

Conflicting Human Rights

A Study of the Relation between Logic, Legal Reasoning and Artificial Intelligence

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Abstract. This paper addresses two issues. First it contains an analysis of the ways in which human rights function in legal reasoning, with a focus on handling human rights conflicts. Second it uses the human rights discourse as illustration of the relation between logic and ‘interpretation’ in legal reasoning (including ‘theory construction’), or - better – legal decision making. The conclusion concerning this relation is that ‘interpretation’ plays the more important role. A further conclusion is that Law and AI research should focus more on this ‘interpretation’ than on logical tools for modeling legal reasoning.

Keywords. human rights, conflicts of rights, bundle-rights, teleological rights, interpretation, background constraints, law and logic

Law, logic and artificial intelligence

The relations between law and logic are not without ambiguities. Few persons would claim that legal reasoning does not need to be ‘logical’, but most lawyers have only a faint interest in logic, in particular formal logic. Logicians, on the contrary, ‘know’ that their field should take a central place in every discipline which attaches much value to argumentation, the law certainly included.

Part of the problems is that logic can be approached in two ways. One way is to see it as specifying a relation between on the one hand sets of sentences (premises) and on the other hand single sentences (conclusions). This relation is timeless and directionless, and has as such nothing to do with making inferences [1]. The other way is to see logic as a tool that can be used in reasoning, including legal reasoning. Then it specifies which conclusions may validly be drawn from a set of premises, or which premises are sufficient to justify the adoption of a conclusion. A special legal application is that logic can specify which consequences the law attaches to a case. This second view is seldom defended explicitly, but seems to underlie implicitly much logic-oriented work in Artificial Intelligence and Law [2, 3, 4, 5]. Logic on this second approach guides human behavior, because it tells humans which inferences they are

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‘allowed’ to make. This legal application is related to the use which law and AI makes of logic, namely as a tool to guide legal inference engines.

In this paper we will do a small case study about the role of logic in modeling human rights conflicts and their solutions. This study has two purposes. First we try to provide some insight in the complexities of reasoning with human rights. And second, we want to point out the limited role of logic in dealing with human rights and their conflicts.

To avoid possible misunderstandings: we do not assume that logic by itself should solve many (legal) problems. Logic must work with premises and these premises are from the logical point of view given. Of course it is often possible to argue about ‘premises’, but then the ‘premises’ are not premises anymore. So an important part of the solution of legal issues must lie in the adoption of premises. But given a sufficient set of premises, logic should determine the outcome of a case, at least that is the traditional picture.

We hope to illustrate that this traditional picture is incorrect as far as the legal decision making *process* is concerned. Premises, logic and possible conclusions are the result of a process of mutual adaptation, and the simple picture that logic bridges the distance between a set of adopted premises and the conclusions that follow from them is often incorrect. In a sense this is well-known: ‘Logic deals with a relation between premises and a conclusion, not with the process of legal decision making’ runs the obvious rebuttal. However, this rebuttal assumes the first approach to logic, as a timeless and directionless relation between premises and conclusion. Law and AI requires the second approach, however, the approach according to which logic guides the reasoning process. With our case study about human rights conflicts we aim to illustrate that the role of logic – more or less traditional logic² – is rather limited in this field of reasoning.

Interpretations of human rights

At first impression, human rights can conflict with each other. The freedom to express themselves of paparazzi who want to take photographs of celebrities and sell them to the press, conflicts with the right to privacy of the celebrities [6]. The right to property of rich people conflicts with the right to health care of poor people, because the government can only provide this health care if taxes are raised. The same right to health care may conflict with the right to education if the government has insufficient money to provide both.

At second sight the precise nature of human rights conflicts is not very clear and it may even be disputed that human rights can really conflict. This lack of clarity has to do with the interpretation of human rights. Interpretational issues play a role on at least two levels. On a relatively concrete level interpretation must determine what a human right ‘involves’, the precise nature of this ‘involvement’ still to be explained. For instance, does the right to freedom of expression involve a permission to photograph

² If the notion of ‘logic’ is made very broad, so that it includes for instance also guidelines for belief revision and other standards for rationality, the role of logic becomes correspondingly broader. Broadening logic in this way illustrates our main point, however, namely that the role of traditional logic in legal *reasoning* is rather limited.

celebrities and – which is not the same issue – to publish these photographs in magazines for commercial purposes. Does the right to privacy involve that there exists a general prohibition to photograph people, which needs to be lifted by means of a permission of the photographed person? On this level it is possible to use the guideline for interpretation that human rights should be interpreted in such a way that they can all be complied with. This would mean that the freedom of expression and the right to privacy should be interpreted in such a way that no conflict can arise. For instance, the freedom of expression should not include the permission to photograph people for commercial uses, while the right to privacy only involves the prohibition to take photographs for commercial uses.

On a more abstract level, human rights in general can be given two distinct interpretations. On the *bundle interpretation*, a human right ‘involves’ a bundle of permissions, prohibitions, duties and competences. For example, the right to privacy may involve the general prohibition for everybody to photograph every other human being (for commercial purposes). It may also involve a competence for everybody to give permission to take photographs nonetheless, but only for photographs of the permission giving person. On this bundle interpretation of a human right, the existence of the right necessarily goes together with all the duties, prohibitions, permissions and competences which the *bundle right* involves. This may be combined with the view that the existence of the right coincides with the bundle of involved duties etc. but that is not necessary. To reason on the basis of human rights, it is on this bundle view required to establish by means of interpretation what the right ‘involves’. This bundle of involved duties etc. is then the basis for more traditional legal reasoning.

On the *teleological interpretation*, human rights can be seen as a kind of ideals which should be realized as much as possible, but which may have to compete with other ideals, including human rights, and maybe also policies [7, 8, 9, 10]. On this interpretation the fact that an action promotes a human right is a contributory reason why this action should be performed. The fact that an action detracts from the human right is then a contributory reason against performing that action [11, 12]. The step from the abstract rights formulations to the more concrete reasons for action is made possible by information of the type that a particular kind of action promotes or detracts from the human right. This kind of information figuratively bridges the distance from the abstract right description to the concrete reasons for action.

Conflicts of human rights

Let us assume provisionally that human rights can conflict. Then the next question becomes *how* human rights – or rights in general – can conflict. Part of the problem is that it is not at all obvious what a right is. There seem to be at least three kinds of rights:

1. personal rights, or claims, which are the flip side of obligations [13];
2. absolute rights or rights in rem, such as ownership, copyright, and usufruct;
3. human rights, such as the right not to be tortured, the right to privacy, the right to health care, and the right to freedom of expression.

Interpretation and conflict

Here we will only focus on human rights, but even then the nature of the right not to be tortured seems to differ considerably from the nature of the right to privacy and from the right to freedom of expression. Rights need to be *interpreted* in order to determine what they 'involve'. It turns out that human rights do not only differ in the kinds of legal positions which they involve, such as permissions, duties (of others than the right bearers), and immunities, but also in the contents of these positions. For instance, does the right to freedom of expression involve only the permission to express oneself by means of speech or in writing, or also by means of works of art, or by killing a person. It seems unlikely that it is allowed to kill somebody by way of exercise of the freedom of expression, but what is the reason? Is it the case that this freedom does not involve the permission to kill, or does the permission to kill conflict with the prohibition to kill?

As this last example illustrates, it is not always clear whether a human rights conflict in a very broad sense is to be solved through the determination of what the right involves, or through a way of conflict handling in a more narrow sense of "conflict". What is clear is that the proper analysis of human rights conflicts is not on the level of the rights themselves, but on the level of what the rights involve. A conflict of human rights is a conflict of what these rights involve.

A recurring conflict of human rights is between the freedom of expression and the right to privacy. One example is the case of Princess Caroline of Monaco against paparazzi [6]. The Princess complained that her right to privacy was violated by paparazzi who took pictures for publication in European magazines, while the paparazzi invoked their freedom of expression. This is a conflict of human rights because the permission of the paparazzi to take the photographs and sell them for publication, based on their freedom of expression, contradicts the duty on the paparazzi not to take these photographs, based on the Princess' right to privacy. The logical contradiction between the duty and the permission so to speak fires back on the human rights which involve the duty and the permission. The logical contradiction between the duty and the permission leads to the conflict between the freedom of expression and the right to privacy. To determine whether the human rights conflicts, it is necessary to 'interpret' these rights to determine what they 'involve'. Only if what the rights involve is incompatible, the rights can be said to conflict.

This immediately suggests one way to handle human rights conflict: the rights may be interpreted such that what they involve does not conflict. The conflict is only apparent then, because when the human rights are 'properly' interpreted, the seeming conflict disappears. One factor determining the proper interpretation of a human right might be that a different interpretation causes an actual human rights conflict.

Compatibility and background constraints

The conflict between the right to privacy and the right to freedom of expression seems to be purely logical in the sense that there is a logical conflict between the permission to take photographs and the prohibition of taking photographs, which does not depend on any other facts.

Some human rights conflicts do depend on additional facts, however, and these conflicts are therefore not purely logical. Take for instance the rights to health care and

the right to education. These rights may conflict in case the government which must implement them does not have sufficient money. Given a lack of money, it is not possible to fulfill fully both the right to education and the right to health care. These rights would therefore conflict, but this conflict is conditional on the money constraint. This money constraint as such has nothing to do with the two human rights, but if it exists 'on the background' it makes it impossible that both duties which follow from the human rights are complied with simultaneously. This *background constraint* makes the duties incompatible. However, if the money constraint is lifted, the duties become compatible and the conflict between the rights to education and health care is taken away. So a second way to handle human rights conflicts is to lift background constraints which cause conflicts. Obviously, this only works for human rights conflicts which depend on such constraints.

Notice, by the way, that one way to lift the money constraint would be to expropriate rich people in the country, or to nationalize some big companies. That would make the rights to education and health care compatible but would violate the human right to property. Apparently this right to property is somehow involved in the conflict between the rights to education and to health care [14].

Exceptions

Suppose that Princess Caroline of Monaco would have given some paparazzi permission to take photographs of her. This permission would make an exception to the prohibition to take photographs that is involved in the right to privacy. This exception would for these paparazzi take the conflict between their freedom of expression and the Princesses right to privacy away. However, the limitation to the paparazzi who have the permission makes that this exception does not take the conflict between the human rights as such away. The rights in abstract still conflict, but the general implications of the conflict are taken away by the exception which resulted from the permission.

A different kind of exception would be that something which is normally involved by a human right is not involved because of the exception. For instance, the right to due process involves that citizens may not be imprisoned without having been heard by an impartial judge. Under normal circumstances, the right to due process imposes a negative duty (prohibition) on states. Arguably, however, in a state of war there exists an exception to the right to due process, which makes that what is normally involved in the right is not involved during war time. There is no prohibition for the state anymore against imprisoning citizens that have not been heard.

These two examples illustrate how exceptions to human rights differ from limitation on the rights through interpretation. A particular interpretation of a right does not require the presence of a special reason, while an exception does.

The discussion of exceptions brings us to the third way to deal with human rights conflicts. Such a conflict may be taken away by making an exception to the right, so that what normally is involved by the right is under the exceptional circumstances not involved. This possibility is – by the way – a reason not to identify rights with the bundle of legal positions they involve. The reason is that if the rights are identical to these bundles, exceptions would not be possible.

Prioritizing

The above three ways to deal with human rights conflicts, interpretation, constraint lifting, and exceptions, are means to ensure that threatening conflicts do not actually occur. There are also ways to deal with actual conflicts, namely prioritizing and optimization.

Prioritizing can take place on two levels, on the level of the human rights themselves and on the level of what the rights involve. The conflict between the right to life and the right to privacy can illustrate the difference. Suppose that terrorists have taken some persons as hostages and threaten to kill them if certain demands are not met. The police have a serious suspicion that the hostages are in a private house and consider to enter the house. To do so, they need a search warrant, but obtaining one may take too much time. In deciding whether to break the 'ordinary' law they must balance the right to life of the hostages against the right to privacy of the inhabitants of the house. In making this decision the police might argue that the right to life is more important than the right to privacy, and that *therefore* the duty to free the hostages prevails over the duty to respect the privacy of the inhabitants. In the end, it is the priority of one duty over another duty that counts, but this priority is derived from the priority relation between the human rights that involve these duties.

A different case illustrates how the prioritizing can take place on the level of the involved duties only. A person who suffers severely at the end of his life wants to receive help in ending his life. Suppose that the right to privacy involves the right to decide over one's own life and therefore allows people to assist other persons to end their lives. The right to life, one might argue, involves a prohibition to assist persons who want to end their lives. (Clearly, it is possible to debate this all.) If the priorities are derived from the human rights, the duty not to assist prevails over the permission to assist. However, in this case the priority is arguably different; the permission might prevail over the duty. That would mean that the priority relation over the involved duty and permission is not (only) based on the priority relation over the human rights.

Optimization

Optimization as a technique to deal with conflicting human rights which is based on the insight that compliance with, or violation of, a human right is not always an all or nothing matter. Human rights can be seen as values which can be realized to a smaller or a greater extent. The idea is then that a smaller realization of an important human right may prevail over a bigger realization of a lesser human right, or the other way round [15]. Notice, by the way, that this way of dealing with human rights conflicts presupposes the teleological interpretation of human rights, while the ways to deal with conflicts discussed above presuppose the bundle interpretation.

Let us assume for the sake of argument that the right to freedom of expression is more important than the right to privacy. Going by this priority, the permission to photograph persons prevails over the prohibition to do so. Suppose that a professional photographer gets permission from the board of directors of a hospital to photograph all patients who enter the emergency department of a hospital, even without their permission. A patient who discovered that he was photographed demands destruction of the picture. The photographer defends himself by stating that this particular photograph will not be used in the newspaper report for which the photographs were

taken. The patient nevertheless persists. Arguably, in this particular case the violation of the privacy was bigger than the promotion of the freedom of expression. Therefore, again arguably, the prohibition to take (and keep) the photographs prevails over the permission to do so, even though the priority of the underlying human rights points in the other direction.

In this optimization approach, the priority relation over human rights is combined with the degree of violation or promotion, in order to obtain a more balanced result concerning the duties and permissions that are involved by these rights. The optimization may be further refined if not only the importance of the rights and the degrees of promotion or violation are taken into account, but also the likelihood that particular behavior actually will promote or violate a human right [15, 12].

Accrual of reasons

In the above it was assumed that a conflict of human rights is a conflict between *two* rights. That is not necessarily the case, though. If the right to education and the right to health care must be balanced, it is very well possible that the right to life also plays a role. Moreover, we have seen that the right to property may also play a role in this connection.

Suppose that a government in a poor country considers the possibility to start a program for building small hospitals in a number of cities. If it builds the hospitals, the quality of education cannot be improved because of a lack of money. If only the rights to health care and to education are involved, the outcome might be a division of the available money over hospitals and schools, such that the importance of the rights in combination with the degrees (and likelihood) of their realization is optimized. One can imagine, however, that investing money in hospitals is an even better way to save human lives than to invest money in education. If the human right to life is taken into account, the balance might be tipped or shifted in favor of the hospitals [12].

It is also possible to question the monetary constraint. By taking more money from rich people, it may be possible to build both hospitals and schools. That might be a violation of the right to property, but this violation can be balanced against the promotion of health care, education and human lives. More in general this raises the question whether the promotion of human rights should be treated as a big balancing operation in which all rights should exercise some influence on the outcome of the decision making process, or that some rights should be treated as constraints on the possible actions, where the other rights go into the balancing operation to select the best possible action within these constraints [14].

No formalization

There is no room for a satisfactory formalization of the above account of human rights conflicts, let alone of a complete one. Moreover, for the gist of this paper, formalization is not very important. Nevertheless we will briefly indicate the lines along which formalization might take place. The first issue is which interpretation of human rights is adopted, the bundle interpretation or the teleological interpretation. The decision on what is the best interpretation likely depends amongst others on the right which is at stake.

Rights on the bundle interpretation

If a ‘bundle-right’ exists (is valid), this involves the validity of one or more rules. These rules may be mandatory (duty-imposing), prohibitive, permissive, or power-conferring. Involvement may be modeled as entailment (necessary implication). For instance:

$$N(\text{Valid}(\text{Right-not-to-be-tortured}) \rightarrow \text{Valid}(\text{true} \Rightarrow \text{Od}(x, \neg\text{torture}(y))))$$

Let us ignore power-conferring rules here. Then the conflict of bundle-rights boils down to a conflict of the deontic rules which these rights involve. Basically it may be said that two rules conflict if it is possible that the conditions of both rules are satisfied, while it is impossible that the (instantiated) rule conclusions are both true [14].³ A conflict of duties can be characterized analogously: two conditional duties conflict if it is possible that the two conditions are both satisfied, while it is impossible that the behavior prescribed by the rules is performed. As a special case, two unconditional duties conflict if it is impossible that the behavior prescribed by both rules is performed. Moreover, a prohibition to do X conflicts with the permission to do X.

What is co-possible depends on a set of background constraints, which can be taken more or less broadly. The operation of these constraints and the possibility that the constraints consists (partly) of valid rules is also discussed in [14].

What is involved in a bundle-right is an all-or-nothing matter. Actions are permitted, mandatory, prohibited, or not. Still there are several ways to deal with conflicts. One is to change the interpretation of rights, so that the duties etc. which are involved in a right are changed. Another one is to assume exceptions, either to the rights, so that they do not involve particular duties etc. anymore, or to the duties etc. themselves, so that a conflict with another duty or a permission is avoided. A final possibility is to make changes in the background, so that duties which were in conflict do not conflict anymore.

Rights on the teleological interpretation

Rights on the teleological interpretation may be said to conflict if, given a background of presupposed facts, actions which promote one right detract from the other right. Suppose that we have a background consisting of the following facts:

Not-enough-money
Not-enough-money $\rightarrow$ Detracts-from(build-hospitals, right-to education)
Not-enough-money $\rightarrow$ Detracts-from(build-schools, right-to-health-care)
Promotes(build-hospitals, right-to-health-care)
Promotes(build-schools, right-to education)

Given this background, the rights to health care and to education conflict, because what promotes the one right detracts from the other, and the other way round.

There are several ways to deal with such conflicts. The first way is to interpret the conflict away, for instance by changing one’s views about what promotes or detracts

³ We assume here that neither one of the rules ‘conflicts with itself’ in the sense that it is possible that the conditions of the rule are satisfied, while the instantiated rule conclusion is an impossible state of affairs.

from a right. This is only possible where promotion or detracting is not a causal relation. For instance, it is possible to determine by means of interpretation that a prohibition of social network programs detracts from privacy. It is not possible to determine by means of interpretation that building more hospitals promotes health care.

A second way is to lift the background conditions which make that what promotes the one right detracts from the other. In our example about building schools and hospitals, collecting more money would do the job.

A final way to deal with such a conflict is to live with it, and optimize action so that the gain derived from promoting one right is bigger than the loss caused by the detracting from the other right [15, 11, 12].

Mixed cases

A bundle-right conflicts with a teleological right if the bundle-right involves a duty or a permission to do what detracts from the teleological right, or forbids what promotes a teleological right. Mixed conflicts can again be solved by means of interpretation and constraint lifting, and mitigated by looking for ways to comply with duties that detract as little as possible from teleological rights.

Legal reasoning, logic and interpretation

In the previous sections we studied human rights and how they function in legal reasoning. We found that these rights can be interpreted in two fundamentally different ways (bundle-rights and teleological rights), and that the presence or absence of conflicts depends to a large extent on how the rights are interpreted, what they are taken to involve, and what is taken to promote them or detract from them. Given a (large) number of these interpretational choices, logical tools can help to deal with the conflicts, if only by indicating which interpretations or exceptions are necessary and which constraints must be lifted to avoid the conflicts, or which actions must be looked for to mitigate their effects. This is not different from the role of logical tools in other forms of (legal) reasoning. Logic can only inform us about the relation between premises and conclusion, and tell us which conclusions follow from a set of premises, and which premises suffice for validly drawing particular conclusions. Notably, it cannot help in generating the premises of arguments, and it should not be expected from logic that it provides this help. But still ...

Still this account of the role of logic in legal reasoning with human rights leaves much to be desired for AI applications in legal reasoning. Such AI applications which can assist in drawing legal conclusions need two kinds of input, which are not necessarily easy to distinguish. One kind is a form of logic, deductive logic, defeasible logic, deontic logic, logic for comparison of alternative actions, or whatever. The other kind of input consists of domain knowledge. Although the idea that there is one 'correct' logic has been abandoned nowadays, the number of available logics from which can be chosen is still relatively limited and the choice for a particular kind of logic is still to a large extent determined by the knowledge domain. Logic is the relatively unproblematic kind of input for legal AI applications.

Domain knowledge is much more problematic. The reason is that it is not a fixed entity. It is, for instance, probably not the case that there exists a fixed number of

human rights. It is certainly not the case that there is one objective right answer to the question what the human rights involve, or what promotes them. It is not even objectively so that a human right is either a bundle-right or a teleological right, or that it has the same nature in every case in which it might be applicable. None of these domain-related issues has a predetermined correct answer [16, 17] and legal reasoning about the demands which human rights make on the outcome of legal cases is as much establishing premises as drawing conclusions. The decision making procedure is at least as important as the final argument that leads from what turn out to be the premises and the conclusion. Legal decision making is precisely what its name says: it is decision making, not conclusion drawing. This is not to say that logic is unimportant and plays no role, but it does say that the role of logic in legal reasoning is relatively limited. Again, this is theoretically well-known, but the amount of energy put in the development of legal logics does not reflect this relative lack of importance. In the opinion of the present authors, it may be a waste of effort to invest more time in the development of logics that are to be implemented in artificially intelligent legal reasoning systems. A pursuit that is more worthwhile is to gain insight in types of legal reasoning, such as the use of principles of proportionality and subsidiarity, a fortiori arguments, the strive for efficiency etc. [18, 19]. The tools of formal logic can be very useful in making the implicit understanding of these reasoning techniques explicit and precise. What this leaves for the use in artificially intelligent legal reasoning systems is a matter that needs to be clarified if our understanding of what goes on in the minds of naturally intelligent reasoning systems has reached as sufficient level.

References

- [1] D.J. Israel, 'What's wrong with non-monotonic logic?', in M.L. Ginsberg (ed.), *Readings in Nonmonotonic Reasoning*, Morgan Kaufman, Los Altos 1987, 53-55.
- [2] K. Ashley, *Modeling Legal Argument. Reasoning with Cases and Hypotheticals*, MIT-Press, Cambridge, 1990.
- [3] H. Prakken, *Logical Tools for Modelling Legal Argument. A Study of Defeasible Reasoning in Law*, Kluwer, Dordrecht. 1997.
- [4] J.C. Hage, *Reasoning with Rules*, Kluwer, Dordrecht. 1997.
- [5] G. Sartor, *Legal Reasoning. A Cognitive Approach to the Law*, Springer, Dordrecht, 2005.
- [6] European Court of Human Rights, Application 59320/00, Judgment of June 24, 2004 (*Von Hannover v. Germany*).
- [7] R. Alexy, 'Zum Begriff des Rechtsprinzips', *Rechtstheorie*, Beiheft 1 (1979). 59-87.
- [8] R. Alexy, *Theorie der Grundrechten*, 6e Auflage, Suhrkamp, Frankfurt a/M, 1986.
- [9] J.C. Hage, 'Teleological Reasoning in Reason-based Logic', *Proceedings of the Fifth International Conference on Artificial Intelligence and Law*, ACM Press, New York, 1995, 11-20.
- [10] J.C. Hage, 'Goal-based Theory Evaluation' in J. Breuker (ed.), *Proceedings of the Thirteenth Jurix Conference*, IOS Press, Amsterdam, 2000, 59-72.
- [11] T.J.M. Bench-Capon and G. Sartor, 'A Model of Legal Reasoning with Cases Incorporating Theories and Values', *Artificial Intelligence* 150 (2003), 97-143.
- [12] J.C. Hage, 'Comparing Alternatives in the Law. Legal Applications of Qualitative Comparative Reasoning', *Artificial Intelligence and Law* 12 (2005), 181-225.
- [13] W.N. Hohfeld, *Fundamental Legal Conceptions as Applied in Judicial Reasoning; And Other legal Essays*, Yale University Press, New Haven, 1920,
- [14] J.C. Hage, 'Rule Consistency', in Jaap Hage, *Studies in Legal Logic*, Springer, Dordrecht, 2005, 135-157.
- [15] R. Alexy, 'On Balancing and subsumption. A Structural Comparison', *Ratio Juris* 16 (2003), 433-449.
- [16] J.C. Hage, 'Legal Reasoning and the Construction of Law', *i-Lex*, 7 (2012), 81-105, <http://www.i-lex.it/us/previous-issues/volume-7/issue-16/103-legal-reasoning-and-the-construction-of-law.html> .

- [17] J.C. Hage, 'Construction or Reconstruction? On the Function of Argumentation in the Law', C. Dahlman and E. Feteris (eds.), *Legal Argumentation Theory: Cross-Disciplinary Perspectives*, Springer, Dordrecht 2012.
- [18] A. Peczenik, *On Law and Reason*, 2nd ed., Springer, Dordrecht, 2008.
- [19] W. Farnsworth, *The Legal Analyst*, Chicago, University of Chicago Press, 2007.