An instructional environment for learning to solve legal cases: PROSA

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Citation for published version (APA):
Muntjewerff, A. J. (2001). An instructional environment for learning to solve legal cases: PROSA.
Chapter 3

Domain of Practice: Administrative Law

3.1 Introduction

Legal knowledge plays a determining role in solving legal cases. In Chapter 2 we examined problem solving to get a better understanding of the role of the basic components in solving a legal case. There are two components in problem solving that interact. These components are the domain knowledge and the problem solving method. Both the review of empirical and modeling literature and our own empirical study showed an interaction and interdependency between problem solving method and domain knowledge. Where every teacher is convinced that subject matter is more important, because it precedes a method, in learning to solve legal cases methods still do play an important role. However, Chapter 2 made clear that students experience difficulties with finding their way in the knowledge to apply, i.e. the problem is to come to grips with content rather than with method. We hypothesized that for students a systematic approach is the result of understanding and insight in the structure of the domain knowledge rather than that a method would facilitate the insight in problems and via this, into the structure of the domain knowledge itself. It appears that the role of a method in learning problem solving is somewhat less important than assumed in educational studies. Articulate task structures appear to be an emergent property or ‘side effect’ of practice in problem solving, rather than the drivers of effective practice. It therefore may turn out to be more natural and simpler to start from domain knowledge distinctions to arrive at a task decomposition than the other way around. To be able to solve a legal case the student must have knowledge of the specific domain involved and must acquire understanding of the structure of this knowledge that is obviously more important then acquiring a correct method. To improve their legal case solving performance students benefit from insight in the structure of the applicable knowledge available in the legal sources.
The required domain knowledge can be found in legal sources as statutes and precedents. This chapter is therefore concerned with examining the structure of legal knowledge. We have chosen a typical legal domain in which legal cases are solved: the domain of administrative law. This domain of practice is introduced in paragraph 3.2 from a legal point of view resulting in a description of the structure of the domain knowledge as it appears in the legal sources. Most effort in teaching is put in communicating this domain knowledge to the student. However, difficulties arise when students have to apply this knowledge to a specific situation. This structure may be theoretically adequate, however, for applying it more is involved than simply understanding it. We want students to use legal knowledge, therefore we introduce a functional description of the domain of practice in paragraph 3.3. These analyses result in insight in the type of difficulties that students have when applying legal knowledge. These problems are described in paragraph 3.4 together with possible remedies. Our principles for designing legal cases are also based on the analyses of the legal knowledge and are presented in paragraph 3.5.

3.2 Legal Point of View

Here we introduce the domain of practice from a legal point of view. This involves an objective description of the legal rules. A basic distinction made in law is that between public law and private law. This distinction goes back to ancient times where the Roman jurist Ulpianus already distinguished between a part of law concerning the state and a part of law concerning individuals. The two parts of law, public law and private law, are in turn subdivided into more specific areas of law (see Fig. 3.1).

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<td>law of persons and family law</td>
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<td>law of property</td>
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Figure 3.1: Areas of law.
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Public law is subdivided into constitutional law, criminal law and the more recent administrative law, where private law is subdivided into law of persons (jus personarum) and family law, and law of property. The legal sources are the locations where the legal rules that regulate the different areas of law can be found. The legal sources that are acknowledged in the Dutch legal system are statute, common law, precedent and treaty.

3.2.1 Administrative Law

Administrative law is the area of law concerned with regulating active government interference. Administrative law gives the administrative authorities the legal tools needed to accomplish their public tasks, while at the same time it gives the citizen influence on and protection against the activities of the administrative authorities (see, for example, van Wijk, 1991; Nicolai, Olivier, van der Vlies, Damen & Schueler, 1997). The administrative authorities represent the public interest. They may unilaterally prescribe the legal position of a citizen, however, in doing so the authorities have to opt for an outcome that is the result of a balance of interests that takes the individual interest into account. Administrative law regulates the relation between administrative authorities and citizens. The legal rules that govern administrative law can be found in one general administrative law act and a couple of hundred special administrative law acts, a large variety of precedents and principles¹, and in doctrine, handbooks and reference books (see, for instance, van Wijk, 1991; van Ballegooij, Bruil, Klein & Schilder, 1992; Verheij, 1993; Versteden, 1993; Tak, 1994; Brenninkmeijer, 1994; ten Berge, van Male, Tak, Verheij, & de Waard, 1994; Weesing, Bolt, Damen, Olivier & van der Vlies, 1995; Schreuder-Vlasblom, 1996; Verheij & Lubberdink, 1996; Stroink, 1996; Nicolai et al., 1997).

¹ The general principles of good management are an important source for deriving norms regarding the behavior of the administrative authorities. Although some of these norms have been coded in the General Administrative Law Act (GALA), most of them are still not yet coded. An example of a norm derived from a general principle of good management is article 3:3 of the GALA. The norm reads: the administrative authority ought not use the authority to make an order for a purpose different from that for which it was conferred (détournement de pouvoir). This norm is derived from the principle of duty of care.
We describe a typical example to illustrate some of the issues involved in administrative law.

3.2.2 Issues in Administrative Law

We introduce an individual Ina Deurloo who sees herself confronted with an administrative authority, i.e. Major and Aldermen of Haarlem and another interested party, i.e. Harry Kramer.

Ina Deurloo, citizen of Haarlem, wants to put a dormer\(^2\) on her house in Haarlem. Although she is the owner of the house she is not allowed to build the dormer. This is forbidden by article 40 of the Housing Act\(^3\). The Housing Act is one of the many special administrative law acts. However, by asking Major and Aldermen for permission this prohibition can be lifted.

Article 40 It is forbidden to build without or contrary to a permit of Major and Aldermen (permit to build).

Ina Deurloo has to apply for a permit to build a dormer on her house with Major and Aldermen of Haarlem. From now on certain articles in the General Administrative Law Act (GALA) apply when there are no specific articles in the Housing Act that have preference.

In the application for the permit Ina has to indicate the demanded decision together with the necessary available documents, for example, a floor plan.

She also has to put her name, address, the date and her signature in the application.

\(^2\) In Dutch: dakkapel.

\(^3\) In Dutch: Woningwet.
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It is possible that the municipality Haarlem uses standard forms to apply for the permit. Based on article 41 of the Housing Act Major and Aldermen in turn should publish this application for the permit to build.

Harry Kramer, neighbor of Ina Deurloo, does not want the dormer to be built, because, as he states, it will take away his view.

The administrative authority has to take a decision following the application, i.e. Major and Aldermen of Haarlem have to decide if they will permit Ina Deurloo to build her dormer or not. In the decision making process the administration should follow both the norms stated in the administrative law regulations and the general principles of good management. As Harry Kramer is an interested party and has reservations, he may present his view on the matter.

The Housing Act regulates the period within which Major and Aldermen have to make their decision. Where in turn the GALA states that they should also base their decision on proper reasons as well as publish and communicate their decision within a certain period and in a certain way.

There are two possible outcomes: the administration provides the permit or the administration rejects the application.

If Major and Aldermen of Haarlem decide to give Ina Deurloo the permit to build, there is the possibility that other parties oppose this decision. In specific situations they may start a procedure against the decision of the administration. Harry Kramer has the possibility to oppose to the decision of Major and Aldermen of Haarlem to give Ina Deurloo the permit to build.

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4 In Dutch: algemene beginselen van behoorlijk bestuur.
If Major and Aldermen of Haarlem decide that Ina Deurloo will not get the permit to build, Ina Deurloo can start a procedure against this decision.

If Major and Aldermen of Haarlem decide to give Ina Deurloo the permit under certain conditions, she can start a procedure against these conditions. This in turn may have consequences for Harry Kramer.

In general a citizen can take the following course of action. First the citizen can make an objection. Objection means that the administration that took the decision has to reconsider the decision. This results in a decision on objection. The objection procedure is considered as a pre-procedure for admission to court. When the parties involved are not satisfied with the decision on objection they can go to court to ask for a decision from the administrative court judge on the decision on objection.

In case Major and Aldermen of Haarlem decide that Ina Deurloo will not get the permit to build a dormer on her house, Ina can object to this decision. In turn Major and Aldermen of Haarlem have to reconsider their decision and once again take the decision.

When this time Major and Aldermen decide to give Ina the permit to build, Harry Kramer may oppose this decision. In case Major and Aldermen decide again not to give Ina the permit to build, she can start court appeal.

This example illustrates that although the situation is in principle a very simple one, i.e. Ina Deurloo applies for a permit to build, many complications may arise in the application process and in the actual decision making process. The decision in turn may also create (new) problems, where the presence of other parties may complicate matters even further.
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It also indicates that on entering the administrative law world a specific vocabulary is used to refer to persons and activities by persons. Terms used are, for example, ‘interested party’ and ‘administrative authority’ to refer to persons, where ‘decision’ refers to a specific type of act by an administrative authority.

The example finally introduces the complicated relation between the general administrative law regulation and the special administrative law regulations. We will now describe in more detail what legal rules govern this area of law and where these rules can be found.

3.2.3 The Legal Rules

Administrative law is the area of law that governs the relation between administrative authorities and citizens. The legal rules are to be found mainly in statutes and precedents, the primary source being the statutes (see Fig. 3.2). We will restrict ourselves to statutes. A basic division in administrative law is that between the special part of administrative law and the general part of administrative law.

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<tr>
<th>statutes</th>
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<tr>
<td>special administrative law regulations</td>
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<td>Housing Act</td>
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<td>Environmental Planning Act</td>
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<td>Shop Hours Act</td>
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<td>Meat Inspection Act</td>
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<td>and many more</td>
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<td>general administrative law regulations</td>
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<td>General Administrative Law Act</td>
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<th>precedents</th>
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<td>general principles of good management</td>
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Figure 3.2: Sources of administrative law.

The regulations that cover the various areas of administrative activities are indicated as the special part of administrative law.

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5 Dutch Criminal law also has a division in a general part and a special part.
The general topics that come up, as there are the various forms of governmental activities, legal protection of the citizen and administrative sanctions, are referred to as general administrative law, the general part of administrative law.

3.2.3.1 The special regulations on administrative law

There are hundreds of acts and implementing orders\(^6\) regulating the numerous areas of governmental concern, as, for instance, education, finance, and environmental planning. Besides regulations issued by the central government, there are the statutes issued by the local governments and the European community. Arbitrary examples of central legislation are the Environmental Planning Act, the Housing Act, the Shop Hours Act, the Meat Inspection Act. Examples of statutes issued by local governments are the Amsterdam Housing Act, the Amsterdam District Council Act, the Amsterdam Catering Industry Act\(^7\). The starting point in the relation between an administrative authority and a citizen is always based on a special administrative law act. A special administrative law act states definitions and norms that are only valid within the scope of the particular act concerned. In the example of Ina Deurloo the Housing Act is the applicable special administrative law act. This act gives definitions and norms regulating building and public housing. Ina is not allowed to build without a permit from Major and Aldermen.

3.2.3.2 The general administrative law act (GALA)

The main source of the domain knowledge in general administrative law is the General Administrative Law Act (see, for example, Bartels & Meijer, 1994)\(^8\).

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\(^6\) In Dutch: uitvoeringsbesluiten.  
\(^7\) In Dutch: Wet op de Ruimtelijke Ordening, Woningwet, Winkeltijdenwet, Vleeskeuringswet, Huisvestingsverordening Amsterdam, Verordening op de Stadsdeelraden Amsterdam, Horecaverordening Amsterdam.  
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The GALA covers definitions, norms and procedures that are applicable in all fields of administrative law. Although the major objective of the GALA is to promote unity, special administrative law acts may under certain conditions regulate their own definitions, norms and procedures. The GALA consists of four different types of regulations indicating these conditions. There are regulations in the GALA that should apply for all special administrative law acts, there are regulations that permit exceptions in the special administrative law acts, there are regulations in the GALA that only apply when special administrative law acts did not regulate it, and there are regulations in the GALA that serve as standard regulations to which the special administrative law acts may refer. Major and Aldermen of Haarlem have to decide on the application of Ina Deurloo within 13 weeks from the moment they received the application. The Housing Act gives the decision period in article 46. Article 4:13 of the GALA refers to the existence of such a regulation in special acts and also describes what to do when there is no such regulation available in the special act.

3.2.3.3 The system and the structure of the GALA

The GALA consists of eleven chapters. Chapter 1 contains the definitions of the major concepts in the act. The Chapters 2, 3 and 4 include provisions for the preparation, the realization and the communication of orders and other administrative acts. Chapter 5 is concerned with enforcement by the administration. The Chapters 6, 7 and 8 regulate objection and appeal. Chapter 9 is on complaint consideration. Chapter 10 contains provisions on administrative authorities and the final provisions are stated in Chapter 11. The GALA also has one schedule. The schedule lists a subset of statutory regulations. Article 8:5 of the GALA refers to this schedule. We restricted ourselves to the Chapters 1, 2, 3, 4, 6, 7 and 8 of the GALA, leaving out Chapters 5, 9, 10 and 11.

The provisions containing the definitions and scope are presented in Chapter 1 of the GALA.

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10 In Dutch: klachtbehandeling.
11 In Dutch: Bijlage.
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Chapter 1
Introductory provisions (a total of 9 articles)
definitions and scope
  administrative authority
  interested party
  order
  administrative court
  making objection, lodging appeal
implementation of binding decisions of authorities of the European Communities

The GALA regulates the relations between administrative authorities and citizens (more specific: citizens who have the status of interested party) for a specific type of administrative activities. Chapter 1 defines the basic concepts administrative authority, interested party, order, objection and appeal. Take, for example, article 1:3 defining the basic concept ‘order’.

1. Order means a written ruling of an administrative authority constituting a legal act under public law.
2. Decision means an order which is not of a general nature, including refusal of an application.

When these basic concepts are used in the subsequent chapters of the GALA or in special administrative law acts they follow the definitions of Chapter 1.

The primary decision making process of the administration, also called the non-contentious procedure because there is not yet a conflict, is regulated in the Chapters 2, 3 and 4 of the GALA. Chapter 3 contains the provisions on preparing and ruling an order, where Chapter 4 contains the provisions on preparing and making a decision, being a specific type of order.

Chapter 2 (a total of 12 articles)
Dealings between individuals and administrative authorities
  general provisions
  the use of language in administrative communications
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Chapter 3 (a total of 51 articles) General provisions on orders
- introductory provisions
- duty of care and weighing of interests
- advising
- public preparatory procedure
- extensive public preparatory procedure
- filing an application; admissibility
- the draft of the order
- opinions and reservations
- ruling on the application
- decisions regarding modification or withdrawal and other decisions to be taken officially
- publication and communication
- reasons

Chapter 4 (a total of 79 articles) Special provisions on orders
- decisions
  - application
  - preparation
  - decision period
- subsidies
  - introductory provisions
  - subsidy limit
  - granting subsidy
  - obligations of the subsidy recipient
  - subsidy decision
  - withdrawal and modification
  - payment and reclamation
  - granted subsidies to legal person per financial year
    - introductory provisions
    - application
    - granting subsidy
    - obligations of the subsidy recipient
    - subsidy decision

These chapters give provisions on how to prepare an order or decision and how to realize it, as well as how to communicate the order or decision.
The uniform administrative procedural law\textsuperscript{12}, where uniform means it applies to all special administrative law acts, is regulated in the Chapters 6, 7 and 8 of the GALA. These chapters give provisions regarding what is called the contentious phase, because now there is a conflict between an administrative authority and (one or more) interested parties concerning an order that has been ruled or a decision that has been made.

Chapter 6 (a total of 24 articles) General provisions on objection and appeal
  
  introductory provisions
  other general provisions

Chapter 7 (a total of 28 articles) Special provisions on objection and administrative appeal
  
  objection preceding appeal to an administrative court
  special provisions on objection
  special provisions on administrative appeal

Chapter 8 (a total of 89 articles) Special provisions on appeals to the court
  
  general provisions
  
  jurisdiction
  proceedings before a single judge or a full court
  referral, consolidation and separation
  challenge and exemption
  parties
  witnesses, experts and interpreters
  sending of documents
  
  treating the appeal
  court fee
  preliminary inquiry
  expedited proceedings
  simplified proceedings
  court session inquiry
  judgment
  provisional remedies and immediate judgment on the merits
  review

\textsuperscript{12} In Dutch: administratief procesrecht.
In general an interested party can first ask the administrative authority to reconsider the order. When the interested party does not approve with the outcome of the reconsideration she can lodge court appeal. Chapter 8 in turn deals with the procedure before the administrative court judge. Within the GALA the different topics are arranged from general to special. The provisions in Chapter 1 define the basic concepts for all following chapters. The sets of related chapters, the Chapters 2, 3 and 4 make a set, as do the Chapters 6, 7 and 8, are also arranged from general to special. For example, Chapter 6 contains the general provisions on both objection and appeal, where appeal is the general term referring to administrative appeal and court appeal, Chapter 7 in turn contains the special provisions on objection and administrative appeal, where Chapter 8 contains the specific provision regarding court appeal. This structure defines the scope of the provisions. For example, article 1:3 of the GALA defines ‘decision’ as a species of ‘order’. This makes that not only the provisions regarding decisions apply but also all, more general, provisions on orders. The special provisions regarding court appeal can be found in Chapter 8, however, the general provisions on objection and appeal of Chapter 6 also apply.

3.2.3.4 Other Statutes

Administrative law is governed by the general administrative law act and the numerous special administrative law acts. However, regulations outside the field of administrative law also apply. To have the right to appeal Ina Deurloo must be an interested party. This means that Ina’s interest has to be directly affected by an order. So there is also the question of the order being a written ruling of an administrative authority constituting a legal act under public law. To begin with an administrative authority is a body of a legal person established under public law. Here the Civil Code (CC)\textsuperscript{13} comes into view, because this code contains provisions that define the concept legal person. Other non-administrative law acts that may apply are acts in the field of constitutional law. Examples are the Civil Servant Act, stating the definition of civil servant, the Province Act and the Municipality Act (see Fig. 3.3)\textsuperscript{14}.

\textsuperscript{13} In Dutch: Burgerlijk Wetboek.
\textsuperscript{14} In Dutch: de Ambtenarenwet, de Provinciewet en de Gemeentewet.
3.2.4 The Basic Concepts

Chapter 1 of the GALA gives the provisions that define the basic concepts used in administrative law. These concepts and their definitions are valid within all special administrative law acts. The major concepts defined in the GALA are:

- administrative authority
- interested party
- order
- decision
- application
- administrative court
- objection
- appeal

In defining these concepts references are made to other basic concepts in administrative law. Some of these concepts are defined in other provisions, or in precedents, others are not defined any further.
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For example, article 1:3 section 1 of the GALA defines ‘order’ as:

Order means: a written ruling of an administrative authority constituting a legal act under public law

This definition is based on three concepts: written ruling, administrative authority and legal act under public law. The concept administrative authority is in turn defined in article 1:1 of the GALA, whereas written ruling and legal act under public law are not defined any further within the GALA or any other act. Another example is article 1:2 section 1 defining ‘interested party’ as:

Interested party means: the person whose interest is directly affected by an order.

This definition is also based on three concepts: the person, interest directly affected and order. The concept ‘order’ is defined in article 1:3 section 1 of the GALA, where ‘person’ and ‘interest directly affected’ are not defined any further within the GALA or any other act. The concept ‘interest directly affected’ however, is defined by precedent cases.

We have introduced the domain of practice from a legal point of view. This involved a description of the area of law, the objective structure of the legal sources and the basic concepts. Law teachers spent much time introducing the basic concepts and the statutes. The way in which the legal sources are structured does not explicitly indicate how they have to be used. Therefore teachers and books provide explanations, objectives and justifications to insert coherence absent in the actual text of the statute. As is also illustrated with the example of Ina Deurloo the legal knowledge referred to does not clearly follow the structure indicated in the written statute text. It is almost obvious that this will lead to difficulties and problems in using the knowledge. We will discuss these problems in more detail in paragraph 3.4. However, we now first describe the domain of practice from a knowledge engineering point of view where the emphasis is on the use of the domain knowledge.
3.3 Knowledge Engineering Point of View

Here we describe the domain of practice from a knowledge engineering point of view. We are interested in using the legal knowledge in constructing a legal solution. We want to reveal a structure of use in the legal sources. We therefore turn to a conceptual perspective where statutes are seen as artifacts constructed to perform certain functions. Such a functional viewpoint on legal knowledge is described in the functional ontology of law (Valente, 1995). We first present a short description of ontological modeling before we introduce the functional ontology. This functional ontology is then used to analyze the GALA.

3.3.1 Ontological Modeling

In order to represent a domain it is necessary to restrict the attention to a small number of concepts which are meaningful and sufficient to interpret reality (the world) and to provide a representation adequate to a certain task or goal at hand. As a consequence, a central part of knowledge representation consists of elaborating a conceptualization: a set of abstract objects, concepts and other entities which are assumed to exist in a certain domain, as well as the relations that may hold between them (Genesereth & Nilsson, 1987). An ontology is a specification of a conceptualization (Gruber, 1994). It comprises a description of the concepts, objects, relations and so forth, which make up a conceptualization.

The commitments which are implied by the choice of one set of concepts instead of another to describe a certain phenomenon are called ontological commitments. A conceptualization therefore also carries a set of ontological commitments. These commitments can be made explicit by ‘importing’ or including the more abstract ontologies that reflect the assumptions or point-of-views that have been made or taken in conceptualizing a domain. Therefore an ontology can either be a top ontology, a core ontology or a domain ontology depending on the purpose of use. To summarize:

- a top ontology can make explicit the ontological commitments of some domain ontology.
- a core ontology contains the categories that define what a field is about.
- a domain ontology contains the concepts of some domain.
Terms which re-occur in every domain and are part of our common sense understanding of the world, like time, space, cause etc., are part of a top ontology (Hobbs, 1995; Sowa, 1995; Guarino, 1995; Guarino, 1998). Core ontologies are intermediates between the completely general top ontologies and ontologies of legal, ecological, medical, etc. domains: the domain ontologies (van Heijst, Schreiber & Wielinga, 1997). A core ontology tells us what a domain is about. A core ontology mediates a top ontology, that reflects our common sense understanding of the world, and a domain ontology that defines the concepts and structures in a domain. In our case the field under study is law and the subfield or domain is administrative law. A core ontology of law contains the categories that define what law is about. The categories constrain what is relevant in the domains that constitute the field of law. As hypothesized by Valente (1998) (see also Valente, Breuker & Brouwer, 1999), core ontologies have a functional character and reflect the major reasoning or argument in a field. The functional perspective may be understandable by the fact that fields are typically fields of practice. As a consequence, types of knowledge can be distinguished by their roles. That these roles may also reflect the predominant structure of reasoning is more speculative, but may be conceived as that domain knowledge is a ‘model of the system in the world’ and that reasoning means some operation on this simulated system, or the construction of such a system (Clancey, 1992). A legal core ontology describes a coherent view on the legal domain (see, for other examples, McCarthy, 1989; Visser, 1995; van Kralingen, 1995). We use the core ontology of law developed by Valente (1995) because it is a functional ontology and therefore reflects the major structure of reasoning in the field of law.

3.3.2 A Functional Ontology of Law (FOLaw)

The core ontology of law originally developed by Valente (1995) is a functional ontology of law and is referred to as FOLaw.
The ontological commitments (view) that have lead to the core ontology are:

- the legal system is viewed as a system, i.e. an entity with a certain internal structure, behaving in an environment.
- the legal system is an artifact with presupposed functions. The purpose that is served by the legal system is: control over social behavior. Therefore the output of the legal system is intended output.
- the main function of the legal system is to prescribe and to react to social behavior.
- the law is defined by its legal sources, such as legislation and precedent law. Legal sources contain the (codified) knowledge which specifies how the legal system works or should work: not only internally, but also in particular in reacting to social behavior in a society.

Given this view, an ontology of law can be built by identifying these functions and using them to distinguish categories of legal knowledge. The primary functions of legal sources and the corresponding categories of legal knowledge proposed by Valente (1995) are introduced first. These categories are normative knowledge, meta-legal knowledge, world knowledge, responsibility knowledge, reactive knowledge and creative knowledge. This is followed by a description of the functional roles of these distinctive categories of legal knowledge in the operation of the legal system.

3.3.2.1 Normative knowledge

The most characteristic category of legal knowledge is normative knowledge. A norm expresses an idealization: what ought to be the case or what ought to happen. This idealization is expressed by reference to a description of the reality (the world) in which some configurations of facts and behavior are prohibited to make an ideal world. The basic conception of norm used in the ontology is largely derived from Kelsen (1991). Since they express an ideal world, norms can be either observed or violated. A norm is observed when the behavior in the real world does not conflict with its specification in the ideal world. A norm is violated when the behavior in the real world conflicts with its specification in the ideal world.
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To apply a norm means to verify or compare the reality with the ideal world defined in the norm, and so classifying the reality as either compliant or non-compliant with the norm. The classification is the normative status of the behavior with respect to the norm.

3.3.2.2 Meta-legal knowledge

Legal sources are made up of individual norms. These norms may give conflicting normative status for the same situation. Meta-legal knowledge provides the rules by which these conflicts are resolved. Another function is to specify which legal knowledge is valid. A valid norm is a norm that belongs to the system.

3.3.2.3 World knowledge

Law deals with behavior in the world and therefore must contain some description of this behavior. This description is not directly available from the legislation, but is usually implicit. The category of knowledge that describes the world is the world knowledge. This knowledge should constitute a structured model. When this model character of the world knowledge is stressed the term legal abstract model (LAM) is used as a synonym for world knowledge. The LAM is the world knowledge structured as a legal abstract model and functions as the interface between the real world and the legal world. Its role is to define a model of the real world that is used as a basis to express normative and other categories of legal knowledge. The LAM expresses the legislator’s view on some domain, e.g. traffic, crime, administration. This view is necessarily abstract and constrained to legal functions. The bulk of the LAM consists of definitions of concepts that represent entities and relations in the world. It is here where common sense accounts of cases meet a legal interpretation and selection of legally relevant facts. Besides the identification of relevant facts, the law also needs to establish causal accounts between these facts in order to establish which agents can or cannot be held responsible for violations of norms.
3.3.2.4 Responsibility knowledge

The role of responsibility knowledge is to assign or limit the responsibility of an agent over a given (disallowed) state of affairs. The responsibility knowledge either establishes or disestablishes a link between a violation of a norm and agent that is to be considered responsible. Responsibility is the intermediate concept between normative and reactive knowledge.

3.3.2.5 Reactive knowledge

The knowledge that specifies which reaction should be taken given a certain normative status and an agent responsible for it is what is called reactive knowledge. The reaction can be either a positive sanction or reward (a financial benefit, a right), or a negative sanction or punishment (a fine, prison sentence).

3.3.2.6 Creative knowledge

The legal system must regulate itself. The law can design the structure of the legal system as an organization. Creative knowledge performs this function.

3.3.2.7 The functional roles of the categories

These categories of legal knowledge are distinguished by their function in the legal system. Together the functions/categories identified compose the main function of social control. There are functional dependencies that describe how the main function is decomposed in sub-functions that together perform it (see Fig 3.4).
Figure 3.4: Functional roles of legal knowledge in the operation of the legal system (with permission Valente 1995). The rounded boxes represent functions, or alternatively, bodies of knowledge which perform the function. The solid arrows indicate functional dependencies, i.e. the inputs and outputs of these functions.

A cycle starts with a real world situation that is interpreted in order to generate an abstract description in terms the legal sources use. This abstract case description is called a legal situation, and the knowledge used to produce this is the world knowledge, the definitional knowledge, which forms the legal abstract model. The legal situation is then analyzed against the normative knowledge to verify whether it violates any norm, producing a classified situation, a situation classified as either allowed or disallowed.
In another path the situation is analyzed using again the world knowledge, the causal knowledge, in order to find out which agent in the world has caused the situation. This information is then used as input to the responsibility knowledge that determines which agent is to be held responsible for the situation. The classified situation and the responsible agent are used as inputs for the function that defines a possible legal reaction using reactive knowledge. Outside this cycle the law may also create an abstract entity (part of the legal system) using creative knowledge. This entity is added to the LAM. The meta-legal knowledge refers to all the entities. Another way to see the interdependencies is that they provide the connections between the (sub)functions from a reasoning point of view. Moreover, the main path in the figure can also be seen as the global structure of legal arguments: starting from the ‘facts of the case’ and going up to sentencing with each function providing the source for argument steps in specific places in the global argument. The scheme in Fig. 3.4 can also be seen as the basic structure of legal arguments. Each category corresponds to a type of argument that has as antecedents the inputs and as conclusion the outputs of each function, and as the warrants the knowledge belonging to that category. Legal reasoning can therefore be seen as the production and analysis of arguments involving one or more of these categories.

### 3.3.2.8 Typing the GALA

The GALA has been analyzed in terms of the FOLaw. Valente (1995) distinguishes between non primitive types of knowledge and primitive types of knowledge. Non primitive types are rights, liberties, powers and procedures. The primitive knowledge types are world knowledge, normative knowledge, meta-legal knowledge, responsibility knowledge, reactive knowledge and creative knowledge. A non primitive or compound knowledge category needs to be decomposed into primitive knowledge types. ‘Procedure’ is a construct used in law as are ‘rights’ and ‘liberties’. Because it is acknowledged that the GALA regulates procedures, we need to go into more detail in what these procedures constitute as far as primitive knowledge categories are concerned. In typing the knowledge in the GALA the major difficulty was to decide between typing an article as either definitional or normative. Definitional knowledge contains definitions of concepts that represent entities and relations in the world.
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Definitional knowledge is used by the normative knowledge to describe the ideal world. The function of definitional knowledge is to distinguish a set of agents, actions and situations in the world through a set of legal definitions. Normative knowledge in turn has two functions: prescribing behavior and defining a standard for comparison. A norm expresses what ought to be the case, the function of normative knowledge is to classify a certain situation as legal or illegal.
There is no problem to type, for example, article 1:3 section 1 of the GALA as definitional.

Order means: a written ruling of an administrative authority constituting a legal act under public law.

Everything that does fit this definition is an order, everything that does not fit this definition is not an order. There is also no problem to type, for example, article 3:46 of the GALA as normative.

An order ought to be based on sound reasons.

This norm expresses what ought to be the case. However, difficulties arise when we want to type the knowledge in, for example, article 6:5 section 1 of the GALA.

The notice of objection or appeal shall be signed and shall contain at least:
(a) the name and address of the person lodging it;
(b) the date;
(c) a description of the order against which the objection or appeal is brought;
(d) the grounds of the objection or appeal.

What do we have here? Can we type the knowledge as definitional or normative, or do we have to construct a new type of knowledge? What is the function of the knowledge described in this article? Is it to distinguish a set of agents, actions and situations in the world or to prescribe behavior and define a standard for comparison?
Legal procedures: normative or definitional?
Norms are rules of conduct that indicate that there is desired and undesired behavior in the world. Certain undesired behavior is forbidden in the world, while desired behavior is ordered. Take, for example, article 3 of the Regulation on Traffic Rules and Traffic Signs. Drivers are obliged to keep to the right as much as possible.

In the ideal world drivers keep to the right as much as possible. This is prescribed by this rule, where at the same time this rule is the standard of comparison. When the outcome of the comparison of a specific situation with the norm is that the driver showed undesired behavior, i.e. he did not keep to the right as much as possible, and he is also responsible for the violation of the norm, he will receive a sanction.
We may look upon article 6:5 of the GALA as prescribing behavior. So in that sense it might be typed as normative. However, it is not forbidden to behave differently. It seems that the prescriptions in article 6:5 rather indicate how to get a certain outcome, or reach a certain goal, in the easiest or best controllable way. These prescriptions of behavior resemble directions or instructions for use we all are familiar with, because these kind of prescriptions go with all new household appliances we purchase as, for instance, toasters, vacuum cleaners, washing machines, microwave ovens and, probably being the most complicated, video recorders.
The prescriptions that accompany these appliances are given to prevent accidents to happen, i.e. not to electrocute yourself with the toaster, to reach a certain goal or get a certain outcome, i.e. nice clean laundry, to restrict possibilities and to keep control, i.e. programming the video to record Doctor Zhivago showing on BBC1 next Thursday from 20.12 to 24.12, to pass off something in the easiest, comfortable and handiest way, i.e. replace the bag of the vacuum cleaner. It seems that these kind of prescriptions are somewhat less coercive, or less imperative than the prescription shown in article 3 of the Regulation on Traffic Rules and Traffic Signs.
However, if you do not follow these prescriptions this may also have consequences. For example, the instruction for use of the toaster gives a set of instructions on how to use the toaster.

\[15\] In Dutch: Reglement Verkeersregels and Verkeerstekens (RVV 1990).
If you follow these instructions you are guaranteed that certain consequences will result, i.e. nice toasted bread. When these consequences do not take place or take place differently, i.e. burned toast, the guarantee gives you the right to get another toaster for free. However, if you did not follow the instructions, i.e. you tried to repair the toaster with a knife, and the expected consequences did not result, you cannot claim the guarantee.

Article 6:5 section 1 of the GALA not so much prescribes an ideal world, but prescribes a way to reach a certain goal where the set of possible ways to reach that goal are restricted. The legislator takes into account that there are many possible ways in which a person may object or appeal and anticipates the consequences. So the decision to restrict the set of possible ways is more a pragmatic one than a principled one as is the case with a norm that is based on a conception of an ideal world.

We may also look upon article 6:5 section 1 as a legal definition. The function of definitional knowledge is to distinguish a set of agents, actions, objects and situations in the world. In this case the article gives the legal definition of ‘notice of objection’ and ‘notice of appeal’. The legal definition indicates that in the world of general administrative law there are objects that are referred to as ‘notice of objection’. This legal definition is used by the normative knowledge to describe the ideal world, but it is also used to interpret the specific situation to see if elements in the specific situation can be classified as a ‘notice of objection’.

So in typing the knowledge in the GALA, being a statute that regulates procedures, we may type the knowledge as normative knowledge or as definitional knowledge depending on the function of the knowledge in solving a legal case. We have decided that most of the articles in the GALA can be considered to have the function of indicating the set of agents, objects or actions, and are therefore typed as definitional knowledge. We therefore conclude that the GALA mainly contains definitional knowledge that is used to distinguish a set of agents, actions, objects and situations in the world the regulation refers to.

### 3.3.3 Domain Ontology

A domain ontology describes the content domain. This involves the knowledge that has to be acquired first to be able to apply this knowledge.
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This knowledge constitutes a structured model, the legal abstract model (LAM). The LAM consists of definitions of concepts that represent entities and relations in the world. These concepts are usually organized in class hierarchies, i.e. some concepts are subsumed by others. In defining concepts and relations based on other concepts and relations, some concepts are taken as primitive, i.e. are not defined. These concepts are supposed to be interpreted by people.

The LAM is in fact a layer of definitions of concepts and relations that is built on top of a large layer of common sense knowledge. The primitive (non-defined) concepts and relations in the LAM are the interface between the world knowledge and the common sense knowledge. For instance, it is possible to define in detail the characteristics of an order to be used in administrative law. The definition refers to other concepts, such as a written ruling, administrative authority and legal act under public law. However, the concept a written ruling being left undefined (primitive) the only way to interpret it is to rely on common sense knowledge. Therefore a concept in the LAM is defined in two steps. First defining it in terms of other concepts in the LAM until the level of primitive concept is reached. Second the common sense ‘definition’ of primitive concepts. To verify whether or not a certain legal concept in the LAM applies to a certain entity in the world, there are two interpretive steps. First there is the interpretation of reality asserting that a specific thing in the world is a written ruling. Second, there is the interpretation of the primitive terms with respect to the defined ones. The interpretation of an entity in the world to primitive concepts or the other way around is called common sense interpretation.

The interpretation of a primitive (or defined) concept to a defined concept within the LAM, or the other way around, is called legal interpretation.

The basic characteristic of the definitional framework is to provide the definitions of terms that form a vocabulary to describe states of affairs in the world. It is important to index and organize the knowledge based on the definitions of concepts. The basic elements that characterize a concept, for example order in administrative law should be distinguished clearly. Moreover it is useful to represent taxonomies of concepts both as an organizational principle and to be able to reason with these taxonomies.

— Lenat & Feigenbaum (1991) refer to common sense knowledge as the consensus reality: the general knowledge about the world that all people are assumed to have.
Because definitions of legal concepts frequently refer to other concepts, it is important to be able to represent a definition of a concept based on other concepts. For instance the concept order in administrative law is based on the existence of a written ruling, so that it is better to define one based on the other. From the reasoning point of view it is important to be able to verify whether a certain object in a case can be classified as an instance of a certain concept.

It is also important to be able to perform a goal-oriented variation of the same service by finding out which information is necessary for a certain concept to apply to a certain object, or what is lacking in order for this to occur.

Legislation is necessarily centered on human behavior in society and therefore some basic categories to describe this behavior are necessary. For instance, the law always refers to social agents, who may be either a person or an organization made and run by persons. Agents are assumed to be rational and therefore capable of independent and autonomous behavior (Valente, 1995). Typical agents in administrative law are person, administrative authority and administrative court. A second category is objects. Objects can only behave as an instrument of human behavior. Typical objects in administrative law are application, order and decision.

Agents and non-agents form the main classes of ‘things’ in the world. Legislation needs to identify and refer to who is or what these things are. For this reason it defines predicates or relations that may hold about one or several of them. Typical relations in administrative law are interested party (a relation between a person and an order) and right-to-appeal (a relation between an interested party and an order). Relations are basically static; in order to describe behavior it is also necessary to describe the behavior of agents. Typical behaviors in administrative law are file an application, make an object and lodge an appeal.
Here we present a small part of the LAM of the GALA world as an example.

agents

entity
: supertype [agent]
: subtype [person, other entity]

person
: supertype [entity]
: subtype [natural_person, legal_person]
: name (string)

natural_person
: supertype [person]
: subtype [civil_servant, medical_doctor, draftee, expert, adviser, lawyer, witness, interpreter, other]
: name (string)
: place of residence (string)
: status (competent, incompetent)
: age (int)

legal_person
: supertype [person]
: subtype [legal_person_in_private_law, legal_person_in_public_law]
: name (string)
: aims (list)
: domicile (string)

objects

act
: supertype [object]
: subtype [legal_act, other_act]
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legal_act  
: supertype [act]  
: subtype [legal_act_by_public_law, legal_act_by_private_law]  
: legal_consequence (yes)

other_act  
: supertype [act]  
: subtype [factual_act, non_factual_non_legal_act]

factual_act  
: supertype [other_act]  
: subtype [factual_act_with_intention, factual_act_without_intention]  
: legal_consequence (no)

factual_act_with_intention  
: supertype [factual_act]  
: subtype [naming_a_street, laying_of_tile_paving, ...]  
: intention (yes)

order  
: supertype [ruling]  
: subtypes [order_with_general_scope, order_with_specific_scope]  
: format (written)  
: emanated_from (administrative_authority)  
: content (legal_act_by_public_law)

The advantages of ontological modeling of a domain of practice are that it provides for an explicit, i.e. communicable and verifiable (e.g. by inheritance/exclusion etc.) analysis. The domain ontology contains the standardized terminology and supports the consistent use of terms. It also enables reuse of the knowledge.
We have discussed the objective structure of the legal knowledge in our domain of practice. It may be obvious that the structure we described does not present a structure of use. A functional point of view revealed different knowledge structures that each has a specific role in legal reasoning.
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These definitional and normative structures however, cross through the objective structure. Depending on what you are doing, in which stage of the legal case solving process you are, a specific knowledge structure should be used. This requires jumping from one point in the regulation to another. These two analyses make clear that problems arise when legal knowledge has to be used. We will now describe these difficulties in more detail to be able to propose possible remedies.

3.4 Students’ Difficulties

In legal education teachers and law books introduce the basic concepts and the structure of the statutes from a legal point of view (see section 3.2). However, when students have to apply this knowledge these structures appear to be insufficient. In describing a domain from a legal point of view the structure of a statute is followed with its arrangement of chapters, sections and subsections. However, although the document structure resembles a book structure, a statute covers something completely different. It may sound strange, but a statute is not a text. A statute is not a real, normal, current text following e.g. a story structure with a plot that focuses on events, complications and motives of agents, or expository discourse that contains statements, argumentation, reasoning and assertions. A real text takes the reader by the hand allowing her to construct an internal structure or macro structure (van Dijk, 1980). Such an internal structure enables the reader to produce the essence of the story in reply to the request “what did you read?” This is different with a statute. A statute is not a real text, it consists of parts of text, where the interrelation between text fragments has to be introduced by the reader. However, we not only have to read and understand a statute, we also have to use it.

The real structure of a statute is revealed when it is applied to specific situations. When we analyze the statutes from a functional point of view the coherence that seems to be absent is established following a distinction of different types of knowledge on the basis of their role in solving a legal case. These structures however, are criss-crossing through the objective structure. When we want to use statutes to construct a legal solution for a specific problem situation we do not start reading at the beginning and go on to the end of the statute. The statute structure that is presented to us is not the structure we have to follow when using the statute. The structure of use is crossing through the presented structure.
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Solving a legal case is therefore not a simple mapping between the case at hand and the text of the law. A student has to go back and forth in order to identify the applicable articles. All this makes that finding your way in statutes when solving a legal case is very difficult.

3.4.1 Finding Your Way

The basic difficulty students have when using the legal knowledge is that they have to reconstruct the available structure in a ‘structure of use’. They have to construct a conceptual model of the statute structure. We will again turn to the GALA to illustrate this. Other difficulties are related to the accessibility and the readability of statutes.

3.4.1.1 Structure reconstruction

The GALA is arranged using chapters, titles, paragraphs and articles. However, besides this formal layering the GALA also follows a substantive layering, which breaks out of the formal layering.

Applying the GALA does not mean that one can start with article 1:1 section 1 and just go on to the final article 11:4\(^{17}\).

This formal layering is traversed by the substantive layering. In applying the GALA it is important to keep in mind the way the act is constructed following the definitions, the linking provisions\(^{18}\) and the general and special parts. Besides a special provision, most of the time a more general provision is also applicable.

This substantive layering materializes through the use of the definitions in the GALA, through the existence of linking provisions and through the existence of general and special parts in the GALA.

\(^{17}\) Based on the GALA edition 1999/2000 (Drupsteen et al., 1999).

\(^{18}\) In Dutch: schakel bepalingen.
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PROSA

To summarize:
• definitions
  • definitions with a general scope
  • definitions with a special, restricted scope
• linking provisions
  • link from one part to another within the GALA
  • link to provisions outside the GALA
  • link from provisions outside the GALA to the GALA
• general and special parts in GALA
  • general - special distinction within the GALA
  • general - special distinction within each chapter of the GALA

Take, for example, the issue of legal protection. Legal protection is regulated in the Chapters 6, 7 and 8 of the GALA ranging from general to special. Chapter 6 contains general provisions for both objection and appeal, Chapter 7 contains special provisions on objection and administrative appeal, where Chapter 8 includes special provisions on court appeal. When Major and Aldermen of Haarlem decide not to give Ina a permit to build, she may take action. The commencement of proceedings is stated in article 8:1 section 1 of the GALA stating the right to appeal.

An interested party may appeal to the court against an order.

There will be a right to appeal for Ina Deurloo when she can be defined as an interested party. Given the right to appeal the next issue to determine is the procedure to follow. In general the person who has the right to appeal has to make an objection first. Once assigned a procedure the special provisions concerning this procedure apply as well as the general provisions regarding procedures. On the basis of the provisions in the GALA Ina has to make objection before she can appeal to the court.

The following overview shows the order in which these articles concerning the legal protection procedure have to be consulted when confronted with a specific situation.
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the right to appeal to the court (8:1 GALA)

interested party (1:2 GALA)

entity

- natural person
- legal person (2:1 CC, 2:3 CC)
- administrative authority (1:1 GALA)
- other

order (1:3 GALA)

format written

of an administrative authority (1:1 GALA)

- a-body (1:1 section 1a GALA; 2:1 CC)
- b-body (1:1 section 1b GALA)
- 3-body (1:1 section 3 GALA, Civil Service Act article 1)
- not an administrative authority (1:1 section 2 GALA)

content legal act under public law

administrative authority competent to take the legal act under public law

interest is directly affected

interest entrusted (1:2 section 2 GALA)

general and collective interests (1:2 section 3 GALA)

- objectives legal person
- factual activities legal person

equal with order (no order but appeal) (6:1 and 6:2 GALA)

excepted order (order but no appeal) (8:2, 8:3, 8:4, 8:5, 8:6 GALA)

objection before appeal to court (7:1 GALA)

no objection needed before appeal to the court (7:1 under a, b, c and d GALA)

- order made in respect of an objection (7:1 a GALA)
- order made in respect of administrative appeal (7:1 a GALA)
- order subject to approval (7:1 b GALA)
- order containing the approval of an order (7:1 c GALA)
- order containing the refusal of the approval an order (7:1 c GALA)
- order prepared in accordance with one of the procedures regulated in paragraph 3.5 of the GALA (7:1 d GALA)
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making an objection (1:5 section 1 GALA, 6:4 section 1 GALA, chapter 6 GALA, paragraph 7.1 GALA, paragraph 7.2 GALA)

lodging an administrative appeal before appeal to court (1:5 section 2 GALA, 6:4 section 2 GALA, Chapter 6 GALA, paragraph 7.3 GALA)

lodging an appeal to an administrative court (1:5 section 3 GALA, 6:4 section 3 GALA, Chapter 6 GALA, Chapter 8 GALA).

However, the formal structure of the statutes is very different from the substantive structure as was shown above.

3.4.1.2 Accessibility

The accessibility of statutes is complicated by the availability of large amounts of statutes and the lack of an explicit structure or organization for guidance. Statutes are difficult to assess, i.e. select as potentially applicable candidates to the case, not only because there are so many, but in particular because their formal structure is so different from their substantive structure. Moreover, a parsimonious substantive structure may be dependent on the legal issues implied in the case. Finally, and maybe most importantly, the normative structure is difficult to comprehend due to the use of exceptions, explicit and implicit references, the use of different but related terms, the fact that related topics are often not regulated in a coherent way, the fact that a topic can be regulated in various articles in various statutes and the existence of conflicts between legal rules. There do exist conflict resolution rules, however, to apply these rules the entire legislation has to be checked.

3.4.1.3 Readability

Legislation is difficult to read because a statute is formulated in abstract legal terms. Moreover, a statute consists of articles that have to be read in interrelation. Most of the time a combination of articles is needed to infer a conclusion. In turn an article is often subdivided in sections, each article or article section consists of article components. These article components have to be read in interrelation and these relations can be cumulative (AND), alternative (OR) or negative (NOT).
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Take, for example, article 1:3 section 1 of the GALA

Decision means: an order which is not of a general nature, including refusal of an application.

In full this indicates that decision is an order NOT an order of general nature AND refusal of an application of an order NOT an order of general nature. Another difficulty is that article components that constitute an article are not always applied in the order they are mentioned in the article. Take, for example, article 1:2 section 1 of the GALA.

Interested party means: the person whose interest is directly affected by an order.

The three concepts that can be distinguished in the order mentioned in the article are ‘person’, ‘interest directly affected’ and ‘order’. However, this is not the sequence in which the components have to be examined when applying this knowledge to a specific case. After having determined who the specific person is, the next thing to do is to make clear what the order is. Then it is possible to determine if this specific person has a directly affected interest concerning this order.

3.4.2 To Sum Up

Students experience many difficulties when they have to use the legal knowledge. These difficulties are primarily caused by the fact that the objective structure of the knowledge is an insufficient structure for using the knowledge. Legal knowledge is described by articles that do not constitute a coherent text, (legal) knowledge has to be inferred on the basis of the articles and as usual these are riddled with exceptions. Therefore there is no simple mapping between a case at hand and the text of the law, one has to go back and forth in order to identify applicable articles.

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19 That this is not only a theoretical difficulty was shown in the evaluation of PROSA where many students when applying this article started with examining interest directly affected before examining order.
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The problem that students are not able to analyze a case systematically is caused by the fact that it takes a long time to acquire insight in the mapping between the textual organization of the law and the conceptual structure that cannot be acquired by simple explanation. Students also have problems with the identification of terms of the law in the case. These problems are concerned with mapping the common sense case description to the legal terminology, i.e. the LAM. Students do not have sufficient insight into the major conceptual structures and into the world of administration. What can we do to enable students to acquire insight in and understanding of the structure of the regulations and the world of administration?

3.4.3 Remedies

One of the remedies we may think of is representing regulations in a different format. Regulations are purely text based. Although graphical representations are only recently accepted in communication, they are already widely applied in science. However, neither the application of non-textual elements is introduced in law\textsuperscript{20}, or the use of more precise formal representations. Both the use of graphical tools and the explicit codification of references may improve the readability and accessibility of the legal knowledge that in turn may lead to better insight. However, we do not think we may expect the legislator to introduce these improvements on short notice, therefore we will deal with these difficulties by supporting the student. The fact that the formal structure is not consistent with the substantive structure makes that in solving a legal case the student has to leaf through many statutes and as a result has to keep track of this search process and has to hold on to the intermediate results. This managing of information puts a heavy load on her cognitive activities at the expense of creating understanding and insight in the system and structure of the regulations involved. Therefore we have to support the student providing guided access to enhance accessibility and readability. To be able to acquire this understanding and insight as affective and efficient as possible the information management activities should be supported in such a way that the student can focus on acquiring insight in the structure of the knowledge.

\textsuperscript{20} There are exceptions, e.g. in patent law or construction law where drawings are used, but not as elements of the law itself.
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Enhancing either or both the accessibility and the readability of regulations may support the management of information to enable the student to enlarge her understanding and insight in the structure of the regulations.

3.4.3.1 Enhance accessibility

The accessibility of the legal knowledge can be enhanced using a table of content, an index and by restructuring regulations using formats as a flow chart, a figure, a structure, a diagram, an outline, etc. to be presented to the student. A table of content and an index do not, or only slightly, depict interrelations between regulations and within a statute. Restructuring statutes as flow charts may depict the relations and may make the coherence explicit. However, a flow chart may easily become too complicated because of too much branching.

3.4.3.2 Enhance readability

Readability can be enhanced by rewriting the regulations by specifying the condition parts of the specific rules. However, the problem here is that this may lead to too much redundancy and results in rules that are too voluminous and too talkative.

3.4.3.3 Support the acquisition of the conceptual structure

Although effort should be spent in enhancing the accessibility and the readability of the statutes, e.g. by using information serving facilities of modern text based computer repositories, this is not enough to acquire insight in the structure of statutes. As we stated before, to be able to acquire insight in the structure of statutes it is necessary that students actually engage in solving legal cases. To be able to solve a legal case the student must have knowledge of the specific domain involved and must acquire understanding of the structure of this knowledge. There are a number of ways to support students in acquiring understanding and insight in the structure of statutes. To be able to find your way, you need to have a conceptual representation of the regulations. To acquire a conceptual representation a functional differentiation of knowledge may help, because it distinguishes the knowledge on the basis of their function in solving a legal case.
A distinction between the legal case facts on the one hand and the legal rules on the other, for example, may already work as a structuring principle that may lead to more insight in what to do when. To support students in acquiring the conceptual structure of the domain of practice and to support them in identifying legal terms in the case to be able to systematically analyze a case, a major emphasis has to be on the mapping between the LAM, i.e. the world knowledge implied by the GALA, and the case description. This mapping should be in such a concrete fashion that it also acts as an external memory. To summarize:

Students have to acquire a structure of use, therefore we have to present them legal cases to solve. To support the acquisition of the conceptual structure we should present the student guided access to the legal knowledge based on a functional differentiation of the legal knowledge. Enhancing the accessibility and the readability of the legal knowledge sources makes that students will have less problems in finding their way and in managing the information.

We will now present our view on how to design legal cases. We put restrictions on the format and the content of legal cases because the cases have to be used as exercises to acquire understanding of, and insight in, the structure of the legal knowledge to enable the construction of a correct and complete legal solution.

### 3.5 Designing Legal Cases

Legal cases are used in legal education as descriptions of standard problems and solutions belonging to a regulation. Legal cases are also used as specific situation descriptions for which a legal solution has to be constructed by applying legal knowledge. Therefore there is, or should be, a close relation between the content of the domain of practice and the content of the legal cases presented to the student.

#### 3.5.1 What is a Legal Case?

There is a large overlap in descriptions with regard to what is meant with a legal case (see, for instance, Crombag et al., 1971; Abas et al., 1985; Bos, 1986; Teich, 1986; Henket & van den Hoven, 1990; Algra et al., 1991; Tunkel, 1992; Wessels, 1992).
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Crombag et al. (1971, p. 8) describe a legal case as:

A legal case consists of a description of a set of events containing a legal problem. The question is to find a solution to the problem in the form of a decision that has to be constructed on the basis of rules of law that, in principle, are to be found in law books and precedents.

Abas et al. (1985, p. 13) describes a legal case as follows:

A case is a situation, a listing of facts and events that may occur in everyday life.

Henket & van den Hoven (1990, p. 219) describe a legal case as:

A case is nothing more than a situation, an incident. In a case a set of facts and events is described. A legal case is a situation, an incident, in which a problem is enclosed for which a solution can be searched for from a legal perspective.

Wessels (1992, p. 112) describes a case as follows:

A case is a description of a set of facts, relations and events in which one or more legal problems can be found.

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21 In original “Bij een casuspositie is gegeven een beschrijving van een aantal gebeurtenissen, die een juridisch probleem bevatten. Gevraagd wordt een oplossing van dat probleem in de vorm van een uitspraak, die tot stand moet komen op grond van rechtsregels, die in principe gegeven zijn in de wetboeken en de jurisprudentie.”.
22 In original “Een casuspositie ofwel korter een casus, is een geval, een opsomming van feiten en gebeurtenissen die zich in het leven van alledag kunnen voordoen.”.
23 In original “Een casus is niets anders dan een geval, een voorval. In een casus worden een aantal feiten en gebeurtenissen beschreven. Een juridische casus is een casus waarin een probleem ligt besloten waarvoor vanuit juridisch perspectief een oplossing kan worden gezocht.”.
24 In original “Een casus is een beschrijving van een aantal feiten, relaties en gebeurtenissen waarin een of meer juridische problemen schuil gaan.”.
We want to design legal cases to practice legal case solving to enable law students to acquire insight in the structure of the legal knowledge, that is enable the acquisition of a conceptual structure of the legal knowledge. This has major consequences for both the format and the content of the legal cases to be used.

### 3.5.2 Legal Case Format

In our view a legal case consists of a situation description, a related question and a legal solution. The legal solution consists of the conclusion and the argument structure.

#### 3.5.2.1 The Situation Description

The situation description part of a legal case describes a real life situation in terms of facts (see Fig. 3.5).

> Mrs. Nienke den Haan wants to enlarge her living room. By building an extension to her house for the new kitchen, she can add the old kitchen to her living room. Nienke den Haan applies for a permit to build with the qualified administrative authority. Mrs. Jaspers, the neighbor of Nienke den Haan, does not like the idea. In the mean time the permit to build is given to Nienke den Haan by writing of 2 February 1998. Mrs. Jaspers hears about the permit and is appalled. Mrs. Jaspers objects to the granting of the permission to Nienke den Haan. However, the qualified administrative authority dismisses Mrs. Jaspers objection. Mrs. Jaspers is not satisfied with this decision and she starts court appeal. Now it is Nienke den Haan her turn to be appalled.

Figure 3.5: Situation description.
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A more formal description of a situation description is:\footnote{The description is in BNF where '::=' means `defined as, 'I' means 'or'}. 

\[ (1) \ <\text{Case}>::= <\text{SituationDescription}><\text{CaseQuestion}> \]
\[ (2) \ <\text{SituationDescription}>::= <\text{Fact}_1, \ldots , \text{Fact}_n> \]
\[ (3) \ <\text{Fact}>::= <\text{Event}|<\text{State}> \]
\[ (4) \ <\text{Event}>::= <\text{State}_1><\text{StateChange}><\text{State}_2> \]
\[ (5) \ <\text{State}>::= <\text{Object}><\text{Attribute}><\text{Value}> \]
\[ (6) \ <\text{Object}>::= <\text{Term}> \]
\[ (7) \ <\text{Attribute}>::= <\text{Term}> \]
\[ (8) \ <\text{Value}>::= <\text{Term}> \]
\[ (9) \ <\text{Term}>::= \text{<LegalTerm>|<WorldTerm>} \]

3.5.2.2 The Question

The question related to a situation description presents the problem solving goal. An example of a question related to the situation description stated above is the following (see Fig. 3.6).

![Figure 3.6: Question.](image)

What can Nienke den Haan do at this point?

A more formal description of a question related to a case is:

\[ (7) \ <\text{CaseQuestion}>::= <\text{Identification}|<\text{NormativeStatus}|<\text{ResponsibilityStatus}|<\text{ReactiveStatus}> \]
\[ (8) \ <\text{Identification}>::= <\text{LegalTerm}> \]
\[ (9) \ <\text{NormativeStatus}>::= \text{'allowed'|'disallowed'} \]

3.5.2.3 The Legal Solution

A legal solution for a question related to a situation description consists of an argument structure or reasoning working to a conclusion or answer.
Article 8:26 section 1 GALA Until the end of the examination in court, the court may on its own initiative, at the request of a party or at their own request, allow interested parties to be joined as parties in the action.

Article 1:2 section 1 GALA Interested party means: the person whose interest is directly affected by an order.

the person = Nienke den Haan

Article 1:3 section 1 GALA Order means: a written ruling of an administrative authority constituting a legal act under public law.

a written ruling = by writing of 2 February 1998

of an administrative authority = the qualified administrative authority

a legal act under public law = the permit to build is given

interest is directly affected = the granting of the permission to Nienke den Haan

interest is directly affected = Mrs. Jaspers objects to the granting of the permission to Nienke den Haan

Nienke den Haan being an interested party may request to be joined as a party in the action.

Figure 3.7: Legal solution.
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A more formal description of a legal solution on the basis of a situation description and a question is:

(10) \(<\text{LegalCaseAssessment}>::= <\text{Case}><\text{LegalSolution}>\)
(11) \(<\text{LegalSolution}>::= <\text{ArgumentStructure}><\text{Conclusion}>\)
(12) \(<\text{ArgumentStructure}>::= <\text{Component}_{1}...<\text{Component}_{n}>\)
(13) \(<\text{Component}>::= <\text{Article}>|\)
   \(<\text{ArticleComponent}>\)
   \(<\text{LinkOperator}>\)
   \(<\text{Fact}>\)
(13) \(<\text{Article}>::= <\text{ArticleComponent}_{1}...<\text{ArticleComponent}_{n}>\)
(14) \(<\text{ArticleComponent}>::= <\text{LegalTerm}>\)
(15) \(<\text{LinkOperator}>::= '='|'\neq'\)
(16) \(<\text{Conclusion}>::= <\text{LegalTerm}>|
   '\text{allowed}'|'\text{disallowed}'|\)
   \(<\text{agent}>|\)
   \(<\text{Reward}>|<\text{Punishment}>\)

3.5.3 Legal Case Content

The situation description, the question and the legal solution are described in terms of the domain of practice. There should be a close relation between the subject matter content and the legal cases to be designed. Within the case content a distinction can be made between case topics and levels of difficulty.

3.5.3.1 Case topics

The legal cases can be arranged to topic. The topics are the outcome of modeling the subject matter content. The functional differentiation of the knowledge results in a clear separation of categories of knowledge and their role in legal reasoning. For example the definitional part of the world knowledge of the GALA shows the basic concepts in the domain of administrative law.
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- interested party
- order
- administrative authority
- appeal
- objection before appeal

These concepts can be used as case topics. The components in the definition of the term are used to vary the content of the cases. For example, cases with the topic order may vary on types of format, sorts of subtypes of administrative authorities the order emanated from, sorts of subtypes of content, or a combination of these.

order
: supertype [ruling]
: subtypes [order_with_general_scope,
  order_with_specific_scope]
: format (written)
: emanated_from (administrative_authority)
: content (legal_act_by_public_law)

3.5.3.2 Difficulty levels

The functional differentiation of the knowledge also supports the arrangement of legal cases to level of difficulty. A legal case is assigned a difficulty level on the basis of the series of reasoning steps necessary to construct a legal solution. The number of reasoning steps is an indication for difficulty level. The more reasoning steps one has to perform to construct the legal solution the more difficult the legal case is. The number of components that make a legal solution is also an indication for difficulty level. The more components needed in the legal solution, the more difficult the legal case. In describing the assessment model, Breuker (1993) states that case abstraction, involving the abstract/transform inference, can mean a large range of types of inferences, dependent on the “distance” between the way the case is described and the way the norms are formulated.
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The simplest way of abstraction is classification or identification of instances as concepts (Mayor and Aldermen of Haarlem = Mayor and Aldermen). Terminological abstraction requires more inferences (Mayor and Aldermen of Haarlem = Mayor and Aldermen = administrative authority). Underlying domain knowledge is used for interpreting the situation description. A situation description can be described in the legal terms used in the domain, or in primitive terms, or in common sense terms, or in a combination of these.

3.5.3.3 Legal case examples

To illustrate how to design a legal case we describe three cases, each with the same topic, but with different levels of difficulty. The definitional framework of the GALA contains five basic topics. Reasoning is restricted to this category of definitional knowledge. The topic selected is interested party, the difficulty levels are easy, medium and difficult. Article 1:2 section 1 of the GALA gives the following description of interested party.

Interested party means: the person whose interest is directly affected by an order.

To design cases with this topic the essential components within the description are used to vary the content. These components are ‘person’, ‘order’ and ‘interest directly affected’. Each case description for the topic interested party must at least contain facts on each of these three components. However, the description of the components differs with difficulty level. The case facts are described in more abstract terms in an easy case (legal terms), whereas they are described in more concrete terms for a case that is classified as difficult (common sense terms). An example of an easy interested party case is the Dapper Market case. The facts that play a role in the legal solution are indicated between brackets in courier.
Already for many years there is the Dapper Market in the Dapperstreet in the district Zeeburg. [The qualified administrative authority takes an order in the meaning of the General Administrative Law Act to run the Dapper Market also on Sundays]. [Alexander Boer], [who lives in the district Amsterdam Oud Zuid, in De Lairessestreet], does not like it that the Dapper Market will be open on Sundays as well. He is a light sleeper, his health might be in danger. He makes an objection against the order of the district Zeeburg.

Figure 3.8: The Dapper Market situation description.

Is Alexander Boer an interested party according the General Administrative Law Act?

Figure 3.9: The Dapper Market question.

Article 1:2 section 1 GALA Interested party means: the person whose interest is directly affected by an order.

the person = Alexander Boer

an order = The qualified administrative authority takes an order in the meaning of the General Administrative Law Act to run the Dapper Market also on Sundays

interest is directly affected IS NOT Alexander Boer, who lives in the district Amsterdam Oud Zuid

Alexander Boer is not an interested party according to the GALA

Figure 3.10: The Dapper Market solution.
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The legal solution shows articles and article components that are matched to facts from the situation description. An example of a medium interested party case is the Hawthorn case. This case is characterized as medium, because we now have to decompose the order article into its successive article components as well.

Mrs. Dubbeldam has a garden at the allotment complex Amstelglorie. In her garden grows a hawthorn tree. Mrs. Dubbeldam dislikes this tree enormously and she wants to get rid of the tree. She requests a permit to fell the hawthorn tree. [The qualified administrative authority] grants Mrs. Dubbeldam [the tree-felling permit] [by the letter of 10 October 1998]. [Mr. van Dijkum], [who has the garden next to Mrs. Dubbeldam], hears about this permit. He is a devoted to everything that grows and blooms. He immediately writes a letter to the administrative authority that granted the tree-felling permit in which he makes his objections against the granting of the permit knowable.

| Mrs. Dubbeldam has a garden at the allotment complex Amstelglorie. In her garden grows a hawthorn tree. Mrs. Dubbeldam dislikes this tree enormously and she wants to get rid of the tree. She requests a permit to fell the hawthorn tree. [The qualified administrative authority] grants Mrs. Dubbeldam [the tree-felling permit] [by the letter of 10 October 1998]. [Mr. van Dijkum], [who has the garden next to Mrs. Dubbeldam], hears about this permit. He is a devoted to everything that grows and blooms. He immediately writes a letter to the administrative authority that granted the tree-felling permit in which he makes his objections against the granting of the permit knowable. |

Figure 3.11: The Hawthorn situation description.

| Is Mr. van Dijkum an interested party according the General Administrative Law Act? |

Figure 3.12: The Hawthorn question.
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PROSA

Article 1:2 section 1 GALA Interested party means: the person whose interest is directly affected by an order.

the person = Mr. van Dijkum

Article 1:3 section 1 GALA Order means: a written ruling of an administrative authority constituting a legal act under public law

a written ruling = by the letter of 10 October 1998
an administrative authority = The qualified administrative authority
a legal act under public law = the tree-felling permit
interest is directly affected = who has the garden next to Mrs. Dubbeldam

Mr. van Dijkum is an interested party according the General Administrative Law Act

Figure 3.13: The Hawthorn solution.

An example of a difficult interested party case is Soccer Club SHO. This case is classified as difficult, because next to decomposing the ‘order’ article, we also have to decompose the ‘administrative authority’ article.
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The soccer club SHO wants to move to municipal grounds at the border of the buildings of the municipality of Oud Beijerland. Major and Aldermen propose to the city council [to rent the municipal grounds] to SHO for a ten year period. The city council agrees with this proposal and instructs the [Major of Oud Beijerland] to make an agreement with the soccer club.

On the 2nd of March 1998 [the written agreement] is made between the municipality Oud Beijerland and SHO.

[Wim van Prooijen] is the owner of a piece of land with an agrarian use. This piece of land is situated next to the piece of land where SHO will move to.

Wim van Prooijen was engaged in negotiations with the municipality about purchasing this particular piece of land. Wim van Prooijen wants to use the land to expand his agrarian farm. Wim van Prooijen is furious.

Figure 3.14: The SHO situation description.

Is Wim van Prooijen an interested party according to the General Administrative Law Act?

Figure 3.15: The SHO question.
**Article 1:2 section 1 GALA**

Interested party means: the person whose interest is directly affected by an order.

the person = Wim van Prooijen

**Article 1:3 section 1 GALA**

Order means: a written ruling of an administrative authority constituting a legal act under public law

a written ruling = the written agreement

**Article 1:1 section 1 GALA**

Administrative authority means:
(a) a body of a legal person which has been established under public law
(b) another person or body corporate which is invested with any public authority

**Civil Code Book 2 Article 1 section 1**

The State, the provinces, the municipalities, the district water boards and also all bodies with statutory powers under the Constitution, have legal personality

**Municipality Act Article 6**

Each municipality consists of a city council, a Major and Aldermen and a Major.

Major = Major of Oud Beijerland

a body of a legal person which has been established under public law = Major of Oud Beijerland

a legal act under public law IS NOT to rent the municipal grounds

Wim van Prooijen is not an interested party according to the GALA
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3.6 Conclusion

Legal knowledge plays a determining role in solving legal cases. In learning to solve legal cases the problem is to come to grips with content rather than with method. To improve their legal case solving performance students benefit from insight in the structure of the applicable knowledge available in the legal sources. There is a basic difference between the ability to understand the legal knowledge and the ability to use this knowledge, to apply it to specific problem situations.

The theoretical, or objective, structure of the legal knowledge is a different one than the functional structure. The legal source text structure is sequential, with some textual aids as indexing using article numbers, pronouns, conjunctions and terms. The structure of use, however, is an explicit structure. The explicit structure cannot be represented in a pure sequential textual format because it needs "branching". The explicit structure represents exception structures for normative parts of articles, procedural dependencies and hierarchies of concepts.

To be able to improve the ability to use the knowledge, students have to acquire such an explicit structure of the legal knowledge on top of the legal source text structure. This explicit structure can only be acquired by applying the knowledge to specific problem situations, i.e. by using the knowledge. However, support can be organized to facilitate the acquisition of this explicit structure. We selected administrative law as the domain of practice. We described the objective structure of the legal knowledge in the domain and the functional structure. We showed that the functional knowledge structure does not follow the objective structure at all, but cross through it. Depending on what you are doing, in which stage of the problem solving process you are a specific knowledge structure, for example a definition structure or a normative structure, should be used. This requires jumping from one point in the objective structure to another. This makes clear that problems arise when legal knowledge has to be used, however, it also makes clear that we can use the functional knowledge structures as an organizational principle in supporting the student in acquiring the conceptual structure of use. The basic difficulty students have when using the legal knowledge is that they have to reconstruct the available objective structure in a 'structure of use'. The objective structure of the knowledge is an insufficient structure for using the knowledge.
In learning to solve legal cases students have to construct a structure of use based on the already acquired objective structure. It takes a long time to acquire insight in the mapping between the textual organization of the law and the conceptual structure of use. This conceptual structure cannot be acquired by explanation, it can only be acquired by using the objective structure. Because students have to acquire this structure of use we have to present them legal cases to solve. To support the efficient acquisition of the conceptual structure we present them guided access to the legal knowledge based on a functional differentiation of the knowledge.

We already emphasized that there are basically two aspects related to learning legal case solving. Learning by doing requires a task to perform and we have to facilitate the process of learning to solve legal cases. We first explored legal case solving to get a better understanding of what the task of legal case solving implies and where difficulties for law students arise. We performed an analysis of what it takes to solve a legal case to be able to perform this task correctly. We also detected difficulties students encounter and we proposed remedies to overcome these difficulties. In the next chapter (Chapter 4) we will address the issue of facilitating the process of learning to solve legal cases.