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Understanding the law: improving legal knowledge dissemination by translating the contents of formal sources of law

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Abstract Considerable attention has been given to the accessibility of legal documents, such as legislation and case law, both in legal information retrieval (query formulation, search algorithms), in legal information dissemination practice (numerous examples of on-line access to formal sources of law), and in legal knowledge-based systems (by translating the contents of those documents to ready-to-use rule and case-based systems). However, within AI & law, it has hardly ever been tried to make the contents of sources of law, and the relations among them, more accessible to those without a legal education. This article presents a theory about translating sources of law into information accessible to persons without a legal education. It illustrates the theory by providing two elaborated examples of such translation ventures. In the first example, formal sources of law in the domain of exchanging police information are translated into rules of thumb useful for policemen. In the second example, the goal of providing non-legal professionals with insight into legislative procedures is translated into a framework for making available sources of law through an integrated legislative calendar. Although the theory itself does not support automating the several stages described, in this article some hints are given as to what such automation would have to look like.

Keywords Accessibility of legal information · Understandability of legal information

1 Introduction

To be a citizen is to know one's role, rights and duties in a society. The much-used saying that every citizen 'ought to know the law' is a fiction (Voermans 2004)—useful,

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for example, for the attribution of responsibility—but its fictitiousness also presents a huge risk for the legitimacy of governance. The body of legal rules, case law and literature has grown to such substantial proportions that any person without a legal education will get lost in the multitude and sheer volume of formal sources of law (legislation, case law, treaties and customary law). This cannot be changed by simply making these sources accessible through the internet, because mere textual information does not suffice for legal knowledge dissemination.

The legal system is the backbone of modern society. It establishes the conditions under which people can do business, how they should behave, and what rights they have. If law is instrumental to doing one's duties as a citizen, at least one should have the possibility of mastering the relevant knowledge. An example of a deficit in relevant legal knowledge was established in the research project ANITA (an acronym for 'administrative normative information transaction agents'). As a part of this project, empirical research was done into police officers' knowledge about the regulation of the distribution and exchange of police data. It appeared that there are often shortcomings in such knowledge (Koelewijn and Kielman 2006).

Additionally, current accessibility of sources of law does not suffice to serve non-legal professionals. In The Netherlands, sources of law are indeed made available on-line, but they are not linked in a meaningful way. As for the European Union, there are extensive information services, which are indeed linked to each other, but still only serve those who know their way around these services, and who have sufficient background to understand the nature of the European legal order. Additionally, there are relations between European legislation and national legislation. These connections are not explained as a part of existing European information portals (such as EUR-lex) in a meaningful manner to non-legal publics.

Dissemination of legal knowledge should take into account specific abilities and interests of the publics involved. The normative nature of the law introduces new challenges in developing such a view: do individual and group attitudes towards certain norms influence the possibility of legal knowledge dissemination? The same goes for the complexity of the legal system: how can someone understand at least the relevant consequences for their situation of a specific part of the law without mastering the outlines of the legal system as a whole, and the content of and interaction between legal sources?

Many modern legal systems, including the 'Acquis' underlying the European Union, are very much like 'virtual cathedrals'; enormous construction of legislative instruments. Just making accessible all the instruments and procedures by themselves will not provide citizens with sufficient insight. In order to attain such insight, effective methods of disseminating legal knowledge to the public are needed.

The hypothesis underlying this article is that there has to be a translation of legal information both in terms of the literal content of legal documents—that are often written in the kind of prose that is not readable for the non-legally educated—and the specific goals with which publics utilize that information. Moreover, considering the complex structure of legal instruments and the multitude of documents applicable to even the simplest of situations, there has to be mapping of multiple legal sources to, preferably, a single piece of information or advice.

The goal of this article is to set out the basics for such a translation model, determining the elements of legal domains and legal knowledge dissemination to be taken into account, and providing an onset to the steps in the translation process. First, we discuss related work (sect. 1.1), and subsequently, we discuss how principled problems affect our abilities to model the legal domain, which is also essential to the present venture, as translation can only start the moment we have a clear 'picture' of a certain domain (sect. 1.2).

Within the context of this article, it should be noted that the terms 'method' and 'model' are used in a rather informal way. The purpose of constructing a method for the translation activity is not to automate this activity, but to support it. There are two reasons to propose such a method. First, many AI & law research projects that aim at making legal sources accessible do not actually do so, because the simple fact that a primary legal source can, e.g., be *found* by laymen by applying advanced search algorithms does not imply that laymen can *understand* that source. Thus, there is principal insufficiency of many AI & law methods to attain the ultimate goals of the projects in which they are applied.

Second, AI & law research is guided by technology and science rather than by interests from legal disciplines. This phenomenon leads to a relative lack of legal knowledge applied in AI & law research, which in its turn prevents it from real insight in the legal dimension of the cases it uses. Rather than discussing the complex nature of legal problems, the research often uses simple legal examples as mere 'toys'. This makes the majority of AI & law research into mere artificial intelligence, logic, or informatics research, not the multi- or even interdisciplinary research one would expect. Therefore, this article is an attempt to approach the problem of legal knowledge dissemination from a different (translation) perspective—only asking the question about the applicability of existing AI & law research after introducing the problem at hand.

1.1 Related work

Legal knowledge dissemination should be a multi-disciplinary venture, involving legal specialists for making explicit their knowledge and communication specialists for translating that knowledge into understandable information. Outside the academic world, legal knowledge dissemination is a widespread activity; therefore, performing case studies and analysis of best practices are also of major importance to validate the theory presented in this article. We have identified relevant work in different fields: AI & law, language philosophy, theory of learning, and practical legal knowledge dissemination.

In AI & law, considerable attention has been given to the (on-line) accessibility of legal documents, such as legislation and case law, both in legal information retrieval (query formulation, search algorithms) and in legal information dissemination practice (numerous examples of on-line access to formal sources of law). The artificial intelligence and law approaches to legal knowledge dissemination partly falls outside the scope of this article, as it generally does not attempt to 'educate', to explain how and why certain rules work as they do. Although, some of these systems show how their 'reasoning processes' yield particular conclusions,

they usually do not reveal anything about the rationale behind rules. Examples of such projects focus on (a) intelligent ways of interfacing between lay users and legal databases (cf. Dini et al. 2005; Van Laarschot et al. 2005; Matthijssen 1999; Mommers and Voermans 2005), and (b) translation of rules into natural language question answering systems (cf. Winkels et al. 1998).

Other approaches partly take out the necessity of acquiring legal knowledge by suggesting solutions or decisions for a legal problem through rule-based or case-based approaches, that provide advice or decisions in specific situations. In those cases, emphasis is on the resulting advice or decision, instead of making the user understand the process of giving that advice or making that decision. Rule-based systems, translating rules of law into rules in a (semi-)formal language, and case-based systems, representing cases by their characteristics are said to representing the continental tradition and the common law tradition, respectively. However, this is a simplification, as may become clear from, e.g., reading Dutch literature on law finding, for instance Scholten (1974) and Vranken (1995). See also Ashley (1990) and Hage (1997).

Although some of these knowledge-based systems also give the factors or rules contributing to the resulting output, in general, only limited attention has been given to making legal texts themselves more accessible to those without a legal education. This can be explained partly because such translation falls outside the scope of AI & law research. Still, probably no other area of research can shed more light on making explicit the structure and content of legal domains, as so much attention has been given to identifying the 'building blocks' of law, for instance by building models of legal domains.

Language philosophy can clarify the relation between the nature of legal language and that of 'common' language. In the traditions of Fregean philosophy of meaning and Wittgenstein's (second period) analysis of language, the nature of conceptual meaning can be clarified and analyzed in terms of similarities and differences between those two 'types' of language (cf. Frege 1892 and Wittgenstein 1953). Also, the nature of legal concepts (and their meanings) has been the subject of literature, explaining similarities and differences between normal concept meaning and legal concept meaning (cf. Bix 1991; Loth 1988, 1992, 2002; Mommers 2002; Mommers and Voermans 2005; and Termorshuizen-Arts 2003). Other types of language philosophy, such as argumentation theory and legal semiotics, could, for instance, explain the ratio of certain legal documents. The extensive attention for argumentation structure and rhetorics can also be deemed to be a type of language philosophy, relevant to the legal domain, focusing on larger structures in legal texts cf. Hage (1997), Lodder (1998), Perelman (1977), Prakken (1997), Toulmin (1958), and Verheij (1996). Legal semiotics has studied the relation between norms and behavior; cf. Schooten van (2000, 2001). We will elaborate on this subject in sect. 1.2.

Regarding theory of learning, in the academic world, there is a focus on the support of legal education for law students; cf. Muntjewerff (2001). Within the literature in this field, much attention is given to computer-based support of legal education, for instance with argumentation schemes and collaborative workspaces (cf. Carr 2001).

However, legal knowledge dissemination outside a scholarly context is a different activity—as it is not primarily a 'scholarly' teaching enterprise, but a communication venture. Outside an academic setting, in the domain of communicating relevant legal information to small- and medium-sized enterprises, there is focus from the EU in a specific priority called 'networked businesses', aimed at collaboration and exchange on legal issues. Moreover, there is an international initiative to build a legal version of Wikipedia, called Jurispedia (www.jurispedia.org), aimed at constructing an encyclopedia of legal systems, with a dissemination end to non-lawyers as well. And there is, of course, the more 'traditional' way of legal knowledge dissemination, initiated by government communication departments, issuing public relations materials and services such as brochures, helpdesks and web-sites; for instance, a public information service in The Netherlands is called 'Postbus 51' (www.postbus51.nl). On a European level, there is an EU information service called 'Europa direct' (http://ec.europa.eu/europedirect/index_en.htm).

The theory of legal knowledge dissemination has not had much attention in The Netherlands, although there are a few writers who have contributed to this field with practice-oriented books (cf. De Clercq 2004 and Hoogwater 2005), and there is currently a research project with this subject (Ph.D. research project 'Towards a new analytical framework for legal communication?', Center for Legislative Studies, Tilburg University). Also, there is a focus on this type of activities in 'socio-legal services' studies. These studies, however, primarily focus on person-to-person contacts involving legal and social problems; cf. Langen (2005). The rise of general legal education on so-called 'hogescholen' (Universities of Applied Sciences) in The Netherlands has led to the production of more practice-based books for that purpose; cf. Roest (2006).

1.2 Modeling the legal domain

The relation between natural language—the foremost representation language for legal knowledge *outside* the domain of AI & law—and representation languages used in the legal domain is a difficult one. Although, legal language use often has a particularly formal nature, and contains a lot of jargon, it is still natural language—not the formal kind of language we find in programming languages or logics. This means that there is neither a formal syntax nor a formal semantics for legal language. Any attempt to represent parts of a legal domain will encounter this lack of formal syntax and semantics, as representation languages require—at least—a formal syntax in order to be usable for automated reasoning and a formal semantics in order to disambiguate meaning. The mapping from natural language—by far the important representation language for legal knowledge—towards (semi-)formal languages introduces so many principled and practical problems that one could wonder if building formal representation frameworks actually is a sensible thing to do.

Principled problems that occur when attempting to model part of the legal domain are manifold. First, the nature of natural language meaning in general is an obstacle. The revolution that the later Wittgenstein (1953) started in philosophy of language was the denial of being able to fix natural language meaning in terms of

necessary and sufficient conditions. This revolution has been translated to the legal domain by, among others, Hart (1961), by introducing the notion of open texture concepts (cf. also Bix 1991). Modeling a domain almost necessarily assumes a low degree of change if the representation is required to give a correct picture of that domain. Any changes in the domain have to be modeled to keep the representation up to date. As legal concepts change through time (they are either replaced by new concepts, or their meaning or interpretation changes through judicial decisions), their representation should change as well.

Second, modeling a domain assumes that a domain *can* be represented. However, many branches of legal theory actually concern those acts that 'mold' the law: judicial reasoning for instance, making new 'things' (decisions) on the basis of incomplete information about facts and rules that are not conclusive. Although, there is discussion on the matter whether this problem concerns only hard cases (cf. Hage et al. 1993; Leenes 1998)—and consequentially, how to establish whether a case is actually a hard case—the problem will probably always apply to simple cases to a certain degree.

Third, representing a legal domain often includes representation of relevant parts of the 'real world'. Therefore, such representations generally contain a mix of legal concepts and real-world concepts. There are major differences in the accommodation of the legal and the legally relevant types in models of the legal domain. For instance, McCarty's (1989) Language of legal discourse contains largely legally relevant concepts. Van Kralingen's (1995) frame-based ontology of law contains mostly legal concepts. Mommers' (2002) knowledge-based ontology of law makes an explicit distinction between the two types.

Elaborating a bit further on natural language meaning—the first principled problem stated above—meaning is a subject of major importance to modeling in the law, as so many legal issues arise from the meaning and interpretation of natural language terms and sentences. In this respect, some logico-philosophical history is necessary. Frege (cf. Frege 1892) developed a theory of meaning that distinguishes between two components of meaning: sense (Sinn) and reference (Bedeutung). The sense of an expression consists of the conditions under which it obtains: if we call an unmarried man a bachelor, then the concept 'bachelor' has as conditions: being a man and being unmarried.

The presence of each of these conditions is necessary, and the presence of both of these conditions is sufficient for a person to be a bachelor. The reference of an expression consists of the set of all objects that fulfill the conditions that are part of its sense: 'bachelor' refers to all unmarried men. The sense of an expression determines its reference, and two expressions with the same sense have the same reference. Meaning may change, i.e., for instance, the conditions that determine the sense of a concept may change through time. This is sometimes referred to as the 'open texture' of a concept.

The open-texture nature of legal concepts can be more precisely defined as the possibility that elements of the definition of some concept may change, may be left out, or may be added at some point in time, from which point in time the new set of elements will constitute the definition of that concept. In other words: the sense of an open texture concept changes through time. The concept of open texture is not a

purely legal phenomenon. It was introduced by Waismann (1952, p 120), who distinguishes between open texture and vagueness of empirical concepts. If we consider vagueness to be the unclear (or missing) demarcation lines of application of a concept, then open texture can be defined as the *possibility* of vagueness. Vagueness may apply to both the intension (sense) of a concept, in which case there is no (clear) set of necessary and sufficient application conditions for the concept, and to the extension (reference) of a concept, in which case we cannot (completely) determine the set of objects the concept refers to.

The view of meaning as use, introduced by Wittgenstein (cf. Wittgenstein 1953), always is subject to the danger of becoming a slogan rather than a serious idea. It has to be more strictly defined (or rather, explained by examples, as Wittgenstein did) to make sense, because otherwise, it raises questions such as: whose use constitutes meaning? and: what kinds of use constitute meaning? Putnam (1975) has an approach that may clarify the 'use' aspect of meaning:

> [E]veryone to whom gold is important for any reason has to acquire the word 'gold'; but he does not have to acquire the method of recognizing if something is or is not gold. He can rely on a special subclass of speakers. The features that are generally thought to be present in connection with a general name—necessary and sufficient conditions for membership in the extension, ways of recognizing if something is in the extension ('criteria'), etc.—are all present in the linguistic community considered as a collective body; but that collective body divides the 'labor' of knowing and employing these various parts of the 'meaning' of 'gold.'

The question whose use constitutes meaning becomes acute when only a small part of the community is able to determine whether some substance is really gold. Is only their use of the term 'gold' relevant? The majority of people, who do not distinguish gold from many other substances that look like gold, use the term 'gold' in a way that makes it impossible to determine its reference. Should we then exclude reference from our understanding of meaning?

Any definition of meaning that is related to use yields such problems. In the determination of the meaning of 'meaning' we can employ the approaches to the concept itself. For an intensional approach, this would mean that we can define the meaning of 'meaning' in terms of necessary and sufficient conditions. As 'meaning' it is an open-textured concept, we need to consider the possibility of changes in this set of necessary and sufficient conditions. Meaning regarded as use also enables us to integrate open-texturedness into the concept of meaning. Because the use of the concept of meaning varies through time and through communities, we should incorporate use in its definition. The meaning of 'meaning' thus becomes dependent on the actual occurrence of the concept in natural language use, or, more specific, in the legal domain, or even in the domain of the employment of legal information systems. The concept of meaning forms the core of the more 'ambitious' models of legal domains: any such model that does not take into account the peculiarities of legal meaning—the meandering of legal meaning between fixed criteria ensuring legal certainty and open texture enabling proper responses to unforeseen situations and unfair consequences—will render itself useless in little time.

Facing these principled problems in modeling the legal domain, the task of legal knowledge dissemination poses specific challenges. There has to be a 'mapping' between the context of legal meaning as understood within a community of legal professionals, and the context of understanding by a specific public. Thus, the explanation of a legal rule or case has to take into account both the 'original' legal meaning and the projected 'interpretation' of its explanation to the public.

2 A translation model for legal knowledge dissemination

A model for translating sources of law into understandable information requires detailed knowledge about both the constituents of the legal domain under scrutiny and the background and attitudes of the dissemination public. Although, some parts of the model presented can probably be generalized to other legal systems, the entire analysis in this article is restricted to the Dutch legal system. Especially the interpretation of sources of law depends on the legal system under scrutiny.

Any translation of formal sources of law into more understandable texts will yield a risk of explanation flaws and wrong interpretations. As only formal sources of law constitute *valid* law, making explicit references to the relevant parts of the original legal documents is probably the best strategy to solve this lack of authority of any translated legal information.

In this section, we first discuss the translation model (sect. 2.1). Subsequently, we elaborate on the separate steps that have to be taken in order to produce an understandable text for a specific public (sect. 2.2). Then, we discuss two examples of using the method in actual cases of legal knowledge dissemination. The first case concerns translation of specific legislation on the exchange of personal data by the police (sect. 2.3). The second case concerns the translation of legal sources into a legislative calendar (sect. 2.3).

2.1 Outline of the translation model

The graphical representation of the legal knowledge dissemination model presented in this article resembles an hourglass. The point where the two triangles meet is where the translation (T) should take place. In the figure, several examples of elements and factors playing a role in the translation are given. They are not meant as limitative lists.

The top triangle shows elements that constitute (valid) law in a legal domain: material sources of law (unofficial sources of law, such as political opinions, socio-economic situation etc.), formal sources of law (these are the official sources of valid law: legislation, case law, treaties and customary law), the structure of a domain (e.g. priority rules for the application of legislation and case law, references between sources, exception structures etc.), and the institutions playing a role therein (promulgating institutions, judicial institutions etc.). The bottom triangle shows examples of knowledge dissemination modalities: rules, advice, directives and guidelines. These modalities concern the way in which the dissemination

activity is presented: e.g. informal or binding. The scope of the communication can vary from personal advice to mass communication, and anything in between.

Returning to the top triangle, on its left, there are some concrete examples of sources of law: topoi (subjects such as 'reasonableness' that play an important role as reference points in the interpretation of law), norms (rules with a normative nature), case law, and legislation. On the right of the top triangle, there are examples of characteristics of legal domains that complicate legal knowledge dissemination. Legal systems are artificial, which has consequences for the degree to which legal documents can be understood. Growth, meaning, language and specialism play a role in this.

Growth. Despite the call for a decrease of administrative burdens, legal systems have a natural tendency to expand. New legislation is issued, whereas existing rules remain in force. The body of case law expands. The more rules the system contains, the less transparent it will probably become.

Meaning. Many legal terms have a constructed meaning, sometimes having hardly any relation with the 'common sense' meaning of the same term. Legal documents should always be read with the specific context-based (artificial) meaning of such terms in mind; cf. Mommers and Voermans (2005).

Language. Legal language use includes the use of complex grammatical structures and archaic phrases. These are common as a form of legal jargon, not taking account the readability for non-lawyers.

Specialism. 'The law' has encountered such a degree of specialization that only specialized lawyers can say something sensible about a certain area of law. For each of these areas, specific background knowledge is needed.

On the left of the bottom triangle, there are some examples of the forms that dissemination can take: textual information, web-sites, schemas and forums. On the right of the bottom triangle, there are factors that should play a role in the translation of sources of law for a specific dissemination public: background knowledge, reciprocity, attitudes and goals. I elaborate a bit further on these four factors.

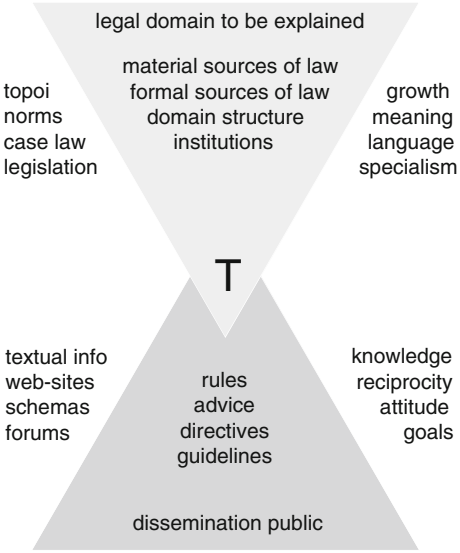
Knowledge. Background knowledge of the dissemination group can occur both in terms of being well-educated in general or having prior legal knowledge. It plays an important role in how to approach the target persons, e.g. in determining what additional knowledge is needed and how the dissemination activity can relate to knowledge already present.

Reciprocity. Rules that originate only from structuring goals are often hard to understand for individual citizens. Reciprocity refers to the phenomenon that people are willing to do things for a different person or institution, in an abstract form of 'compensation' (quid pro quo). If the goal of a rule is not clear because of a lack of 'built-in' reciprocity, the tendency to understand, let alone to follow such a rule will decrease. For an extensive account of reciprocity, cf. Pessers (1999).

Attitude. The attitudes of the dissemination public determine, e.g., the degree to which a public puts an interest in an area of law, or in a certain dissemination activity. Other examples of attitudes are curiosity and ignorance.

Goals. Goals of a dissemination public are the specific aims the public tries to attain with respect to a legal area. Goals can range from acquiring knowledge to

knowing whether a certain activity is legal or closing a contract with a different party. Other examples of goals are active compliance, avoiding legal problems, satisfying curiosity etc.



2.2 Translation steps

Information implicitly present in the legal domain to be explained should be made explicit before the actual translation can take place. At the same time, making all implicit information explicit would be very time and resource consuming, if not impossible. As a consequence, legal domain specialists need to be involved in the translation process for making information explicit, and communications specialists need to be involved in order to impose restrictions on that activity. The translation process is thus assumed to consist of different phases: the restriction determination phase, the expansion phase, the strategy determination phase, and the translation phase.

The restriction determination phase takes into account the four factors relevant to legal knowledge dissemination. This phase involves determining the background knowledge of the dissemination public regarding the particular subject of legal knowledge dissemination, identifying communication goals for the particular instance of legal knowledge dissemination, identifying goals of the dissemination public regarding the particular subject of legal knowledge dissemination, and identifying attitudes of the dissemination public towards the particular subject of legal knowledge dissemination.

The expansion phase concerns making explicit 'hidden' information, such as the priority relations between different sources of law, exceptions to rules, and rules that can be derived from, for instance, authoritative case law. Additionally,

in the expansion phase terms should be identified that have a meaning that differs from their use in everyday language. These deviant meanings should be made explicit.

The strategy determination phase involves both determining the modality of legal knowledge dissemination and the type of communication used for legal knowledge dissemination. Modalities determine the 'tone of voice' of the communication: whether the communication has the form of advice, behavioral rules, guidelines, obligations or prohibitions. The type of communication used for legal knowledge dissemination towards the dissemination public can, e.g., be texts or schemas, in the form of brochures or a web-site, or in the form of personal advice.

The translation phase encompasses the selection of relevant information from the expanded body of legal information determined in the expansion phase, by checking what information is needed considering the outcomes of the restriction determination phase. With the approach chosen in the strategy determination phase in mind, the selected legal information has to be translated into understandable information. The understand ability has now, to a certain degree, been guaranteed by taking into account specific characteristics of the dissemination public. Summarizing, the model consists of the following steps:

[A] Restriction determination phase:

1. identifying communication goals for the particular instance of legal knowledge dissemination;
2. identifying goals of the dissemination public regarding the particular subject of legal knowledge dissemination;
3. identifying attitudes of the dissemination public towards the particular subject of legal knowledge dissemination;
4. determining the background knowledge of the dissemination public regarding the particular subject of legal knowledge dissemination.

[B] Expansion phase:

5. for a particular domain, making implicit information explicit, such as information regarding, e.g.:
   (a) priority of different sources of law;
   (b) exceptions to rules;
   (c) generalized rules from relevant case law;
6. identifying legal concepts—terms whose meanings differ from everyday meaning—and making these meaning differences explicit.

[C] Strategy determination phase:

7. determining the modality of legal knowledge dissemination (the 'tone of voice': advice, behavioral rules, guidelines);
8. determining the type of communication used for legal knowledge dissemination towards the dissemination public (e.g. texts, schemas, in brochures or on a web-site).

[D] Translation phase:

9. selection of relevant rules from the expanded information from phase [B] in accordance with the restrictions from phase [A];
10. translation of the resulting rule set in accordance with phase [C].

As may become clear from this overview, the translation is definitely not a mechanical process. It has to be carried out by trained professionals. Still, the interesting questions in regard to AI & law methods and techniques are: (a) what parts of this process could be supported by AI & law methods and techniques?; and the other way around (b) what does the model mean for the knowledge dissemination goals of current AI & law methods, especially concerning knowledge-based systems?

2.3 Translating sources of law on the exchange of police data

For clarification purposes, an example of translating a piece of legal information is given below. The example concerns the regulation of the distribution of police data from the severe crime databases (hereinafter: SCD). As a starting point, we take article 13a paragraphs 2 and 3 from the Police Data Act (hereinafter: PDA). In paragraph 2, this article states a specific rule for the distribution of data from the SCD, and in paragraph 3, it states an exception to that rule. Please note that the mere translation from Dutch into English already presents considerable problems regarding meaning, which will be ignored in this article.

Art. 13a Police Data Act (PDA):

Paragraph 2: "Data from a severe crime database about persons as meant in the first paragraph, subparagraph c, will be only distributed in accordance with art. 13b, second paragraph up to and including the fourth paragraph. No data will be distributed under art. 18, third paragraph concerning persons indicated in the first paragraph, subparagraphs a and b".

Paragraph 3: "If it is necessary for the proper execution of the police task, the distribution in accordance with articles 14 and 15 first paragraph under b, c, and d, from a severe crime database can be refused, or it can be carried out under restricting conditions with regard to further use".

[A] Restriction determination phase.

1. Communication goals
   In the restriction determination phase, we first have to determine the communication goal. By defining this goal, we establish a large part of the definition of the domain, which is a precondition for identifying information needs and useable sources. This example concerns two paragraphs from the PDA that determine under what conditions police data can be—and should be—distributed. In The Netherlands, on several occasions it appeared that police officers find great difficulty in the application of the PDA, which resulted in errors in the exchange of police data. The cause for this is found mainly in the unfamiliarity with and the complexity of the relevant legal

provisions. The communication goal is to clarify the provisions cited, so that police officers can determine whether to distribute police data in actual cases. In our example, the communication is initiated by the public prosecution service. In The Netherlands, this is the institution that is responsible for the legality of the investigation and prosecution of criminal offenses. In that capacity, the office has authority over the police, and it also has to supervise the distribution of data from police databases. The goal of the communication for the public prosecution service is the establishment of distribution of police data in accordance with the PDA. A lawful exchange of information is of vital interest to an incorruptible, reliable and verifiable police organization on the one hand, and the protection of fundamental rights of registered persons on the other hand.

2. Goals of the dissemination public
   In addition to the communication goal, we also have to establish the goals of the public addressed. The determination of these goals helps to define the domain, and it helps to determine the proper communication strategy. In our example, we restrict ourselves to police officers responsible for the management of SCD's. The data in such registers mainly originate from informants. Such informants secretly provide information to the police about various criminal activities. Careless use of such information can have major consequences for the informants. Hence, the main goal of police officers that collect and register such information is to protect their sources (Koelewijn and Kielman 2006).
3. Identifying attitudes
   The goal of identifying attitudes is closely related to the idea police officers have of the relevant legal sources. This attitude is the third lead in this model for imposing restrictions on the knowledge to be acquired. The attitude of the relevant police officers is to interpret the PDA in conformance with their main goal (the protection of their sources). In practice, this often leads to an incorrect interpretation of art. 13a par. 3 PDA. Police officers interpret this rule in such a manner, that the distribution of data from the SCD can be refused in all relevant cases. This interpretation will prove to be incorrect later on in the discussion of the model.
4. Background knowledge
   Finally, in the last step of the restriction determination phase, we have to determine which knowledge with respect to the legal provisions is already present in the public concerned. As indicated before, research has shown that Dutch police officers have only limited knowledge of the provisions in the PDA (Schreuders and Van der Wel 2005). Additionally, the two provisions selected make many references to other provisions in the PDA. Such references make the act hard to understand, and, therefore, they have to be explained. Moreover, we saw that the two provisions also refer to 'categories of registered persons' and the 'police task'. These concepts hardly need any clarification for police officers. They generally have sufficient knowledge of the categories of persons on which they collect data, and of their specific police tasks.

[B] Expansion phase

5. Making implicit information explicit
   Hierarchy. After the definition of the domain and the identification of information needs in the restriction phase, in the expansion phase, it is checked which information implicit to the legal provisions has to be made explicit. In case of legal provisions, implicit information often follows from the hierarchy between various regulations. Police officers need to realize that the distribution of police data from the SCD is governed by several regulations. The two provisions in the current example have a high abstraction level, which makes it hard for police officers to apply them in actual cases. In the references to other regulations, these norms contain a large quantity of implicit information, for instance in its references to lower regulations such as the Police Files Decree (hereafter: PFD). This decree provides much more detailed rules about distribution. These rules can be used in the translation. If we evaluate the distribution provisions in the decree, we find a list in art. 14 which provide a limitative enumeration of persons and institutions that are authorized to receive police data. Earlier research, however, showed that police officers do not know this particular decree, and hence they do not know the list in art. 14. In the translation, it is thus necessary to make the list explicit.

   Exceptions. In addition, implicit information can be hidden in exception to provisions. In par. 2 of art. 13a PDA, there is a legal opportunity for refusing the distribution of police data from SCD's. In the formulation of this provision, there is an implicit exception. According to legal doctrine, the phrase 'distribution in accordance with art. 15 under b, c and d' has to read in such a manner that the possibility of refusing distribution is not valid for the cases in which art. 15 under a and e are valid 0. In those cases, the ground for refusal cannot be invoked.

   General rules following from case law. In our example, we have not found any relevant case law in which general rules are formulated with respect to the distribution of police data.
6. Legal concepts
   Moreover, in the expansion phase, legal concepts have to be identified. Those are concepts that have a meaning different from their meaning in regular language use. We discuss two concepts that are used in the two distribution provisions: 'distribution' and 'necessity'.

   In art. 13a par. 2 PDA, the concept of distribution concerns an obligation to provide data. The police officer responsible for the management of the relevant SCD has, in principle, an obligation to respond to a lawful information request from, e.g., a different police officer. This obligation also means that the police officer providing the information only needs to check marginally if the requesting officer really needs the information (Buruma et al. 2003). By this, the legislator has tried to establish a free flow of information within parts of the police organization.

   The concept of 'necessity', used in art. 13a par. 3 PDA, refers to the demands of proportionality and subsidiarity. Proportionality means that the

refusal has to be in a reasonable relation with the goal intended by that refusal. The protection of informants can be such a goal. Subsidiarity means that there ought not to be a less drastic measure—if there is one, that measure should be taken. In the context of data distribution, this means that, for instance, the distributing officer should check whether there a restrictive condition could be laid upon the provision of data, such that the distribution need not be refused.

Police officers will generally not be familiar with the underlying meaning of this concept of necessity, and therefore it needs to be clarified in the translation. Clearly, the legislator wished to express that refusing to distribute data is only allowed in exceptional cases, and that each new information request cannot be refused automatically. Instead, in each of those cases, the relevant interests have to be weighed against each other by the police officer.

[C] Strategy determination phase

7. Dissemination modality
   In the third phase of the model, the communication strategy is determined. Determining such a strategy is the prerogative of communication specialists. They first have to determine the 'tone of voice' for the particular instance of communication. Directly relevant to determining the tone of voice is the communication goals identified for the 'sender' and the 'receiver' (the public) of the message. In our example, we saw that there is a hierarchical relation between the sender and the receiver, in which the former clearly has authority over the latter. The goals identified are also partly conflicting. The goal of the public prosecution office (the sender) is mainly aimed at compliance with legal norms, whereas the police officers in question (the receivers) mainly intend to protect their sources. Considering this conflict of interests, in this particular case, the public prosecution office probably should use an imperative tone of voice. This tone of voice could be established in the form of obligatory provisions with respect to the distribution of police data in case there is no ground for refusal. In case there is room for weighing interests, the public prosecution office can employ an 'advisory' tone of voice, for instance by formulating a number of assessment criteria.
8. Communication type
   Furthermore, in determining the communication strategy, we have to consider the form in which the communication will take place. In the current example, the most obvious thing to do is to relate to communication methods that are already used in the domain. By doing this, there is a good chance that the communication goals will be attained. Two obvious means for communication are adding the instructions to an existing handbook for the police officials concerned, and to publish the instructions on the website of the public prosecution office. Such a handbook already exists, and the public prosecutions office could choose to add an extra chapter with clear instructions on how to deal with information requests for an SCD within the legal framework imposed by the PDA, supplemented by various practical examples. Using the public prosecution office's website would imply an addition to the 'directives for investigation' that are already published on that website. Using the website

would also mean that the police organization would become more transparent and verifiable, as the public can directly access the instructions.

[D] Translation phase

9. Relevant rules
Finally, in the fourth phase, the conversion of the legal provisions takes place, including all relevant background information, into clear instructions for police officers. First of all, we need to establish what restrictions are imposed in the 'restriction phase', and what the information needs are. In our example, although police officers had some background knowledge about the subject, this background knowledge did not suffice to make proper decisions about actual information requests. The translation is aimed at clarifying knowledge implicit in the hierarchy of relevant regulations and legal concepts. In practice, this means that the list of authorized persons for the receipt of data from the PFD has to be provided, and that the information should clarify that art. 13a par. 2 of the PDA implies an obligation to distribute, that is only affected by the exception in par. 3. Furthermore, the exceptional nature of such a refusal should be stressed, in addition to the necessity of weighing arguments for and against compliance with each information request.
10. Translation
The output of the model is a possible translation of the two provisions and relevant background knowledge. It could take the following form:
If, as a manager of a SCD, you receive a request for information about a certain person registered in your SCD, you have an obligation to provide that information in three cases:

    1. if the request is made by a public prosecutor;
    2. if the request is made by the BIBOB bureau (an integrity screening organization);
    3. if the request is made by the AIVD or the RID (both are secret services).

Please note that it is not permitted to refuse such requests, or to impose additional constraints on the provision of the information. If, as a manager of an SCD, you receive a request for information from one of the following persons:

    1. a detective or a different police officer;
    2. a civil servant working for the unusual transactions desk;
    3. a member of the royal military police;
    4. one of the other persons mentioned in art. 14 PFD;

you have the obligation to consider the information request and to provide the data requested. In exceptional cases, the provision can be refused. In the decision to refuse the provision of certain data, the following criteria are applicable:

    1. *Risks for the informant.* To the degree that the use of the information constitutes a greater risk for the informant, you may be more careful

with providing the requested information. In case the risk is life-threatening, the provision of data should probably be refused.

2. *Goal of the information request.* Before refusing to respond to an information request, you have to take note of the goal of the information request. The interest behind the information request has to be weighed against the interest of protecting the informant.
   Example: The fact that a suspect has a firearm always has to be provided to the team preparing his apprehension. The safety of that team outweighs the interests of the informant.
3. *Opportunities for restrictions.* Before refusing to an information request, you have to determine whether additional constraints on the further use of the information supplied could still protect the informant to a sufficient degree.
   Example: Information can be provided with the explicit restriction that it may only be used for analysis ends.

Finally, in case of doubt, you always need to consult the public prosecutor.

This concludes the elaboration of the example concerning the regulation of the distribution of police data from the severe crime databases.

2.4 Translating sources of law into a legislative calendar

Another example of translating sources of law emanates from the thought that legal information does not necessarily always have to be presented in a textual format (cf. Hoogwater 2005). Graphics can clarify legal cases, legal rules and, on a more abstract level, facilitate access to legal knowledge. In this example, we wish to enable a chronological view on the origination of new legislation, which can help non-legal professionals to keep track of legislative processes. The targeted legislative processes are the EU co-decision procedure and the Dutch legislative procedure. The co-decision procedure is the main legislative procedure in the European Union, involving the Commission, the Council, the European Parliament, and several advisory bodies. In The Netherlands, implementation of European directives is done according to the normal Dutch legislative procedure, involving the Government, the Council of State, and the Parliament (Lower and Upper Chamber). In this particular example, we will focus on European Directives (European legislative instruments that have to be 'transposed' into national legislation before they become (completely) effective in national jurisdictions), and the corresponding Dutch legislative instruments.

The degree to which stakeholders can find and understand valid law is a measure for its legitimacy and for the legitimacy of the legislation-issuing institutions as well. Because the sheer numbers of documents produced during the legislative process already pose a threat to the legitimacy of governance, more advanced solutions for providing clear views on legislative information should be found. Current EU portals provide virtually all information relevant to a certain legislative dossier. A major problem is that, e.g., PreLex provides a single view on a legislative dossier, in which all important documents are shown. The number of such

documents will easily reach around 100 for an EU legislative dossier. This will usually constitute information overflow for non-specialized publics. To accommodate other publics—for instance non-legal professionals—a different view should be provided on, essentially, the same information. Below, we elaborate on how to establish such a view, considering the sources of law establishing legislative procedures, and the other phases of the model.

[A] Restriction determination phase

1. Communication goals
   The current example concerns facilitating access to legislative processes and the underlying documents. It involves a less drastic translation of information; attention is focussed on directing persons to relevant information sources that are already available on-line, but poorly adjusted to non-legally educated publics. In our example, the communication is aimed at persons without a legal background, but with a higher education, and a professional interest in certain legislative trajectories. The goal of the legislative calendar is to provide proper insight in the documents that are part of legislative processes. Thus, there is a higher-level communication goal than in the previous example: not the content of individual legal sources is translated here, but the procedural knowledge of legislative processes is 'represented' in such a way that it becomes accessible to a wider public. We will try to illustrate this with an example.

   Codecision procedure: The EU co-decision procedure of article 251 of the EC Treaty is a hard act to follow for any ordinary citizen. In this complex legislative procedure the three main legislative authorities of the EU—the European Commission, European Parliament and the European Council—work together in order to adopt community legislation (enshrined in instruments like directives and regulations in most cases). Codecision—resembling somewhat the French legislative procedure—may involve as many as three different readings.

   As a rule, the codecision procedure starts after a proposal for a directive or a regulation. However, before an initiative matures into a commission proposal the Commission has already consulted member states, experts and stakeholders. It is at this level of incipiency that most of the informal influence can be exerted. The European Commission consults experts and stakeholders in a variety of ways. Sometimes very structured by calling meetings of expert groups or organizing polls, sometimes information is brought to the Commission by lobbies. Recently the Commission has elaborated its preparatory work on legislative proposals by subjecting proposals to impact assessments before submitting them to Parliament or Council.[1]

[1] This requires careful and systematic planning. The commission uses a planning cycle consisting of Multiannual Strategic Objectives, an Annual Policy Strategy and Annual Working program. On the basis of this annual working program projects are selected for (preliminary and full) impact assessment (Road Maps). See Commission Decision of 15 November 2005 amending its Rules of Procedure (2005/960/EC, Euratom).

Once proposals in need for co-decision are submitted to European Parliament (EP) and Council, both institutions have their own rules of procedure. In Council working parties—consisting of expert civil servants from the Memer State—consider the proposal and may suggest amendments. The working group's conclusion—the 'orientation generale', forms the basis of Council's position. Sometimes working groups fail to arrive at a workable compromise. At these moments the Comités des réprésentants permanent (Coreper) step in. The input of the Working groups, Coreper, the opinion of the Commission on the Parliament's first reading and the position of the EP, are at the end of the first reading merged into a document labeled the 'Council's common position'.

On receiving a legislative proposal from the Commission, the European Parliament transmits it to a committee and appoints a rapporteur. The Parliament considers the proposal itself but consults standing advisory bodies as well; the Committee of the Regions (COR) and the Economic and Social Committee (ESC) can make recommendations which provide worthwhile insights for Members of Parliament. Members of Parliament—sitting in the committee—may propose amendments. Members make abundant use of this right. The rapporteur incorporates the recommendations and amendments into his or her rapport which is then submitted to the Plenary of the Parliament (convening in Strasbourg). The report is voted on and amendments can be made to it.

If a proposal is to be adopted and become law, Council and Parliament must approve each other's amendments and agree upon a final text in identical terms. If the two institutions have agreed on identical amendments after the first reading, the proposal becomes law.[2] If Parliament and Council have different views as regards the amendments to the proposal or the final text, Council comes up with a common position—to be submitted to Parliament—which is the center piece for the second reading. During the second reading Parliament and Council considers the amendments made by the other institution. If the institutions after a second reading are still unable to reach agreement on their mutual amendments, a conciliation committee is set up with an equal number of members from Parliament and Council. The committee attempts to negotiate a compromise text which must then be approved by both institutions. Both Parliament and Council have the power to reject a proposal either at second reading or following conciliation, causing the proposal to fall. The Commission may also withdraw its proposal at any time.

A dossier: animal testing—amendment to the cosmetic directive: For citizens it is quite difficult to keep track of the different readings and different documents in this procedure. Keeping track is however vital if one wants to exert some influence during this Byzantine legislative procedures. The dossier of the ban on animal testing for cosmetic products provides a vivid example of

[2] Source: the excellent summary in Wikipedia—procedural summary of the codecision procedure.

both the dynamics and complexity of the European legislative procedure. In the year 2000, the European Commission wrought a proposal for a directive amending for the seventh time Council Directive 76/768/EEC on the approximation of the laws of the Member States relating to cosmetic products COM (2000) 189 final.

The proposal suggested to amend the prohibition on the marketing of cosmetic products containing ingredients or combinations of ingredients tested on animal entering into force after the 30th June 2000 by introducing a prohibition on the performance of experiments on animals for ingredients and combinations of ingredients and to make mandatory use of validated alternative methods for the testing of chemicals used in cosmetic products. This proposal was a controversial step in a 13-year long discussion whether or not to ban animal testing for cosmetic products. Different member's states and different interest groups have widely differing views on this kind of animal testing. The work on the proposal required three readings before the end result—a phased near-total ban on the *sale* of animal-tested cosmetics throughout the EU from 2009, and a ban all cosmetics-related animal testing—was cashed in (Directive 2003/15/EC).

An existing legislative calendar: PreLex: The arm long list of dossiers in PreLex[3] on the proposal gives evidence to the hard fought result. Without any prior knowledge of the procedure and the subject matter it is very difficult to engage let alone understand the different steps leading op to the final result. It consists of an overview of the development of Commission proposals through time. It contains colored bars to indicate the five institutions most relevant to the legislative procedure: the Commission, the Parliament, the Council, the Economic and Social Committee and the Conciliation Committee. The bars are combined with a time line. In each of the 'institution bars', there are small rectangles indicating events in the legislative procedure. A description of these events, or documents associated with them, appears whenever you move the mouse pointer over a rectangle. By clicking on this description, you move to a section of the web page where further information on the event is available, with links to the full underlying documents.

PreLex is an example of an excellent tool that is regretfully only usable for those with a (European) law degree. Such is the case because information is lacking about the legislative procedure, the institutions involved, and the flow of procedural steps. The fact that (the lack of) this information is not trivial, can be understood from the above description of the codecision procedure. The simple lack of explanations for abbreviations—a shortcoming that could be so easily solved—should be a clear sign that accessibility for non-professionals is either not taken seriously, ignored, or not recognized by the agencies responsible for this service. On the other hand, it should be stressed that the service is a major improvement over information services available in, e.g., The Netherlands, where currently no similar service exists.

[3] See http://ec.europa.eu/prelex/detail_dossier_real.cfm?CL=en&DosId=155818.

2. Goals of the dissemination public
   The goals of the public addressed (stakeholders in legislative processes) are mainly to influence policy making and legislative drafting. In order to do so, they need to track relevant legislative processes and institutions involved. Therefore, it should be clear to them how legislative institutions operate, who are the persons they might have to speak with, what procedural restrictions apply, and how legislation is drafted. Although, it may be assumed that those who have an interest in influencing legislative processes will do their utmost to unravel those, access barriers may decrease participation of those groups that have less (access to) knowledge due to, e.g., financial limitations.
3. Identifying attitudes
   Stakeholders in legislative processes will generally be interested in the actual contents of legislation. This makes it easier to disseminate legal knowledge, as their interest will increase their motivation to understand the legislation and the underlying processes and documents.
4. Background knowledge
   It is hard to establish the extent of background knowledge for such a heterogenous group. However, considering the higher education background, a minimum of some knowledge about the legislative procedures in Europe and The Netherlands should be present. Therefore, there is no need to explain the fact that different institutions are involved in producing legislation, and that there are different versions, preparatory documents, comments etc. The precise procedure should be explained, though.

[B] Expansion phase

5. Making implicit information explicit
   Legislative processes are governed by constitutional law, by procedural regulations and by customary law. Making them accessible to non-legal professionals requires focussing on those elements that are clearly important to the establishment of new legislation.

   Hierarchy. The hierarchy in legislation should be made clear to the public. The complex interaction between European and national legislation provides an additional challenge. Without explaining relevant case law, the users of the interactive calendar should be made clear in what stage European directives have an effect on valid law in The Netherlands.

   Exceptions. The establishment of exceptions is, just as hierarchy, on a level different from that for the previous example. In this case, they concern the degree to which validity of certain regulations is affected by other regulations or other circumstances, notwithstanding the normal hierarchical relations among judicial systems and regulations.

   General rules following from case law. Regarding the particular subject matter of this example, case law will generally regard the relations between European and national law. In this particular matter, the effect of European law on Dutch law (also in comparison with its effect on other Member States'

legal systems) are the subject of some important decisions, such as the Van Gend en Loos ruling.[4]

6. Legal concepts
   There are numerous concepts relevant to the domain under scrutiny. We will list only a few: 'directive', 'validity', 'formal law'. It becomes apparent immediately that such concepts are heavily dependent on the context and jurisdiction in which they are used. A European Directive is sometimes understood by laymen as an instrument without obligations (especially the Dutch translation of the term, 'richtlijn', can be understood in such a 'non binding' manner), whereas in reality it leaves only little discretionary latitude to national legislators.

[C] Strategy determination phase

7. Dissemination modality
   Tone of voice is less of a problem in this example than it was in the police data case. Partially because the target group is motivated, partially because the translation takes the form of graphical schemata.
8. Communication type
   Clearly, the whole idea of a legislative calendar can be best realized by issuing a website with dynamically linked content.

[D] Translation phase

9. Relevant rules
   The conversion of legal provisions takes place, including all relevant background information, into a format suitable for presenting legislative processes. First of all, we need to establish what restrictions are imposed in the 'restriction phase', and what the information needs are. In our example, although non-legal professionals will generally have some background knowledge about legislative processes, this background knowledge will not suffice to be able to use current portal services for legal information. The main legal rules relevant to a legislative calendar are those of constitutional law, laying out the ways in which legislative procedures work, including, among others, the EC Treaty and the Dutch constitution (Grondwet).
10. Translation
    The translation occurs by designing a format in which to make documents underlying a specific legislative trajectory available in a format suitable for the target group.

The actual design of the legislative calendar can be based on a number of circumstances. There is a massive availability of legal documents on-line, but these documents are often poorly accessible for publics not familiar with legislative processes and specialized search engines. There are already two European legislative calendars (PreLex, discussed above, and OEIL, the legislative

[4] Judgment of the Court of 5 February 1963—NV Algemene Transport-en Expeditie Onderneming van Gend & Loos v Netherlands Inland Revenue Administration.—Reference for a preliminary ruling: Tariefcommissie—Pays-Bas.—Case 26–62.

observatory of the European Parliament), but these are also aimed at legal (information) professionals. They do not provide an integrated view with national legal information services, and currently, there is no legislative calendar in The Netherlands (apart from smaller initiatives, covering only the legislative initiatives of a single ministry).

The European legislative procedures should be viewed in conjunction with the legislative procedures in its Member States. This is a difficult issue, as legislative procedures differ from country to country, and the reception and implementation of European legislative texts vary accordingly. Also, the on-line availability of legislative texts and relevant documents varies. In The Netherlands, there are several portals with information relevant to legislative procedure: there is a site with consolidated texts of Dutch legislation, a site with a large selection of case law, and a site with official publications. They are currently not connected to each other in a publicly accessible, free service.

Given the fact that so much information is already available on-line, but poorly organized for non-professional access, the legislative calendar to be built should lead its users to information on specific legislative procedures through an interface providing an overview of policy issues. The entrance of the legislative calendar consists of a 'policy issue browser', in which each policy category is indicated by a symbol. These 'symbol branches' include regulative themes such as, for instance, enhancing competition and human rights in Europe.

For each of these themes, relevant legislative processes and existing regulations can be listed in the form of a graph, basically a time line, in which the status of a particular proposal becomes immediately apparent. Time is probably the most salient view on the legislative process, closely followed by the institutions and document types involved. It provides a natural way to attain order among procedural steps, document types produced, and institutions involved. From each of these time line graphs, a stakeholder can click through to a regulation dossier, containing not only relevant documents, but also links to discussion forums, relevant contact persons, and to related regulation dossiers.

There is an additional issue to be addressed, namely the graphical rendition of the relation between European and Dutch law. The complex (semi-)hierarchical relation and the discretionary powers of the Dutch legislator should appear somehow in this rendition. Because of the sensitivity of Europe as governing its Member-States, it might be a good idea not to put the European institutions literally above the Dutch ones. Instead, showing the two sets of institutions behind each other, in a semi-transparent three-dimensional manner, might be preferred. The two views of the calendar, namely the European part and the Dutch part, can then be switched by the user.

2.5 Validation

The model as described above has not yet been validated empirically. Validation should occur along both theoretical and empirical lines. Further theoretical validation will have to emanate from (a) the comparison of the model with similar (validated) translation models in other disciplines, from (b) assessment by

professionals in the domain of legal information translation, and (c) from a comparison with general (validated) models from communication theory and learning theory.

Empirical validation should take place on two levels: (a) on the level of individual dissemination projects, and (b) on the level of legal knowledge dissemination in general. On the level of individual dissemination projects, the efficacy of dissemination has to be tested on three test groups, randomly selected from the target group: a test group that has had no access to the dissemination information, a test group that has had access to relevant 'traditional' dissemination information, and a test group that has had access to dissemination information based on the method described in this article. Efficacy has to be determined by asking the individual members of these three groups an identical set of questions in order to establish their understanding of the subject matter of the particular legal knowledge dissemination project. Results of these tests have to be anonymized in order to establish a 'blind' assessment on the side of the researchers.

As to empirical validation on the level of legal knowledge dissemination, generalization of the results of validation across legal domains is only possible insofar as circumstances are similar, i.e., if the different steps in the model are performed in similar ways under similar circumstances (comparable dissemination publics, identical dissemination methods etcetera). In order to ascertain the verifiability of the model in this general way, claims regarding its validity cannot transcend these comparable areas of application.

2.6 Using AI & ICT techniques

Links with existing AI & law research were indicated in sect. 1.1. In addition, the question arises how AI & law and ICT & law techniques can be used in the translation process outlined in sect. 2.1. First of all, we assume that AI & law techniques can only *support* the process. Natural language processing (NLP) techniques are currently not sufficiently able to cope with the complex analysis tasks of relevant legal sources, or with the generation of information texts—writing information prose is partly a creative process, a craft. In this subsection, we skip the restriction determination phase and the strategy determination phase, as these would typically imply human involvement. Instead, we focus on the expansion and translation phases. Following the steps in these two phases, we comment on the potential use of AI & law and ICT & law techniques.

In the expansion phase, making implicit information explicit encompasses the hierarchy between different sources of law, exceptions to rules and deriving general rules from case law. Especially the latter two could be subject to fruitful application of AI & law techniques. As to establishing exceptions to rules, modeling rule sets enables generating exceptions automatically (Winkels et al. 1999). Deriving general rules from case law will take advantage from case-based techniques in assessing the relevant differences and similarities among cases—although it should be noted that the legal system in the example above is a civil law system. In both cases, the modeling activity needed in order to apply the AI techniques will be considerable.

From a research point of view, this is not a problem, but for the use of such techniques in actual dissemination practice, this will be a major obstacle.

Identifying legal concepts can be attained more easily. Relatively simple pattern recognition and NLP techniques can support the identification of concepts in legal sources, and—if present—their definitions can be isolated. Identification of concepts and their definitions has been subject of research in, among other ones, the LOIS project (cf. Dini et al. 2005, Mommers and Voermans 2005) and other ontology-related research (Ajani et al. 2007). Existing lexicons, including WordNets, can be used to compare the definitions of legal concepts with their lexical counterparts, and thus to make explicit 'constructed' legal meanings. One of the more elaborated corpora for comparison of legal concepts is the European *Acquis*, which has been the basis for extensive term databases such as InterActive Terminology for Europe.[5] NLP techniques can support the large-scale analysis of such terminology databases.

Regarding the translation phase, it would be feasible (and particularly useful) to provide a system that supports the translation activity, by offering procedural help and by offering direct access to relevant information. Thereby, it would resemble the LEDA system (Voermans 1995), which combined several techniques in a single information system implemented as an add-on to a word processor. This will probably not demand AI & law techniques, but rather ICT & law—or even interface—techniques. The steps to be performed in the translation phase refer directly to the information needs of the person carrying out the translation: the selection of relevant rules from the expanded information (phase [B]), by taking into account the restrictions imposed on the dissemination activity (phase [A]). This activity can be supported by providing a clear overview of the rules, the possibility of viewing related information (e.g. explanation of concepts), and the applicable restrictions.

Writing a dissemination text (or drafting a figure or schema, for that matter) can be supported by continually providing the most relevant information. For instance, in the first step of the translation phase (selection of relevant rules), rules can be shown one by one, accompanied by the restrictions from phase [B], and the possibility to select them for later use, or reject them for being irrelevant to the particular dissemination project. In the second step of the translation phase (translation of the resulting rule set), the choices made in phase [C] on the dissemination modality and the communication type can be used by the information system to provide the user with options, tips and advice regarding the ways in which to apply those choices in the text, figure or schema to be produced.

The knowledge dissemination method described is presented as a single workflow. Even if it is, different persons may be involved in carrying out the different phases and steps of the method. Proper interpretation of legal sources requires specialized legal skills, whereas writing dissemination texts or drafting figures requires other skills. Ideally, these should be combined when applying the method. If different persons are involved, the information system should take each of their roles in the translation process into account, and offer optimal support for

[5] Cf. iate.europa.eu.

the workflow, including feedback loops for checking, for instance, the legal validity of the information produced. Typically, these features can be supported by ICT & law techniques, such as collaborative workspaces and workflow management systems.

3 Conclusions

In this article, a method has been presented for translating sources of law in a certain domain to a piece of information for a particular public. This method consists of four phases: a restriction determination phase, an expansion phase, a strategy determination phase, and a translation phase. The theory underlying this method is that sources of law cannot be translated into understandable information without determining the goals of the dissemination activity, the goals of the dissemination public, and the public's attitude and background knowledge. These restrictions allow for selective expansion of information implicit in a domain into explicit information that in its turn can be translated into specific advice for the public intended, employing the modality and dissemination method chosen in the strategy determination phase.

4 Further research

The theory explained in this article will form the basis for further research into methods for legal knowledge dissemination. Specific areas to be addressed are the legitimacy of European citizenship by disseminating knowledge about the legal foundations of the European Union, and empowering small and medium sized companies with specific knowledge about such themes as competition law and intellectual property.

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