



Why non-monotonic logic is inadequate to represent balancing arguments

JAN-R. SIECKMANN*

University of Bamberg, Faculty of Social and Economic Sciences, D-96045 Bamberg, Germany
E-mail: jan.sieckmann@sowi.uni-bamberg.de

Abstract. This paper analyses the logical structure of the balancing of conflicting normative arguments, and asks whether non-monotonic logic is adequate to represent this type of legal or practical reasoning. Norm conflicts are often regarded as a field of application for non-monotonic logics. This paper argues, however, that the balancing of normative arguments consists of an act of judgement, not a logical inference, and that models of deductive as well as of defeasible reasoning do not give an adequate account of its structure. Moreover, it argues that as far as the argumentation consists in logical inferences, deductive logic suffices for reconstructing the argumentation from the internal point of view of someone making normative judgements.

Key words: argumentation, defeasible reasoning, internal point of view, legal reasoning, normative arguments, weighing and balancing

1. Introduction

Several authors (e.g., Verheij 1996; Prakken and Sartor 1996; Prakken 1997; Hage 1997) have proposed systems of non-monotonic logic to represent the balancing of arguments, reasons, or norms in legal justification. The question to be dealt with here is whether these logics are adequate to represent this style of legal reasoning for AI applications. I will argue that they are not. First, because they ignore that legal decision making cannot use priority relations between arguments, because these priority relations are established, rather than used in the decision making process. Second, because legal decision making from the point of view of somebody who endorses the norms that he uses, somebody operating from the ‘internal point of view’ (Hart 1961, 55f.), is essentially deductive.

To illustrate my points, I will use an example of legal reasoning in which arguments are balanced. The example concerns an agent A who says that a judge B is corrupt. The assertion of A is a case of insulting speech. In this case, the rights of the freedom of speech and of personal honour collide.¹ That is, these rights cannot both be respected. As the statement of A is an instance of speech, A can claim that it was permitted. However, such a

permission would interfere with the personal honour of B. Thus, a normative conflict results, which must be resolved by balancing the competing normative arguments. The respective arguments in our example are:

ARG_{FS}:

- (1) any act of speech shall be permitted,
- (2) the statement of A is an instance of speech,
- (3) therefore, this statement should have the status of being permitted.

ARG_{PH}:

- (1) any act that does not respect the personal honour of other people is prohibited,
- (2) the statement of A did not respect the personal honour of B,
- (3) therefore, this statement should have the status of being prohibited.

Given ARG_{FS}, the norm that the statement in question was permitted should be valid. Given ARG_{PH}, the norm that the statement in question was prohibited should be valid.

Notice the deontic qualification of the conclusions. Particular norms *should be* valid. Two norms that permit, respectively prohibit one and the same act cannot both be valid all things considered, only one of these two should-be's can become actuality. The question to be decided then, is whether a permission or a prohibition of the statement shall on the balancing of these arguments, *be accepted* as the norm that is valid all things considered.

A central thesis of my paper is that the balancing of normative arguments is better not taken as the conclusion of a logical inference, but as the outcome of a decision making process. That is why I italicised the words 'be accepted' in the previous paragraph. There is a procedural aspect in the balancing of arguments and this aspect is not adequately captured by the fashionable models of defeasible reasoning. These models presuppose that the balancing of arguments proceeds on the basis of given priority relations (Prakken and Sartor 1996), or weighing knowledge (Verheij 1996; Hage 1997) from which the result of the argumentation can be inferred.² In my view, argumentation by balancing normative arguments *establishes* a priority relation between the competing arguments, and thereby which solution to a particular case is adopted.

2. The role of autonomous judgment

The balancing of normative arguments is a method for solving norm conflicts. In order to determine the legal or, more generally, normative situation, such a conflict must be solved by establishing a priority between

the conflicting arguments (Alexy 1995, 2002, p. 51). The required balancing of normative arguments is characterised by the following features (Sieckmann 1990, 1994, 2004):

- Balancing has the character of an autonomous judgment, because the required priority cannot in general be inferred from established premises, but is nevertheless governed by normative arguments.
- The normative arguments to be balanced are not only the objects of, but also reasons guiding, the balancing procedure.

If an argument based on the balancing of norms is reconstructed logically, the premises will include priority information, because such information is necessary to derive the conclusion. Since a logical reconstruction needs not reflect the decision making process, there is nothing wrong with this. However, such a presupposition of priority information is less than realistic concerning the way in which legal reasoning really operates. In this paper I will try to analyse what goes on in legal reasoning, especially in those cases that involve the balancing of arguments, without trying to force this style of reasoning within the framework of a purely logical reconstruction.

In the real life of law, a feature of balancing normative arguments is that there is often no pre-established priority information that decides the case in question. The required priority must often be established on the basis of the colliding arguments only. Admittedly, there are cases when priorities follow 'logically' from already available information (see, for instance, Prakken 1997, 204f; Hage 1997, 180f, 2001), but, first, the relevant information is often lacking, and second, reasoning about priorities often requires additional priorities that cannot be derived. In a loose sense one might speak of balancing whenever there are arguments for and against a particular decision. However, in a strict sense balancing of normative arguments requires that the valid norm is determined as the result of a balancing procedure, and cannot command validity independently of this procedure. The priority information required for deriving the result independently of such a balancing procedure is in real life often not available.

Moreover, in this procedure the arguments figure not only as objects to be balanced against each other but also as reasons for the resulting normative judgement (Sieckmann 1990, pp. 75, 87; Jansen 1998, p. 94). This means that whatever an agent establishes as the result of his balancing, he must claim to be required by the stronger or more important argument. Accordingly, if in the above example priority is given to the principle of free speech, the reason for this priority is that, in the particular case, the principle of free speech is regarded as of greater relative weight or importance than the competing principle of personal honour. There is not, or at least need not be, any other norm that provides a reason for this priority than the principle of free speech

itself. Thus, someone making such a judgement of priority, implying that a particular speech is permitted, will have to ground this judgement on that it is required by the principle of free speech, and on the greater relative weight of this principle in the particular case. The attribution of relative weight is, however, a determination of the agent making the judgement, and is not derived from a pre-established rule. It is based on a decision of the person making the judgement, but nevertheless this person must claim it to be required by the prevailing principle. The principle so to speak claims its own priority, and by adopting the argument that uses this principle, the required priority information is adopted automatically and implicitly.

One can characterize this type of reasoning as an autonomous balancing, or as making an autonomous judgement (Sieckmann 2004). An autonomous judgment is on the one hand free, that is, the agent could have made another choice, but on the other hand bound by reasons, that is, the agent considers the judgment to be obligatory. This characterization fits the structure of the justification by means of balancing normative arguments. The decision on the priority is free, in the sense that it is not determined by rules, and another decision had been possible for the agent as well. It is at the same time bound by principles or normative arguments, as the agent must present this decision as required by the more important principle or argument.

3. The structure of normative arguments that involve balancing

In this section I will give an analysis of normative arguments that involve the balancing of arguments, which takes into account that balancing is not based on pre-established priorities but is the outcome of autonomous judgements as described in the previous section. In earlier work (Sieckmann 1990, 1994) I have given such analyses in terms of the validity of normative arguments and normative statements. Here I will use terminology that is more familiar in AI and law circles.

The starting point of my analysis consists of normative arguments that lead to particular, though incompatible conclusions. Such an argument leads, for example, to the conclusion that a particular statement should have the status of being permitted. This argument is based on the principle of free speech, as expressed by the first premise of ARG_{FS}: any act of speech shall be permitted.

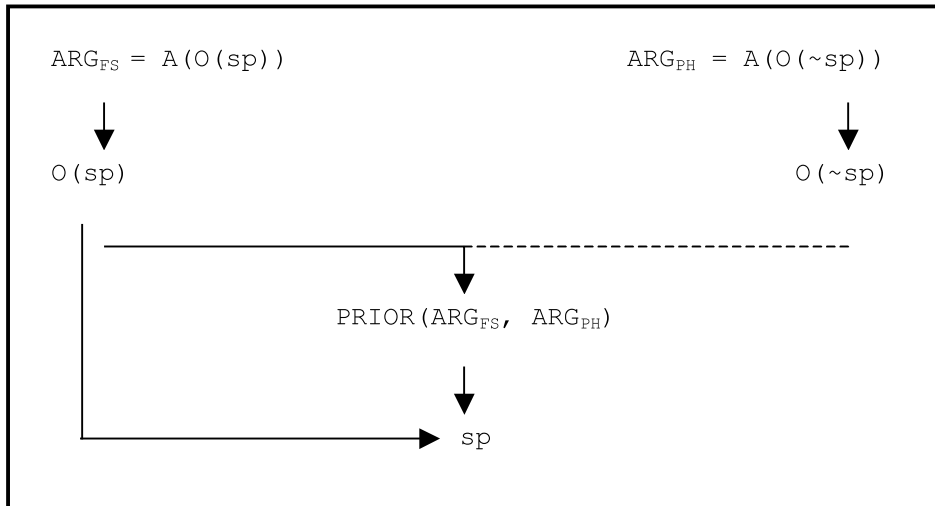
The free speech argument does not lead to the conclusion that a particular statement actually was permitted. This follows from its being an argument that must be balanced with counter-arguments. Normative arguments merely claim that their conclusions *should* be valid norms, not that they actually are valid. The argument of free speech thus cannot claim that someone actually was permitted to make a particular speech, but only that he should be thus permitted. The final outcome, after the balancing of arguments, will be either

that the statement actually was permitted, or that this statement actually was prohibited. Such a final outcome is represented by what I will call a *normative statement*.

In order to distinguish the claims of normative arguments from normative statements, normative arguments will be represented as $A(O(\text{VAL}(N_i)))$, where O is the traditional deontic ought-to-be operator, where VAL is a predicate that operates on norms and expresses that norms are valid, and where N_i represents a norm individual.³ For brevity's sake, the VAL -predicate can, and in the rest of this paper will be, omitted. So, for instance, $A(O(\text{statement-permitted}))$ represents the argument with the conclusion that the norm that the statement was permitted should be (ought to be) valid. The conclusion of this argument, $O(\text{statement-permitted})$, expresses that the statement should be permitted. This conclusion must be distinguished from the possible result of the balancing of arguments: *statement-permitted*.

The priority of one argument (ARG_x) over another argument (ARG_y) is expressed by the PRIOR -relation. For instance, if ARG_{FS} represents the argument based on free speech, and ARG_{PH} represents the argument based on personal honour, then $\text{PRIOR}(\text{ARG}_{\text{FS}}, \text{ARG}_{\text{PH}})$ expresses that the argument based on free speech has priority over the argument based on personal honour.

One can illustrate the structure of the balancing of normative arguments, and the logical relations involved, by the following scheme.



The argument ARG_{FS} leads to the conclusion that the statement should be permitted ($O(\text{sp})$), while argument ARG_{PH} leads to the conclusion that the

statement should be prohibited ($O(\sim sp)$). Because the argument takes place in a normative setting, the conclusion that the statement should be permitted leads to the further conclusion that the statement was actually permitted.⁴ That this conclusion really follows is not evident, because ARG_{PH} leads in a similar indirect way to the conclusion that the statement was actually prohibited. The actual conclusion that the statement was permitted is based on the autonomous judgment that ARG_{FS} has priority over ARG_{PH} . The reason for this priority lays in the argument ARG_{FS} itself. The fact that another priority might have been chosen because of ARG_{PH} makes that the actual priority choice was autonomous. Obviously, another priority might also have been chosen and if it had been chosen, it would be justified by argument ARG_{PH} . The dotted line in the picture represents this possible move that was not made actually.

Given the priority of ARG_{FS} over ARG_{PH} the conclusion that the statement was actually permitted follows from the intermediate conclusion that this statement should be permitted. Obviously there is a circular aspect in this argument: the actual conclusion follows from the intermediate conclusion of ARG_{FS} in combination with the priority of this argument over its competitor, while the priority ‘follows’ from the intermediate conclusion of ARG_{FS} because of the autonomous decision to assign this argument priority. However, there is no logical circle, for these relations are not used to infer one from another, but merely explicate what the agent making a balancing judgement assumes.

4. The deduction thesis

The view that legal reasoning is defeasible has inspired the application of non-monotonic logics to the formal reconstruction of legal reasoning. Although it is recognized that a reconstruction of defeasible reasoning is possible also within a theory of belief-revision following deductive logic (Alchourrón et al. 1985; Alchourrón 1993; Soeteman 2003 and in this issue; Wang 2003; Bulygin in this issue), non-monotonic logic is claimed to be more adequate (Hage in this issue). In the rest of this paper, I will argue that legal reasoning from the internal point of view is basically deductive, and that defeasible inferences do not form an essential part of it (the deduction thesis).

The internal point of view is the position of someone who accepts a norm as valid in a direct, non-relative sense, and uses it accordingly in making absolute normative statements, judgements, or arguments (Hart 1961, 55f.; Sieckmann 1990, p.72). Arguing for a normative legal statement is a form of reasoning from the internal point of view. With respect to this type of reasoning, the deduction thesis claims that

1. the logical inferences applied within such arguments can adequately be analysed by means of deductive logic, and do not require the application of non-monotonic logic, and moreover;
2. defeasible inferences must be regarded as a deficient form of reasoning if applied in normative argumentation from the internal point of view.

Two arguments support this deduction thesis, based upon the procedural nature of this type of reasoning, and on its claim to result in an all-things-considered judgement.

The justification of a legal normative statement takes place in a procedure, performed by an agent on a certain basis of information. For example, an agent might argue:

‘Given the importance of free discussion for democracy, if an insulting speech is made, the principle of free speech, requiring the permission of this speech, is of greater relative weight than the competing principle of the protection of personal honour, requiring its prohibition. Therefore, if an insulting speech is made, this speech is permitted.’

I will call arguments like this one, that argue for a particular norm, *norm establishing arguments* (following a suggestion of Jaap Hage). In this example, the information on which the decision making procedure is based includes assumptions of how a democratic system works, the interests in free speech and personal honour, the importance that is given to these interests and the relative weight that is, accordingly, attributed to the principles of free speech and of the protection of personal honour, and the effects that an insulting speech, its permission, and its prohibition would have on the interests of free speech and personal honour.

In connection with norm establishing arguments in which arguments are balanced, I have argued that they do not lead to their conclusions from pre-established premises, but that they involve autonomous judgments. The relation between the premises that enter into these arguments and the conclusion that is drawn from them is not primarily logical, but procedural. It might be argued that defeasible reasoning plays a role in norm-establishing arguments. Additional information that was not taken into account in establishing the norm invalidates, one might argue, the argument by means of which the norm was established. This line of reasoning would ignore the procedural aspect of norm establishing arguments, however. Additional information may invalidate a norm by necessitating a new justificatory procedure, but it does not invalidate the argument on which the original procedure was based. If a norm N has been established, and a fact F is introduced as additional information, then there are two possibilities. Either F is relevant for the argumentation leading to N, in which case it is not clear

anymore whether N holds. Its justification was based on different information and is not valid anymore. Consequently, a new justificatory procedure has become necessary. Or F is not relevant to the argumentation, and then there is no reason why the established norm should not hold anymore. In neither case defeasibility plays a role.

In taking the internal point of view towards a norm, one commits oneself to this norm. Such a commitment cannot go together with reservations concerning the correctness of the norm towards which one has committed oneself. By adopting a norm, one at least implicitly assigns to this norm the status of an all-things-considered judgement. This means that arguments that use this norm cannot be defeasible, because the (implicit) claim that all relevant arguments have been taken into account makes it impossible to accept that within this reasoning there could turn up new information that invalidates a formerly valid inference. If such information existed, either the proposed judgement was wrong because relevant and available information had been neglected, or some relevant circumstances have changed and require a new argumentative procedure. In neither case the agent makes use of defeasible inferences. Reasoning with a norm towards which one has taken the internal point of view can therefore take place by means of deductive logic.

5. Conclusion

Summing up, according to the inadequacy thesis, the idea of defeasibility is of no particular use for the analysis of the balancing of conflicting arguments, as the core of balancing is a normative judgement based on a justificatory procedure, not a logical inference. In this norm-establishing procedure, the agent must make an autonomous judgment with regard to the priority of the conflicting arguments, although he must base this judgment on one of the arguments, and in particular the argument to which he assigns priority.

According to the deduction thesis, normative argumentation from the internal point of view of someone justifying and applying norms he actually accepts as valid, follows deductive logic. The use of defeasible inferences and, hence, non-monotonic logic is not required and, moreover, inadequate within the sphere of reasoning from the internal point of view, because it is incompatible with the commitment to the norm that is implied by the internal perspective.

Notes

* I am greatly indebted to Jaap Hage for a critical revision of my paper. Of course, all remaining errors are mine.

¹ A more complex example of basically the same structure is the Lebech-case, in which the broadcasting of a TV-film about the Lebbach-murder case endangered the resocialisation of one of the participants of the crime who was shortly to be released from the prison. Cf. the decision of the German Constitutional Court, BverfGE 35, 202. This case has been analysed by various authors (e.g., Sartor 1994; Alexy 1995).

² Prakken (1997, p. 203) acknowledges that priorities not only determine the outcome of arguments, but can themselves be the outcomes of the arguments too. However, in his review arguments about priorities presuppose premises from which to argue themselves. My point here is that the priorities are established (decided upon) in the same argument, and therefore on basis of the same premises in which these priorities are used.

³ For this approach (see cf. Sieckmann 1990, p. 37, and, within a logical system; Hage 1997, p. 134).

⁴ This argument step which seems at first sight to be logical error (from ought to is) is discussed in Hage (1997, 126f) under the term *denotic collapse*.

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