however, that this material necessitates modification of the main argument line of this chapter and therefore I only mentioned some of the more recent publications, without striving for completeness.

Chapter 9, *Legal Reasoning and Legal Integration*, illustrates how the theoretical work of, in particular, the chapters 3 and 4, can be put to practical use. It contains an elaborate argument why case-based reasoning does not necessarily give a legal decision maker more leeway than rule based reasoning. By means of this argument it is argued why Legrand's view that a uniform civil law code cannot lead to uniform private law, is based on a wrong premise. This chapter is a slightly modified version of Hage 2003 (LRLI). I want to thank Jan Smits for valuable comments that made it possible to clarify some obscure parts in the argument of this chapter.

Chapter 1

LAW AND DEFEASIBILITY

1. INTRODUCTION

During the last few decennia quite a bit of literature has been published about so-called defeasible reasoning in the law.[1] Nevertheless, the question what this defeasibility precisely amounts to has received scarce attention.[2] Intuitively, the defeasibility of legal reasoning is a characteristic of the law or of legal reasoning and its understanding would be an understanding of what goes on in the law. Logical systems, such as non-monotonic logics, would only be means to capture a phenomenon that exists independently of these systems.

Recently, the question whether legal reasoning is really defeasible has been raised with some urgency.[3] It seems therefore time to pay systematic attention to the nature of defeasibility in general and to the relevance of defeasibility for the law in particular. Another topic that deserves attention is whether the analysis of legal reasoning, assuming that it is defeasible, requires the use of some non-monotonic logic. It has recently been argued that it does not.[4]

The structure of this chapter is as follows: First I will try to pin down the notion of defeasibility and in that connection I will distinguish between five

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[1]   E.g. Raz 1975, Gordon 1986, Schauer 1991, MacCormick 1995, Prakken and Sartor 1997 and 2004, Verheij 1996, Hage 1997 Prakken 1997 and Brozek 2004.
[2]   One exception is Prakken and Sartor 2004.
[3]   Bayón 2001.
[4]   Soeteman 2003.

kinds of defeasibility, namely ontological, conceptual, epistemic, justification, and logical defeasibility. The second step is to investigate whether the law, legal knowledge, legal reasoning, or legal justification, is defeasible in one of these distinguished senses of defeasibility. The answer will be affirmative. Given this affirmative answer, I will address the question whether legal reasoning, where it is defeasible, should be analyzed by means of a so-called non-monotonic logic. Again, the answer will be, cautiously, affirmative.

2.   KINDS OF DEFEASIBILITY

Although it is often argued that legal reasoning is defeasible, it is seldom specified what this alleged defeasibility amounts to. The first step in filling this gap is to distinguish defeasibility from non-monotonicity.

2.1   Non-monotonicity and defeasibility

Monotonicity and non-monotonicity are characteristics of systems of (formal) logic. A system of logic is monotonic, if and only if it is such that if a set of sentences S' is a superset of S, the set of conclusions C' that follow according to this logic from S' is a superset of the set C of conclusions that follow from S. A system of logic is non-monotonic if and only if it is not monotonic.

   As can be seen from these definitions, monotonicity and non-monotonicity are characteristics of logical systems and have as such little to do with the law or with legal reasoning, or even with reasoning in general. Possibly a non-monotonic logic is useful to model legal reasoning, because legal reasoning is defeasible in a sense that is still to be specified. But even then the non-monotonicity of the logical system is something else than the defeasibility of the reasoning that is modeled by means of it.[5]

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[5]   Non-monotonicity as a characteristic of logical theories and defeasibility are not always well distinguished. For instance, Hage (1997 RwR, 4) calls the phenomenon that additional information can make a conclusion underivable which would be derivable in the absence of this information, the defeasibility of arguments. Prakken and Sartor (2004) adduce the non-monotonicity of common sense reasoning to illustrate what they call inference-based defeasibility. The very notion of inference-based defeasibility already presupposes that defeasibility has something to do with arguments, instead of what these arguments aim to capture, namely justification.

2.2　　Ontological and conceptual defeasibility

'Defeasibility' was originally a technical legal term, standing, according to Collins English Dictionary, for the capability of an estate or an interest in land of being defeated, or – what boils down to the same thing – being rendered void. In his paper The ascription of responsibility and rights, Hart extended the use of this notion to all concepts that have the property that there are a number of conditions of application, but also one or more circumstances that, if they occur, end the prima facie applicability of the concept.[6] The concept of a contract is a typical example. A contract that has come into existence after an offer and acceptance can be invalidated if one of the parties invokes a defeating condition, such as fraudulent misrepresentation, or undue influence. In this connection it is crucial that the defeating conditions are actually invoked; the mere fact that they occurred is not sufficient to defeat the contract. Therefore, defeaters are to be distinguished from ordinary conditions for the existence of a contract, which do not need explicit invocation.

For the understanding of this kind of defeasibility it is also crucial that the defeat of the contract has retro-active force.[7] If defeat would operate *ex nunc*, there would merely be a change in the facts: before the defeat the contract was valid and after the defeat it is invalid. Such a change in the facts is a very common phenomenon and there is no need to have a special concept - defeasibility - to denote it. For instance, if an open door is closed, the door was open before the event and it is closed afterwards. It would be rather peculiar to say that the fact that the door was open has been defeated by the event that the door was closed.

The case of a defeated contract is special, because of the retro-active force of the defeat. As long as the contract is not defeated, it is valid, but as soon as it has been defeated, it is considered to have been invalid all of the time. This is a rather uncommon phenomenon and deserves for that reason the special name of defeasibility. Since this kind of defeasibility concerns the retro-active change of the *facts* and not our beliefs about the facts, I propose to call it *ontological defeasibility*.

In his discussion of defeat in *The ascription of responsibility and rights* Hart connected defeat not so much to facts as to concepts. Concepts such as '(valid) contract' would be defeasible because they cannot be adequately characterized without reference to the conditions that would defeat their

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[6]　Hart 1949.

[7]　The importance of retro-active force that distinguishes defeat from merely a change in the facts was not emphasised by Hart in his *Ascription*.

applicability. One may introduce a special term, *conceptual defeasibility*, for the defeasibility of concepts, although in my opinion it is not very elucidating to connect defeasibility to particular concepts, rather than to the phenomena denoted by these concepts.

2.3   Epistemic and justification defeasibility

Most, if not all, of our beliefs are amenable to revision. Some changes in the set of all our beliefs occur spontaneously, for instance because of sensory perception, or because we forget things that we used to know. Other changes are generated by the insight that beliefs should rationally be accepted or rejected, given what else we believe. This insight may lead us to accept new beliefs that should rationally be accepted, or to abandon beliefs, because they should rationally be rejected. It is possible to call the revisability of our beliefs 'defeasibility'[8] and I will use the term *epistemic defeasibility* for this kind of defeasibility.

In my opinion epistemic defeasibility as a separate notion is not very interesting, because it is merely another term for a phenomenon that is already known as revisability. Moreover, the revisability of beliefs is a psychological phenomenon, which has as such only indirectly to do with reasoning or logic. For this reason I will further ignore epistemic defeasibility.

There is, however, another kind of defeasibility, closely related to and easily confused with[9], epistemic defeasibility, which is more interesting. We accept some of our beliefs because it is *justified* to accept them given our other beliefs. For instance, we believe that John is punishable, because we both believe that John owns pornography and that owning pornography is punishable. If we stop believing that owning pornography is punishable, the belief that John is punishable loses its justification. The same holds if we acquire the beliefs that Johns owns pornography purely for scientific issues and that owning pornography for scientific issues is not punishable. To say it differently, the belief that John is punishable, which used to be justified given the original belief set, is not justified anymore given the new belief set. I will call this kind of defeat, which results from changes in the beliefs that underlie another belief, *justification defeat*.

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[8]   See, for instance, Pollock 1995, 40. Bayón 2001 argues that this kind of defeasibility is the only kind that is relevant for the law.

[9]   Brozek 2004, 33, for instance, shifts easily from the operation of one's cognitive system under defeasible rules (epistemic defeasibility) to the defeasible justification of beliefs (justification defeat).

Normally if one's beliefs are not justified anymore, one abandons them, which means that epistemic defeat is a natural consequence of justification defeat. But this does not always happen. An exception would for instance be that one does not realize the impact of the changes in one's belief set and consequently does not (yet) make the rationally required changes. Moreover, sometimes new beliefs are acquired, or old beliefs are lost, without justificatory reasons for it. Justification defeat and epistemic defeat apparently not always go hand in hand and – next to their conceptual difference – this is a reason to distinguish them well.

2.4   Justification defeat and defeasible reasoning

There is a close connection between justification defeat and the defeasibility of reasoning. Many arguments are used to justify their conclusions. This means that the person who adduces such an argument, if sincere, intends to show by means of the argument that its conclusion is justified. If, on the arrival of new information, the conclusion turns out not to be justified anymore, the original argument by means of which the conclusion was justified, loses its force. *In this sense*, it may be said that the argument turned out to be defeasible too. Notice that on this interpretation, the defeasibility of the argument is the result of the defeasibility of the justification that was given by means of the argument and not the other way round. Defeasibility is not primarily a characteristic of arguments, but of justification.

2.5   Absolute and relative justification

From the kinds of defeat that I distinguish, justification defeat has the strongest relation to the non-monotonicity of some systems of logic. This is particularly clear when justification defeat occurs because of additions to one's belief set.[10] If the belief that John is punishable is not justified anymore because of the additional beliefs that that Johns owns pornography purely for scientific issues and that owning pornography for scientific issues is not punishable, this is quite similar to the phenomenon that a valid argument from a set of premises becomes invalid if more premises are added. The justificatory relation between a belief set and a particular belief corresponds to the derivability relation between a set of premises and a possible conclusion from these premises.

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[10]   That justification defeat also occurs when beliefs are taken out of one's belief set was pointed out to me by Carolus Grütters.

In this connection it is important to distinguish between two senses in which a belief may be said to be justified, name absolute and relative justification. Absolute justification is a status of beliefs that is like truth, in the sense that it can be passed from the premises to the conclusion of a good argument. I am not aware of attempts to give an account of what absolute justification amounts to, but the following may serve to provide such an account.

A belief is absolutely justified if either

  – it is justified by itself,

or

  – it is justified relative to a set of beliefs that are themselves absolutely justified.

This is a recursive definition, because it refers again to absolute justification. This recursion must 'bottom out' somewhere, if the definition is not to be circular. Moreover, the only place where it can bottom out is on beliefs that are justified by themselves. I have strong doubts, however, whether the idea of a belief that is justified by itself, makes sense. A belief can be true, or false, depending on whether the facts are as the belief holds they are. I cannot see, however, what it would mean that a belief is justified, unless in the sense of being justified relative to other beliefs that justify it, that is in the sense of relative justification. To state it bluntly, in my opinion the idea that a belief is justified in itself does not make sense and since the notion of absolute justification depends for its sense on that of being of being justified in itself, the idea of absolute justification is in my opinion without sense itself.

The more interesting notion is that of relative justification.

A belief is justified relative to a set of beliefs, if and only if it is rational to accept this belief if one accepts (all beliefs in) the belief set.[11]

Where absolute justification, would the notion have made sense, would be like truth, relative justification is more like validity. A relatively justified belief 'follows' from the belief set, but whether the beliefs in the belief set are themselves correct, remains open.

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[11]   In this chapter I treat justification as a relation between beliefs. This is a bit narrow and in chapter 2, I treat justification as a relation between 'acceptances', where acceptances include beliefs amongst other 'things', such as rules, principles and values.

Justification defeat concerns the question whether a belief is justified relative to one's belief set, *where the contents of the belief set are not specified*. It occurs because of changes in the belief set, which make that a belief that was justified relative to the old belief set is not justified anymore relative to the new belief set. It cannot occur with respect to a specified set of beliefs, because a belief is either justified relative to a particular set, or not, but it is not possible that is first justified relative to some belief set and later not justified anymore relative to this same set.[12]

For instance, if P's belief set contains the beliefs that thieves are punishable and that John is a thief and nothing else that is relevant, P is justified to believe that John is punishable. That is so, because the belief that John is punishable is justified relative to the beliefs that John is a thief and that thieves are punishable (and P's other, irrelevant, beliefs). If, at a later stage, P comes to believe that John acted under force majeure and that those who acted under force majeure are not punishable, P's belief that John is punishable has lost its justification. The belief that John is punishable is not justified relative to the beliefs that John is a thief, that thieves are punishable, that John stole under force majeure and that acts performed under force majeure are not punishable. Clearly, the newly acquired beliefs have no impact on P's being justified in his beliefs before the acquisition of these new beliefs. They have influence on P's being justified in the light of all his beliefs, because the set of all P's beliefs has changed and the justification of the belief that John is punishable has changed with it. Justification defeasibility has to do with this phenomenon, that a change and - most interesting - an increase in one's total set of beliefs, may bring about that the justification of a particular belief (in the light of everything else that one believes) disappears.

Defeasible reasoning is sometimes described as reasoning with *incomplete knowledge*. However, a direct consequence of the analysis presented above is that justification defeat is not a consequence of incomplete knowledge. With regard to the issue whether a belief is justified relative to some particular belief set, the information cannot be incomplete. All the relevant information is by definition included in the belief set. This information is sufficient to decide whether a belief is justified *relative to this belief set*, although it may be insufficient to decide whether the belief is true.

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[12] This is liable to exception for the case that one modifies the logic by means of which justified beliefs are derived from what else one believes. The exception can be avoided if the notion of a belief set is replaced by the broader notion of an acceptance set. An acceptance set includes everything that one accepts, including beliefs, rules, principles and – in this connection particularly relevant - standards for reasonable inference. More about acceptance sets in chapter 2.

Because justification defeasibility deals with relative justification and not with truth, incomplete information does not play a role in connection with justification defeat.

2.6   Logical defeasibility

Sometimes the notion of defeasibility is also used in connection with conditionals (logical operators) and with rules. A conditional $p \rightarrow q$ can be said to be defeasible if one or more of the following are the case:

1. if $p \rightarrow q$ is true, then it is not necessarily the case that $p \ \& \ r \rightarrow q$ is true (no 'strengthening of the antecedent'[13]);
2. if both $p \rightarrow q$ and p are true, then it is not necessarily the case that q is true;
3. if both $p \rightarrow q$ and p are true, then it is not necessarily the case that q can be derived validly (where validity is taken in a broader sense than deductive validity, because otherwise this third possibility would coincide with the second).

A rule 'if conditions then conclusion' can be said to be defeasible if it is not necessarily the case that if its conditions are satisfied, the conclusion holds.[14]

Both the defeasibility of conditionals and of rules is defined in connection with logical systems in which defeasible conditionals and rules operate. The defeasibility that is at stake is not primarily a phenomenon outside logic that can be modeled by means of some logical theory, but rather an aspect of some logical theories. For this reason I will disregard these kinds of 'logical defeasibility' as phenomena that are less interesting for understanding the defeasibility of the law or legal reasoning.

More generally, it seems to me that in the discussions about defeasibility in connection with the law, the intended kind of defeasibility – if there is a clear intention at all - is mostly justification defeasibility.[15] For this reason I

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[13] Cf. Alchourrón 1993.

[14] Prakken and Sartor 1996.

[15] Prakken and Sartor (2004) distinguish three aspects of defeasibility in the law, namely inference-based defeasibility, process-based defeasibility and theory-based defeasibility. In section 3.1 I will say more about process-defeasibility.

  If my view that justification defeasibility is the relevant notion in the law is correct, the distinction between inference-based defeasibility and theory-based defeasibility collapses, because in both cases the issue at stake is whether it is justified to hold one (inference-based defeasibility) or more (theory-based defeasibility) beliefs in the light of what else one believes.

will confine my discussion of law and defeasibility in the rest of this chapter to justification defeasibility.

3. IS LEGAL REASONING DEFEASIBLE?

The next question to deal with is whether justification defeat plays a role in legal reasoning. This question should be answered affirmatively if there is *some* role for justification defeat in legal reasoning. It is not necessary that all legal reasoning is justification defeasible. In the following subsections, I will discuss three reasons why legal reasoning might be defeasible.

3.1 Justification defeat and the burden of proof

At least some legal conclusions can turn out to be unjustified in the light of new information that was not taken into account in drawing them. Let me give two examples. The first example concerns the division of the burden of proof. Suppose that Violet speeded and is prosecuted. If the prosecutor succeeds to prove the speeding and nothing else happens, the judge is justified in her conclusion that Violet is punishable. However, if Violet defends herself by pointing out that her child was seriously ill and that she speeded under force majeure to bring her child in time to the hospital, acceptance of this defense by the judge would take the justification of this conclusion away. In other words, the information that Violet acted under force majeure functions as a justification defeater for the conclusion that Violet is punishable for speeding. The division in the burden of proof between Violet and the public prosecutor is explained by the fact that the defense of Violet functions as a defeater of the justification of punishability provided by the prosecutor. If the absence of force majeure would have been a normal condition of punishability, the public prosecutor would have born the burden of proof that there was no force majeure.

It is also possible to give a different interpretation to the example. Bayón has pointed out that the division of the burden of proof can also be explained by means of procedural rules that allow a judge to convict a defendant if a

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Brozek 2004 takes deontic defeasibility as the central notion (p. 205). His examples of deontic defeasibility (p. 27) include some that have nothing specifically deontic about them. I suspect that Brozek uses the expression 'deontic defeasibility' for all defeasibility in which legal rules play a role. In my terminology this would be logical defeasibility.

transgression was proved, while force majeure was not proved.[16] Under this interpretation, which focuses on procedural aspects rather than on the question whether the conclusion that the suspect is punishable is justified, no defeat seems to be at stake.

Arguably, however, justification defeat plays a role under this interpretation of the burden of proof too, although only as explanation of the procedural rules. There are procedural rules which indicate under which circumstances a judge can - or even ought to - convict a suspect. In my opinion, these rules reflect the circumstances under which a judge is justified in believing that the suspect is punishable.[17] By default a judge is not justified in assuming that somebody is punishable (presumption of innocence). Therefore it must be proved that the suspect committed a fact that is punishable. When this has been proved, the judge is pro tanto justified to believe that the suspect is punishable. However, if it has also been proved that there was a ground of justification the belief that the suspect is punishable is not justified anymore.[18] For this reason the procedural rules only allow the judge to convict a suspect if it was proved that he committed a crime and if it was not proved that there was a ground of justification. The references in the procedural rules to proof, rather than to fact, are signs that some form of defeasible reasoning plays a role, although the use of the procedural rules itself may be non-defeasible.[19]

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[16] Bayón 2001. Another alternative analysis is given in Brozek 2004, 29. Brozek points out that it is possible that the shift in the burden of proof is meant to allow an opponent of an argument to attack one of the argument's premises.

[17] It seems to me that where Prakken and Sartor (2004) distinguish process-based defeasibility as one of three aspects of defeasibility in the law, they have this characteristic of legal procedures in mind.

[18] Obviously this does not mean automatically that a conviction of a suspect becomes unjustified when, after the conviction, new facts appear that make it clear that there was a ground of justification. It is a matter of the law and not of logic or general theory of justification, how such situations should be dealt with. Obvious as this may be, it has no implications for what I wrote about the role of justification defeat in explaining procedural rules.

[19] In general defeasibility plays a role when conclusions are not based on which facts obtain, but on which facts have been proved. Facts about the past do not change, but beliefs about the past, including what has been proved about the past, tend to evolve in the course of time. As a consequence, beliefs that are based on what was proved are liable to lose their justification if relevant facts that did not count as proved before, come to count as been proved.

3.2   Justification defeat and the context of discovery

Even if the distribution of the burden of proof is disregarded, there is evidence that justification defeat plays a role within legal reasoning. It is not uncustomary to distinguish two 'phases' in legal reasoning that leads to a solution for a particular concrete case.[20] In the second phase, sometimes called the context of justification[21], first order justification[22], or internal justification[23], the legal consequence of a particular case is presented as the outcome of a deductively valid argument. The major premise of this argument is a (universally quantified) material conditional with a generic case description as its antecedent and the corresponding legal consequence as its consequent. The minor premise is the description of (the relevant facts of) the case at hand. The first phase, labeled as the context of discovery[24], second order justification, or external justification, consists of a series of (one or more) arguments in which the truth (or validity) of the major premise of the first argument is established.

The idea behind this distinction between two phases is that legal judgments must be universalizable. If some case has a particular legal consequence, all cases that are similar in all relevant aspects should have similar legal consequences. The major premise in the context of justification specifies both which aspects of the case are relevant for the legal consequence that is attached to it and what this legal consequence is. In the rest of this chapter, I will refer to such a premise as a *case-legal consequence pair* (CLCP). The CLCP is a specification of what the law is for cases like the one at stake. The first phase of the argument is to determine the contents of this CLCP.

If legal reasoning is conceptually divided into two phases along the lines sketched above, the context of justification in which the CLCP is applied to the case at hand can be represented as a form of deductive reasoning and justification defeat plays no role in it. If the conclusion of this second phase

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[20] The quotes around 'phases' are to recognise that the two phases are not always separated in time, but are rather two logically distinguishable aspects of legal reasoning. See in this connection also Wolenski 1979.

[21] Bayón 2001 and Soeteman 2003, implicitly.

[22] MacCormick 1978, 101f.

[23] Alexy 1978, 273.

[24] The context of discovery can be taken in at least two ways. One way is to see it merely as a psychological process, the contents of which are not interesting, which leads to a hypothesis that can possibly be justified in the legitimation phase. The other way is to see it as a phase of non-deductive reasoning. Only on this interpretation of the context of discovery can it be equated with external, or secondary justification and can it be seen as a kind of justification at all. Presently, I take the context of discovery in this second sense.

would be incorrect, the same counts for the CLCP. Justification defeat, if it plays a role in the law, should be looked for in the first phase, that of discovery.[25]

It seems obvious to me that justification defeat plays a role in the context of discovery. Let me first return to the example of Violet who was found guilty of speeding, but who was nevertheless not punishable because a ground of justification was present. The conclusion that Violet is not punishable for speeding can be legitimated by the following deductive argument:

CLCP: Precisely those who have speeded and did not have a ground of justification for speeding are punishable for speeding.

Case facts: Violet speeded, but had a ground of justification for doing so.

Therefore: Violet is not punishable for speeding.

The context of discovery in this connection consists of one or more arguments that end up in the CLCP of the deductive argument above. The first step in this context might be that there exists a rule that makes speeding punishable and that therefore those who have speeded are punishable for speeding. Pro tanto, the belief that those who have speeded are punishable for speeding is justified. However, if grounds of justification and their effects are taken into account, this belief loses its justification. Instead one is pro tanto, namely in the light of both the rule that makes speeding punishable and the rule(s) about grounds of justification, justified in the belief that precisely those who have speeded and did not have a ground of justification for speeding are punishable for speeding. Apparently, justification defeat plays a role when two or more rules are combined into a CLCP.

Let me now mention the second example of justification defeat, which not only illustrates how justification defeat plays a role in the context of discovery when several legal rules are combined into a single CLCP, but also how facts about the non-legal world play a role in this connection. Suppose that in a particular country, say Taxopia, taxes on vehicles are raised. Vehicles are categorized according to their weights, with a certain amount of taxes specified for each category. For this purpose, three pieces of legislation are drafted. The first piece introduces the taxes on vehicles. It also empowers the government to develop a system of categories by means of which vehicles can be categorized. The second piece of legislation, made by the government, introduces this system. Moreover, the Minister of

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[25] This view is shared by Bayón 2001, Soeteman 2003 and Brozek 2004, 134.

Finance is empowered to make decrees by means of which certain amounts of tax are attached to the categories in which vehicles are subdivided. The Minister exercises this power in the third piece of legislation. Since in Taxopia, even more than in many other countries, taxes are a means of making policy, it is decided by means of a fourth piece of legislation that the vehicle taxes for cars are increased with 20%. So Taxopia ends up with four pieces of legislation, three of which regulate the taxes of vehicles in general and the fourth of which deals especially with taxes on cars and refers for the amount of the additional tax to the general regulation about vehicles, to which it makes an exception by increasing the tax.

The description of the tax law of Taxopia as presented above followed the (main) lines of the legislation, that is, of the legal sources. It is also possible to represent the same law in the form of CLCPs by identifying a number of case types and to specify for every type its fiscal consequences. These case types should ideally be mutually exclusive and together exhaust all legal possibilities.[26] Suppose, for instance, that the legislation distinguishes five categories. The first one is essentially occupied by bicycles and other non-motorized vehicles. The second one is occupied by small motorized vehicles, such as most motorcycles and mopeds. The remaining three categories are essentially occupied by various sizes of cars, but also contain some heavy weight motorcycles, tractors etc. Since not all vehicles in the last three categories are cars, the vehicles in the three categories must for tax reasons be divided into vehicles in the categories 3-5 that are cars and vehicles in the categories 3-5 that are not cars. So we end up with eight sets of vehicles, each with its own amount of vehicle tax. The sets are taken such that all members of each set have the same fiscal consequences, while it is not possible to join two or more sets without members of the same set having different fiscal consequences.

In this connection it is important to notice that the amount of sets does not only depend on the legislation, but also on other facts in the world. It is, for instance, important to know whether there are any other vehicles than cars in the categories 3-5, or whether there are cars in the categories 1 and 2. Moreover, the number of distinguishable sets may change without changes in the legislation, for instance because heavier motor cycles are built, thereby introducing non-cars in category 5.

Let us call the first way to describe (part of) a legal system description by sources and the second way description by CLCPs. If we only have a description by sources, legal reasoning, which is then *reasoning by sources*,

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[26] This approach is inspired by the treatment of generic cases in Alchourrón and Bulygin 1971, chapter II, which may be consulted for a more precise presentation.

involves a process of theory construction in which all the rules that have impact on the case at hand must be considered, interpreted and if necessary combined. This process, which may be identified with the context of discovery, involves defeasible reasoning, because taking a new rule into consideration may bring about that a CLCP which was justified in the light of the sources that were originally taken into consideration is not justified anymore. The same counts if new beliefs about the world (about which vehicles there are and which of them are cars) are taken into consideration. For instance, if the special rule about cars is taken into consideration, the general CLCP about vehicle taxes loses its justification.

If we have a set of CLCPs, we can justify legal decisions in concrete cases by pointing to their generic cases and the legal consequences attached to them. Ideally (when the CLCPs are exhaustive and mutually exclusive) it is not possible that a concrete case falls under more than one relevant[27] CLCP, so it is not necessary to look any further as soon as the relevant CLCP has been found. Reasoning *with* CLCPs, which might be identified with the context of justification, is non-defeasible. Reasoning *about* the CLCPs however, the context of discovery is justification defeasible.

It is noteworthy that it is also possible to justify the legal solution for a particular case directly by means of defeasible reasoning by sources. It is not necessary to formulate a general CLCP first and then subsume the case under it. It may be necessary that for every case with its legal solution a CLCP should exist, but from this necessity it does not follow that this CLCP must play a role in the justification of the solution for this case. The arguments in the context of discovery that lead to the justification of a CLCP can be reformulated (by instantiating them) to the effect that they lead immediately to the solution for the case at hand. If this approach is taken, the argument that leads to the solution for the concrete case is completely subject to justification defeat.

It seems clear that defeasible reasoning plays a role in the law, but this does not imply that all legal reasoning is defeasible. We have seen that it is possible to split legal justification into two phases, the first of which, the phase of discovery, contains defeasible reasoning, while the second phase, that of justification, consists of deductive and therefore non-defeasible reasoning. I have briefly argued, however, that this division can be circumvented by letting the phase of discovery deal directly with the legal consequences of the concrete case at hand. If this approach is taken, the only kind of reasoning that is necessary is defeasible. Therefore my conclusion

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[27] Relevant in the sense that the legal consequence of the CLCP in question deals with the issue at stake.

would be that in the law we can both encounter defeasible and non-defeasible reasoning, but that it is not well possible to replace the defeasible part by non-defeasible reasoning, while it is, at least in a number of cases, possible to skip the non-defeasible part.

3.3   The defeasibility of legal rules

A third reason why legal reasoning might be defeasible is based on the assumption that legal rules are defeasible in the sense that it is possible to find implied exceptions that can often not be specified in advance. This assumption is broadly shared.[28] Bayón nevertheless has a problem with it, because in his opinion it is not a necessary characteristic of legal rules that they are thus defeasible. A legal system might make it impossible to allow exceptions to rules, even if they are over-inclusive, or if some relevant principle was not taken into consideration in drafting the rule. I will discuss Bayón's problem with the view that legal rules are defeasible by means of an example.

Probably like other legal systems, the Dutch law has a regulation for the transfer of movable property by a non-owner to a third party who acted in good faith. The legal problem that this regulation must deal with results from a conflict between at least two interests. One interest is that of the owner of the property that was transferred, who wants to remain owner. The other interest is that of the party who acted in good faith and expected to become owner of the transferred property. The Dutch regulation (sections 3:84-86 of the Civil Code) balances these two interests, with the effect that under some circumstances the third party becomes owner of the property, while under other circumstances the original owner remains owner, anyway for a period of three years. The interests of smooth commerce also played a role in the way the topic was regulated.

Let us assume that the regulation of the Civil Code strikes for normal cases a right balance between the conflicting interests. Suppose, however, that the regulation does not work well for some exceptional cases and that if the balance would have to be struck anew for those cases, another outcome would have resulted. One argument for the defeasibility of legal reasoning would be that the regulation provides a good outcome under normal circumstances, but that it should not be applied under particular exceptional circumstances. For instance, for some cases the regulation may protect the

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[28] Bayón 2001 gives a number of references in footnote 21. These include Alexy 1996, 88/9, Sartor 1995, 120f. and Prakken 1997, 47/8. He might also have included Hage 1997 (RwR), 106f.

third party in good faith and for these cases the argument that leads to the conclusion that this third party has become the new owner, is prima facie correct. However, given new information to the effect that exceptional circumstances are present, this conclusion is not desirable anymore.

There are two extreme ways to deal with exceptional cases in which rules give 'wrong' solutions for cases. One extreme way is to ignore the rule and fall back on the principles underlying the rule and all other principles that might turn out to be relevant and compute the best outcome on the basis of all relevant principles. On this approach, the presence of the rule does not make any difference, because the rule is only applied if its outcome agrees with the outcome of the underlying principles. The rule is then superfluous next to the principles; it is merely a 'rule of thumb'.[29] The other extreme way is to apply the rule, without any regard to whether its outcome is correct in the light of the relevant principles. On this 'entrenched' model[30], the applicability of a rule makes principles that deal with the case at hand superfluous.

By describing the two mentioned ways as extremes, I suggested that a middle road is possible. This middle road is to take applicable rules as the starting point in legal decision making, but to leave the possibility open to deviate from the rule's outcome if this is desirable in the light of the relevant principles. Whether this possibility to deviate should be used, does not only depend on the balance of the relevant principles, but also on the facts that deviation from the rule diminishes legal certainty and that it negatively affects the legislator's authority. Both facts are reasons not to deviate from the rule. The amount of weight that is attached to the applicability of a rule as an *independent* reason for the rule's conclusion determines whether this middle road runs closer to the first, or to the second extreme.[31]

Bayón is right when he supposes that it is a matter of the law whether exceptions to rules are possible. It is imaginable that there are legal systems which do not allow exceptions to any rule. However, I do not know any such a system and I wonder whether Bayón knows any. He does not give an example and I think that there is no such an example. There are very good reasons why a legal system should sometimes allow exceptions to rules and the account given by Schauer of the over-inclusiveness of rules provides a good enough insight in why that is so.[32] Probably the possibility mentioned

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[29] Schauer 1991, 77, but see also 104f.
[30] Schauer 1991, 52. See also Raz 1975, 73, who writes that mandatory norms are exclusionary reasons.
[31] This way to deal with rules is at least similar to what Schauer calls *rule-sensitive particularism*. See Schauer 1991, 97 and the literature mentioned there.
[32] Schauer 1991, 31f.

by Bayón of a legal system that does not allow exceptions to rules is a mere theoretical possibility.

Is such a mere theoretical possibility not enough to conclude that it is not a logical matter whether rules are amenable to exceptions? Logic deals with what is logically necessary and the theoretical possibility of a legal system that does not allow exceptions to rules suffices to show that the possibility of exceptions is not logically necessary. At least, that is what might be argued.

Before answering this question, I want to point out that if rules are defeasible, this does not mean that every rule must have an actual exception in one or more cases. It does not even mean that most rules have actual exceptions in one or more cases. It merely means that for every rule it is in theory possible that there is, or will be, some case in which an exception to the rule should be made. Only if this theoretical possibility does not exist, rules are not defeasible. This holds not only for rules in general, but also for any particular rule. A particular rule is not defeasible if it is not even in theory possible that in some case an exception should be made to this rule. Defeasibility does not require the existence of such exceptions in actual cases and not even that one can imagine a case in which such an exception would exist. Lack of imagination does not show a rule to be non-defeasible. Non-defeasibility can only been shown if it follows from constraints imposed on the logical behavior of rules. Unless a legal system adopts the extreme entrenched model of rule application for some, or all of its rules, the constraints on the logical behavior of rules that might cause them to be indefeasible are lacking. I do not know a legal system that has adopted the extreme entrenched model for any of its rules.

If there is no actual legal system in which rules are non-defeasible and if it is implausible that such a system could actually exist, is it then logically necessary that rules are defeasible? Or must we make the stronger demand that it is not even imaginable that such a system exists? Asking the question shows the futility of attempts to answer it. When a necessity becomes a logical necessity is a matter of convention, or of pragmatism. Is it useful to treat some knowledge as unrevisable or should we treat as mere 'domain knowledge'?[33] In the case of legal rules, I think that it is useful to assume that the defeasibility of rules is a necessary characteristic, which deserves study separate from the study of positive law. This means that in my opinion, Bayón's objection does not cut ice and that the defeasibility of legal rules provides a third reason why legal reasoning is defeasible.

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[33] I argued for this Quinean perspective on (legal) logic in (Hage 2001 LL).

4.   DOES LEGAL REASONING REQUIRE NON-MONOTONIC LOGIC?

The next question to deal with is whether we need a non-monotonic logic to represent the phenomenon that a belief that is justified in the light of the set of beliefs B1, is not justified in the light of belief set B2, which has resulted from B1 by making one or more changes to it. Before continuing on this path, I want to discard some issues. First I want to ignore changes involving replacement of one belief by another belief. These changes can be decomposed into abandoning the old belief and adopting the new belief. As a consequence the only changes that remain to be discussed are the abandonment of old beliefs and adoption of new beliefs.

Second I want to deal briefly with the abandonment of old beliefs. We do not need a non-monotonic logic to deal with this phenomenon. Deductive logic is very well capable to represent that a belief that was justified on the basis of some set of premises is not justified if one or more of these premises are given up. A conclusion that follows deductively from a set of premises does not necessarily follow deductively from every subset of these premises. If 'being justified' is (wrongly) taken in the sense of 'deductively following from', a conclusion that is justified by a set of premises needs not be justified anymore if one or more of these premises are dropped.

Therefore the only case that needs special consideration is when a belief that was justified in the light of belief set B1 is not justified anymore in the light of belief set B2 which is a proper superset of B1. This case is quite similar to the characterization of the non-monotonicity of logical system L by saying that S is according to L derivable from B1, while it is not derivable from B2. Justification defeasibility deals with the relation 'is justified by', between a belief set and a belief, where non-monotonicity deals with the relation 'is derivable from', between a set of sentences and a sentence. At first sight, therefore, there is much to say for logically representing justification defeat by means of a non-monotonic logic. Nevertheless some authors have objected to this approach and it is worthwhile to look into their reasons for protesting.

4.1   Alchourrón's criticism of non-monotonic logic

Non-monotonic logics were developed to deal with the defeasibility of arguments, both inside and outside the law. However, it may be argued that such logics are not useful, or even based on confusion. The idea that the use of non-monotonic logics is based on confusion, namely the confusion

between logic and belief revision, was advanced by Alchourrón. I will present his argument by means of a legal example.[34]

Alchourrón approaches the idea of defeasibility from the phenomenon of defeasible conditionals. His basic idea is that a defeasible conditional is a conditional that holds under 'normal' circumstances. The defeasibility of the conditional that if somebody is a thief, he is punishable, would boil down to it that thieves are punishable under normal circumstances. Suppose that the conditional that thieves are punishable does not hold for thieves under twelve years old. One way to deal with this is to use a non-monotonic logic, under which the argument from 'John is a thief' to 'John is punishable' is not valid if John is under twelve. Another way to deal with the same phenomenon is to refine the false belief that thieves are punishable into the belief that thieves of twelve years and older are punishable. From the point of view of what is derivable, this belief revision boils down to the same thing as using a defeasible conditional. And the question then arises what the gain of the defeasible conditional is. In this connection Alchourrón writes[35]:

> *... when someone has to accomplish the task of representing incomplete knowledge ... he will be confronted with the following dilemma. Either use conceptually strong sentences (general conditionals) with many interesting consequences and assume all the dangers involved and hence be ready to revise the premises as often as needed; or use the conceptually weaker defeasible conditionals which will be almost completely secure, at the price of losing most (if not all) of the interesting conclusions. We have to choose between the quiet darkness of Paradise or the risky lights of daily life.*

It seems to me that two points should be noted in connection with Alchourrón's criticism. The first point is that it is indeed possible to deal with defeasibility logically by means of deductive logic in combination with belief revision.[36] Non-monotonic logics are not necessary to handle defeasibility.

This brings me to the second point, namely that it is matter of pragmatics whether one should prefer a non-monotonic logic to a deductive logic in combination with belief revision. Possibly there is no preference that holds universally. Given the quoted passage, Alchourrón had (at least amongst

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[34] The following is based on Alchourrón 1993, 69f.

[35] Alchourrón 1993, 83.

[36] If a conclusion C follows defeasibly from a set of premises P, it follows deductively from P plus two additional premises, namely the premises that there are no special circumstances and that if P and there are no special circumstances, C is true. Defeat can then be dealt with by removing the belief that there are no special circumstances.

others) scientific theory construction in mind, when he expressed his preference for belief revision above non-monotonic logic. If one takes the purpose of scientific theory construction as to give precise descriptions of law-like connections, Alchourrón's preference for belief revision is understandable, because the use of a non-monotonic logic only masks the incorrectness of the theory that can only be applied defeasibly. For instance, Newtonian mechanics is – in a sense - wrong, because it only gives the right outcomes when small velocities are involved. However, even when dealing with scientific theory construction, one might prefer relatively simple laws with a restricted scope of application[37] and consequently the use of a non-monotonic logic to model law application. This might be better than working with universally applicable laws that buy their broad scope of application at the cost of a highly complex content (e.g. the more complex content of relativistic mechanics). The question that needs to be addressed in this connection is whether the nature of legal justification would lead to a preference for belief revision, or for the use of a non-monotonic logic.

4.2   Soeteman on legal justification

Soeteman precisely gives the necessary type of argument for belief revision and against the use of a non-monotonic logic.[38] In his opinion real justification must always be based on a deductively valid argument. He writes:

> *... as long as an argument cannot be analyzed deductively, the conclusion is not warranted. As long as an argument is not reconstructed as deductively valid an alternative conclusion is still possible and the conclusion therefore is not completely justified.*

Moreover, Soeteman emphasizes that such a 'complete justification' is of the greatest importance in law, because of the weighty consequences of legal judgments. His point is that legal conclusions, because of their importance, must be completely justified and that a conclusion is only completely justified if an alternative conclusion is impossible.

There are several things that may be said about this argument. First, it may be highly desirable that legal conclusions are beyond any doubt, but conclusions beyond any doubt are seldom to be reached within human affairs. Therefore, the demand for such indubitable conclusions might be a demand for the impossible. Obviously, we should strive for the best, but I

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[37] Compare in this connection what Toulmin writes about Snell's law. (Toulmin 1953, 57f.)
[38] Soeteman 2003.