse of claim; once a claim is withdrawn, the corresponding commitment is also withdrawn.

A DiaLaw game starts with a thesis put forward by the proponent. The players then take turns in making one move at a time. Each move is a reaction to the previous move made by the other player. Which moves are allowed at any time depends on this previous move and the structural rules of the game. The game ends if both players are committed to the thesis, or the proponent withdraws it. A dialogue in DiaLaw is not guaranteed to end. If the players fail to reach agreement, the game does not terminate. There is no arbiter to lift deadlocks.

There are two ways in which players become committed to statements: voluntary and forced. Voluntary commitment originates from the moves claim and accept. A player can also be forced to accept a statement if this statement follows from commitments the player already has. Forced commitment is comparable to derivation in monological models. The reader is referred to Lodder (1998) for a detailed account about forced commitments in DiaLaw.

A dialog in natural language shows DiaLaw in action (taken from Lodder 1998).

	move	Bert	Ernie
1	claim	O.J. is a murderer	

2	question		Is he?
3	claim	yes, he shot his former wife	
4	accept		I think you're right Bert
		Bert wins	

In move 1 Bert advances a claim that O.J. is a murderer. As a result of this claim he is committed to this fact. He bears the burden of defending this claim if the opponent asks for it, which Ernie does in move 2. As a support for the claim, Bert claims O.J. shot his former wife, which would by virtue of an unstated rule (he who shoots a person is a murderer), make him a murderer. Ernie seems aware of the truth of this statement and accepts it as true in move 4. As a result Ernie is committed to the thesis.

Dialogues in DiaLaw can be much more complex than shown here. They can deal with defeasible rules, reasons and weighing of reasons, illegal moves etc. In this paper, I restrict myself to the burden of proof in DiaLaw. The distribution of the burden of proof in DiaLaw is simple. The player who claims a sentence bears the burden of proof for this sentence if asked for by means of the move 'question'. In the case of a request for justification of a sentence, the dialogue drops into a sub-dialogue, which either ends in an acceptance of the claim, a withdrawal or a tie.

This dialogue model, and its model of distribution of proof, is, in my view, too simple to account for the intricacies in real legal procedures. In the next section I will describe a real legal procedure to show that much has to be added to DiaLaw to make it a more realistic.

3 Dutch civil pleadings

Leenes (1998) gives a detailed analysis of the Dutch Civil Summons Procedure (CSP in short) from the perspective of the development of a legal dialogue game. These proceedings seemed suitable to be modelled in a dialogue game. The CSP is an example of a legal dialogue between two parties. The court in these proceedings is relatively passive. It guards the procedure and is not involved in fact-finding, as is the case in for instance criminal proceedings. An important task of the court in the summons procedure is maintaining the rights and obligations of the parties in the dispute. Guarding the procedure is a task that can be done by a computer program as Gordon shows in the Pleadings Game. Another reason to study this particular type of procedure is that it can be said to be purely procedural (in Rawls' sense 1972; Hage et al. 1984; Leenes 1998). The court's decision in an actual case can not be determined without following the proper procedure. Not the fact that a case *can* be won by certain arguments in principle decides the case, but only *actually adduced* arguments can. Legal decisions therefore are not logical proofs derived from legal axioms and facts of the case, but rather conclusions supported by arguments brought forward in a mediated dialogue. The arguments are based on interpretations of both the law and the facts of the case. The legal dialogue can be seen as the playground in which the parties, under supervision of the court, place boundary marks by means of their dialogue game. The court's decision must within the marks placed by the parties in the dispute.

Before going into details about (the burden of) proof, I describe the CSP at a macro-level.

3.1 A bird's eye view of the procedure

The Dutch CSP resembles the English High Court procedure. It commences with the plaintiff

servicing a writ (Dutch: dagvaarding). The writ is a formal document and needs, apart from the obligatory administrative data, only to state the claim. If the defendant returns an acknowledgement of service, the pleadings begin. The pleadings are a formal exchange of documents. The first of these documents is the Statement of Claim (Dutch: conclusie van eis). Dutch law (Code of Civil Procedure, Dutch: Wetboek van Burgerlijke Rechtvordering) requires the *statement of claim* to provide the grounds for the claim. If the claim is not sufficiently supported by argument, the court will rule out the claim on these grounds. The defendant answers the statement of claim with a Defence (Dutch: conclusie van antwoord). The defence has to provide an argument rebutting the plaintiff's claim. After the defence, the court will see if the case is fit for a hearing (Dutch: comparitie na antwoord). In this procedure, the court will try to get a clear picture of the case and will try to reach a settlement between the parties in the dispute. If the dispute does not end in a settlement during the hearings, the plaintiff may provide further support for his claim and react to the defendant's moves in the Defence by means of a Reply (Dutch: conclusie van repliek). The defendant may in turn, respond with a Rejoinder. The defendant does not need consent of the court (which he would need in the English High Crown procedure). After the Rejoinder the parties may exchange subsequent pleadings with the courts consent.

After pleadings, the parties may bring the case to trial. In most cases, no oral pleadings will be held. Whether or not oral hearings are held, all documents exchanged, including proof if produced so far, will be handed to the court (court's file). The court will decide the case on the basis of the court's file.

Figure 1 shows the procedure in more detail. The article number (e.g. Rv 140) refer to article numbers in the Dutch code of civil procedure (Wetboek van Burgerlijke Rechtsvordering). The figure shows the procedure on the level of turn taking. The dialogue consists of the parties exchanging documents on a limited number of occasions. It is by no means a 'real' dialogue like a cross-examination.

A dialogue model tailored for the Civil Summons Procedure needs rules to represent the procedure on this macro level (Structural rules in terms of Walton & Krabbe, 1995, p. 149). Also needed are locution, commitment and win-and-loss rules. I will now focus on the locution and commitment rules in the Dutch Civil Summons Procedure.

Figure 1. The Dutch civil summons procedure

3.2 Burden of Proof

In civil summons the plaintiff wants the court to entitle him to legal relief, such as monetary compensation for damages. This requires the plaintiff to state (claim) the desired legal consequences in the statement of claim. In the Dutch procedure merely stating the claim does not suffice. The claim has to be grounded in facts. The plaintiff has to

present an argument in favour of the claim. The well-established Toulmin (1958) schema can be used to illustrate what this means in practice.
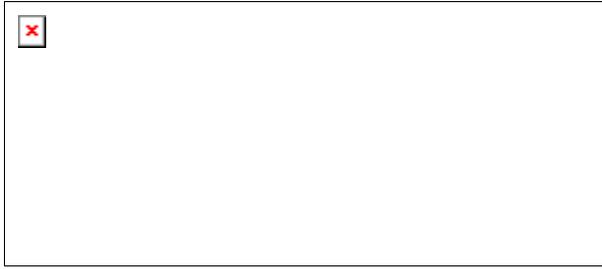

Figure 2. Toulmin's argument schema

The claim in this schema is the conclusion of an argument. The data are the grounds that support the claim. These may, for instance, be facts of a case. The link between data and claim is a rule-like construction, the warrant, which warrants the conclusion. The warrant need not be a legal rule, also new rules, or new interpretations of existing rules, may do. Warrants have different authority. The backing represents the authority of the warrant. A backing of a rule may be a statutory provision or another legal source.

In the Dutch procedure, the plaintiff has to state the legal conclusion he wants the court to draw, as well as the necessary data to support this claim. He is not obliged to provide for a warrant, let alone a backing for this warrant. Legal issues are the domain of the court. The court is supposed to know the law and apply legal rules whenever necessary. Since the *interpretation* of legal rules is not fixed, the parties may discuss the interpretation of the law with respect to the case at hand. Although the court is in no way bound by these arguments produced by the parties, they nevertheless play a role. This amounts to influence of the parties on matters of law.

The fact that the plaintiff has to provide an argument supporting the claim from the outset, marks a departure from the simple rule for the burden of proof as seen in for instance DiaLaw A player is not only obliged to defend a claim when requested. The same applies for the defendant; he has to present an argument against the plaintiff's claim in his Defence. The formal requirement for an argument supporting/attacking a claim does not deal with the level of support in this argument. Since the opponent may question every fact or rule presented and proof (justification) may fail, the parties are wise not to be too generous with support of their claims. This is of course an aspect of trial tactics.

Substantive rules as a source of burden of proof

The simple rule for the allocation of the burden of proof ('the one who makes a claim bears the burden of proof' (or argument at least)) is more complicated in the Dutch civil procedure (article 177 of the Dutch Code of Civil Procedure). Loosely translated this rule states:

> A party, who wants to invoke the legal consequences of the facts or rights adduced by her, bears the burden of proof for these facts or rights, unless any special provision or reasonableness calls for a different burden of proof.

Instead of only looking at which party adduces a certain fact, the burden of proof depends on the content of legal rules. In principle the substantive legal rules determine which side bears the burden of proof. Many legal rules have a substantive aspect, the right and obligations they establish, as well as a procedural aspect, which party bears the burden of proof. As an example consider article 6:162 of the Dutch Civil Code (BW) (tort):

> Article 162 BW 1. A person who commits an unlawful act towards another, which can be imputed to him, must repair the damage, which the other person suffers as a consequence thereof.

> 2. Except where there is a ground of justification, the following acts are deemed to be

unlawful: the violation of a right, an act or omission violating a statutory duty or a rule of unwritten law pertaining to proper social conduct.

3. An unlawful act can be imputed to its author if it results from his fault or from a cause for which he is answerable according to law or common opinion.

Article 6:162 BW both states under which circumstances a plaintiff may claim compensation for damages caused by the defendant: the defendant must have committed an unlawful act, the act must be imputable on him, the plaintiff must suffer damages and the damages must have been caused by the act. The plaintiff has to argue that these conditions are met and how, because he is the one who wants to invoke the legal consequences of article 6:162 BW. The defendant bears the burden of proof to show that an exception as stated in 6:162.2 BW applies, because he wants to invoke the exception.

Article 177 of the Code of Civil Procedure mentions two exceptions to the default allocation of burden of proof: special provisions and reasonableness. An example of a shift in burden of proof from plaintiff to defendant based on a special provision occurs in-group action tort cases. Suppose a group of people is shooting at tin cans in front of a hedge. The plaintiff passes behind the hedge and is wounded by a shot of one of the gunmen. Unfortunately it is unknown who fired the fatal shot. Any one of the gunmen may have fired the fatal shot. Article 6:162 BW would require the plaintiff to prove which of the shooters fired the fatal shot. This burden of proof is quite heavy. Article 6:99 BW sees to a shift of the burden of proof to the defendants. The plaintiff only has to proof the wound is caused by a shot fired by 'the group'. The group as a whole is responsible for the damages. Each of the gunmen may try to lift his part by proving that he did not fire the fatal shot.

The purpose of this shift in burden of proof is clear. In some cases the default burden of proof leads to an unbearable burden for one of the parties, while a shift in burden of proof would be fairer. The same applies to reasonableness as a reason to shift the default burden of proof.

The default distribution of the burden of proof rests on the substantial legal rules. For this reason, the wording of the statutory provisions in the Dutch Civil code contain clear (at least sometimes) indications about the concrete burden of proof. Presumptions play an important role in this respect. As shown in figure 2, proof of a fact (claim) can be delivered by showing that certain grounds are present and that a warrant linking grounds and conclusion is present. The presence of the grounds (and the warrant) leads to the *presumption* that the conclusion is warranted or true. In the Dutch Civil Code these presumptions can be defeasible or indefeasible. In the case of an indefeasible presumption the presence of some fact is taken to mean the presence of another fact. No proof to the contrary is allowed. Defeasible presumptions can be defeated by proof to the contrary. The wording of statutory provisions hints at whether a presumption is defeasible ('presumptive evidence', Dutch: wordt vermoed) or indefeasible ('deemed', Dutch: wordt geacht).

From the perspective of legal dialogue games, the fact that substantive rules hint at the burden of proof is interesting. A catalogue of the default burden of proof for the statutory provisions in the Dutch Civil Code could be used by the dialogue game to monitor and distribute the burden of proof in the dialogue game. While it is difficult for the machine to evaluate whether a player has given sufficient support for a certain claim, it is possible to evaluate if a player is obliged to justify a claim at all, and within restrictions if support is provided.

No burden of proof…

Not all claims have to be justified. Many dialogue games feature a type of move that allows a player to agree (or accept) a claim made by the other party. When a party accepts a claim adduced by the

other party, he becomes committed to this claim. Claims to which both parties are committed need not be proven or justified. What's even more, the court is also committed to the fact, even if this fact is known to be false by the court. This is a result of the principles of the civil procedure (principle of party autonomy).

A second type of facts that needs no justification is the well-known facts. Well known facts, such as "trains can move fast" are true by default. The party who wants to deny a well-known fact bears the burden of proof or burden of justification to show the fact to be false. A complication is that court decides if a fact is a well-known fact. The Dutch Supreme Court held the fact that Yew-trees (in England also known by the quite appropriate name 'HorseDeath') can kill horses to be a well-known fact amongst gardeners. The plaintiff disagreed.

A third type of facts that need no defence or justification, are the facts pertaining to the procedure itself. Whether a party filed a Defence is a question the Court can answer without resort to proof by the parties.

Finally there is a closure rule in the civil procedure: Uncontested facts are considered to be true. Both parties, and the court, are committed to these uncontested facts. In actual cases the parties try to dodge this closing rule by stating they deny all facts proclaimed by the opponent in every document. This move clearly misses its objective. Some dialogue games feature a closure rule for commitments like the one outlined here (e.g. MacKenzie's dialogue game, 1979). The commitments as a result of this closure rule are temporarily. The players can always contest facts in a later stage in the dialogue. For a dialogue game, the closure rule presents problems, such as: when do the commitments for uncontested facts come into play, is a party who became committed by not denying a fact, allowed to attack the fact in an appeal procedure?

A final feature concerning proof and burden of proof I want to discuss is the request to court to be allowed to proof certain facts. Parties may ask the court to be given the opportunity to proof certain facts (article 192.1 Rv). The court may not refuse the party this opportunity. This request to court has consequences for the commitment stores of the players and the court, although it is not entirely sure which.

This concludes my brief description of the CSP and burden of proof. It is far from complete. I hope it shows that an analysis of legal discourse from a legal perspective may show interesting topics for dialogue games to try to deal with.

4 Discussion

General models like DiaLaw do insufficient justice to the characteristics of actual legal procedures. In the previous section I've discussed a small sample of aspects pertaining to the burden of proof. In this section I will compare some of DiaLaw's features with those found in the CSP described above.

DiaLaw consists of four types of moves. Although DiaLaw's types of moves encompass the basic types of moves for a dialogue game, the actual procedure gives rise to a finer distinction. Each type of move can be divided into subtypes. In the CSP for instance, a party can explicitly accept a claim by the other party (Dutch: gerechtelijke erkentenis, article 181 Rv). Such an explicit acceptance can not be withdrawn, unless the acceptance was the result of misleading information. There are also less serious forms of acceptance, for instance acceptance as a result of the closure rule (uncontested facts are taken to be true). This type of implicit acceptance only leads to temporary commitment. The player committed by implicit acceptance can challenge the fact he is committed to at any time in the procedure.

Also with regard to the 'claim' move a further distinction has to be made. Not every fact adduced by the parties is to be treated in the same way. Some claims cause stronger commitments than others.

Walton and Krabbe (1995) distinguish between dark-side and light-side commitments that may prove useful in this context. Dark-side commitments are more fundamental, but also more hidden, than light-side commitments. The light-side commitments are known to both players. Dark-side and light-side commitments are related to different types of claims, for instance assertions versus mere concessions.

In DiaLaw the burden of proof may be lifted by moves of the opponent. In the following case the burden of proof initially rests on Bert. Ernie's move shifts the burden of proof from Bert to Ernie.

Bert: O.J. is a murderer

Ernie: O.J. is not a murderer.

In the Dutch civil summons procedure this would not happen. The Dutch supreme court ruled that article 177 Rv does not imply that a defendant has to provide proof for the facts adduced to question the facts proposed by the proponent (HR 23 Oct 1992, NJ 1992, 813). This gives rise to make a distinction between different types of 'question' moves. It makes sense to distinguish between:

- Requesting clarification. this does not impose a burden of proof on the other player
- Asking whether a player is serious about a fact (and hence is prepared to justify or defend the fact)
- Denying a fact. This is a counter attack, which may cause the burden of proof to shift.
- Confronting the other player with an inconsistency in his argument and hence a request to resolve this inconsistency.

This discussion merely shows that much work has to be done in order to design realistic dialogue games.

Legal dialogue games offer a promising way to study legal argument. In legal discourse, at least in principle, everything can be disputed. This does not mean that the outcome of the dialogue is completely at the disposal of the parties in the dispute. Both the law and the judge play an important role in limiting the discretion of the parties in the dispute. The role of the law in the summons procedure as described in this paper, is twofold: it plays a substantial role and a procedural role. In my view the challenge for researchers in the field of legal computational dialectics is to devise models that take as much from the procedural aspects of law into account to construct models that make realistic debates about the substantial aspect of legal rules possible.

Steps towards better dialogue games include constructing a typology of locutions needed in legal dialogue games. Work done by Gordon (1993), Lodder (1998), Walton and Krabbe (1995) and myself can be combined for this purpose. Another useful enterprise is the construction of an encyclopaedia with default the division of the burden of proof in a particular domain, like Dutch civil law. This component can be used by the moderator to monitor the game. A final domain on which much work has to be done is the rule-set for the dialogue game. Everything, at least in principle, is open to discussion in legal discourse. This also amounts to the rules of the procedure. The rules of the dialogue game have to allow discussion about these very rules.

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