



Universiteit
Leiden
The Netherlands

Understanding the Law: a method for legal knowledge dissemination

Mommers, L.; Koelewijn, W.I.; Kielman, H.H.

Citation

Mommers, L., Koelewijn, W. I., & Kielman, H. H. (2007). Understanding the Law: a method for legal knowledge dissemination. *Proceedings Of The Eleventh International Conference On Artificial Intelligence And Law (Icail'07)*, 195-203. Retrieved from <https://hdl.handle.net/1887/13132>

Version: Not Applicable (or Unknown)

License: [Leiden University Non-exclusive license](#)

Downloaded from: <https://hdl.handle.net/1887/13132>

Note: To cite this publication please use the final published version (if applicable).

Understanding the Law: a method for legal knowledge dissemination

Laurens Mommers
Leiden University
P.O. Box 9520
2300 RA Leiden
+31 6 28 83 12 05
l.mommers@law.leidenuniv.nl

Wouter Koelewijn
Leiden University
P.O. Box 9520
2300 RA Leiden
+31 71 527 85 75
w.i.koelewijn@law.leidenuniv.nl

Hugo Kielman
Leiden University
P.O. Box 9520
2300 RA Leiden
+31 71 527 85 70
h.h.kielman@law.leidenuniv.nl

ABSTRACT

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). However, only limited attention has been given to making legal texts themselves 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.

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 useful fiction 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 [10].

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, well-founded 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 in AI & law (subsection 1.1), and subsequently, we discuss related work in other disciplines (subsection 1.2).

1.1 Related work in AI & law

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

Permission to make digital or hard copies of part or all of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. Copyrights for components of this work owned by others than ACM must be honored.

Abstracting with credit is permitted. To copy otherwise, to republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

ICAIL '07, June 4-8, 2007, Palo Alto, CA USA.

Copyright 2007 ACM 978-1-59593-680-6/07/0006/\$5.00.

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. [6], [11], [17] and [19]), and (b) translation of rules into natural language question answering systems (cf. [34]).

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 [25] and [33]. See also [1] and [8].

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 legal ontologies.

1.2 Other relevant disciplines

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 paper.

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 analysed in terms of similarities and differences between those two ‘types’ of language (cf. [7] and [36]). 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. [2], [14], [15], [16], [18], [19] and [29]). 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. [8], [13], [21], [23], [30], [31]. Legal semiotics has studied the relation between norms and behaviour; cf. [26] and [27].

Regarding theory of learning, in the academic world, there is a focus on the support of legal education for law students; cf. [20]. 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. [4]. 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 encyclopaedia 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), there is an EU information service called ‘Europa direct’ (http://ec.europa.eu/eurodirect/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. [5] and [9], 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. [12]. 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. [24].

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 (subsection 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 (subsection 2.2). Finally, we discuss an example of using the method in an actual case of legal knowledge dissemination (subsection 2.3).

2.1 Outline of the translation model

The graphical representation of the legal knowledge dissemination model presented in this paper 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. [19].

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.

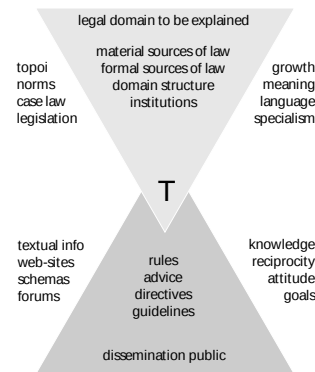
Knowledge. Background knowledge of the dissemination group can occur both in terms of being well-educated in general or hav-

ing 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. [22].

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 dis-

semination 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, behavioural 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 understandability 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, behavioural 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 A translation example

For clarification purposes, one 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 offences. 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 organisation 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 [10].

(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 [28]. 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 realise 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 provides 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 [3]. 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 [3]. By this, the legislator has tried to establish a free flow of information within parts of the police organisation.

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 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 ex-

press 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 are 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 organisation 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 organisation);
- 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 (hereinafter: SCD).

2.4 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 paper. 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.

2.5 Using AI & ICT techniques

Links with existing AI & law research were indicated in section 1.1. In addition, the question arises how AI & law and ICT & law techniques can be used in the translation process outlined in section 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, modelling rule sets enables generating exceptions automatically [35]. 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 modelling 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 [6][19]. 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.

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 [32], 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 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]).

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 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 paper 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.

5. ACKNOWLEDGEMENTS

We would like to thank the Faculty of Law of Leiden University for allowing us to carry out explorative research into legal knowledge dissemination. We would also like to thank three internal referents (Tineke Cleiren, Janneke Gerards and Hans Nieuwenhuis) for their comments on the original grant application on which this article is based. In addition, we would like to thank three anonymous ICAIL referents for their valuable remarks on the previous version of this paper. Finally, the research on the distribution of police data, used as an example in this paper, is funded by the ToKeN programme of the Research Council for Physical Sciences, part of the Netherlands Organisation for Scientific Research, under number 634.000.017. Finally, we would like to thank the Leiden University Fund for funding travel, conference fee and accommodation expenses.

6. REFERENCES

- [1] Ashley, K.D. *Modeling Legal Argument: Reasoning with Cases and Hypotheticals*. Cambridge, MIT Press, 1990.
- [2] Bix, B. H.L.A. Hart and the Open Texture of Language. In *Law and Philosophy* 1991, 51-72.
- [3] Buruma, Y et al. *Jaarboek Wet politieregisters 2003*. Deventer, Kluwer, 2003.
- [4] Carr, C.S. (2001) Computer-Supported Collaborative Argumentation: Supporting Problem-based Learning in Legal Education. In *Proceedings of Euro-CSCL 2001*.
- [5] Clercq, S. de. *Voorlichting in de juridische dienstverlening*. Bussum, Coutinho, 2004.
- [6] Dini, L., Liebwald, D., Mommers, L., Peters, W., Schweighofer, E. and Voermans, E. Cross-lingual legal information retrieval using a WordNet architecture. In *Proceedings of ICAIL '05*. ACM Press, New York, NY, 2005, 163-167.
- [7] Frege, G. Über Sinn und Bedeutung. In *Zeitschrift für Philosophie und philosophische Kritik* 1892, 25-50.
- [8] Hage, J.C. *Reasoning with Rules. An Essay on Legal Reasoning and Its Underlying Logic*. Dordrecht, Kluwer Academic Publishers, 1997.
- [9] Hoogwater, S. *Beeldtaal voor juristen*. Den Haag, Sdu uitgevers, 2005.
- [10] Koelewijn, W.I. and Kielman H.H. Agenten voor agenten. Slimme software ter ondersteuning van menselijk handelen. In W. Huisman, L.M. Moerings and G. Suurmond (eds.), *Veiligheid en recht. Nieuwe doelwitten en strategieën*. Den Haag: Boom Juridische Uitgevers, 2006, 231-255.
- [11] Laarschot, R. van, Steenbergen, W. van, Stuckenschmidt, H., Lodder, A.R. and Harmelen, F. van. The Legal Concepts and the Layman's Terms. *Proceedings of the 18th Annual Conference on Legal Knowledge and Information Systems, IOS Press, Brussels, December 8-10, 2005*.
- [12] Langen, C. *Methodiek sociaal juridische dienstverlening*. Soest, Nelissen, 2005.
- [13] Lodder, A.R. DiaLaw. *On legal justification and dialog games*. Maastricht University: Ph.D. thesis, 1998.
- [14] Loth, M.A. *Handeling en aansprakelijkheid in het recht*. Leiden University: Ph.D. thesis, 1988.
- [15] Loth, M.A. *Recht en taal; een kleine methodologie*. Arnhem, 1992.
- [16] Loth, M.A. Tussen eenheid en verscheidenheid: contextualisme in taal, wetenschap en samenleving. In: Gaakeer, A.M.P., Loth, M.A. (eds.). *Eenheid en verscheidenheid in recht en rechtswetenschap* (28), Kluwer/Sanders Instituut: Deventer/Rotterdam, 2002, 19-43.
- [17] Matthijssen, L.J. *Interfacing between Lawyers and Computers: An Architecture for Knowledge-based Interfaces To Legal Databases*. Den Haag, Kluwer Law International, 1999.
- [18] Mommers, L. *Applied legal epistemology: building a knowledge-based ontology of the legal domain*. Ph.D. thesis Leiden University, 2002.
- [19] Mommers, L. and Voermans, W.J.M. Using legal definitions to increase the accessibility of legal documents. In Moens M.-F. and Spyns, P. (eds.). *Legal Knowledge and Information Systems. Jurix 2005: The Eighteenth Annual Conference*, 2005, 147-156.
- [20] Muntjewerff, A.J. *An Instructional Environment for Learning to Solve Legal Cases PROSA*. Amsterdam, UvA, Ph.D. thesis, 2001.
- [21] Perelman, Ch. *The idea of justice and the problem of argument*. London: Routledge and Kegan Paul, 1977.
- [22] Pessers, D.W.J.M. *Liefde, solidariteit en recht*, Ph.D. thesis University of Amsterdam, 1999.
- [23] Prakken, H. *Logical tools for modelling legal argument: a study of defeasible reasoning in law*. Dordrecht etc.: Kluwer Academic Publishers, 1997.
- [24] Roest, O.A.P. van der. *Basisboek Recht*. Wolters-Noordhoff, 2006.
- [25] Scholten, P. *Mr. C. Asser's handleiding tot de beoefening van het Nederlands burgerlijk recht. Algemeen deel*. Zwolle, W.E.J. Tjeenk Willink, 1974.
- [26] Schooten, H. van. Van bevel naar communicatie: naar een nieuwe legitimering van het recht?. In: B. van Klink & W. Witteveen (eds.). *De overtuigende wetgever*, Schoordijk Reeks. Deventer, Tjeenk Willink, 2000, 71-86.
- [27] Schooten, H. van. The Declaration of War in the Dutch Constitution and Models of Legal Communication. *International Journal for the Semiotics of Law* 14(4), 2001, 329-344.
- [28] Schreuders, E., and Wel, H. van der. *Evaluatie wet bijzondere politieregisters. Deel II. De Wet bijzondere politieregisters in de praktijk*. Den Haag, WODC, 2005.

- [29] Termorshuizen-Arts, M. *Juridische Semantiek. Een bijdrage tot de methodologie van de rechtsvergelijking, de rechtsvin-ding en het juridisch vertalen*. Nijmegen: Wolf Legal Publis-hers, 2003.
- [30] Toulmin, S. *The Uses of Argument*. Cambridge, UK, Cam-bridge University Press, 1958.
- [31] Verheij, H.B. *Rules, Reasons, Arguments. Formal studies of argumentation and defeat*. Maastricht University, Ph.D. the-sis, 1996.
- [32] Voermans, W.J.M. *Sturen in de mist..., maar dan met radar. Een onderzoek naar praktisch haalbare vormen van compu-terondersteuning bij het ontwerpen van regelingen*. Zwolle, Tjeenk Willink, 1995.
- [33] Vranken, J.B.M. *Mr. C. Asser's handleiding tot de beoefen-ing van het Nederlands burgerlijk recht. Algemeen deel*. Zwolle, W.E.J. Tjeenk Willink, 1995.
- [34] Winkels, R.G.F., Boer, A., Breuker, J.A., and Bosscher D. Assessment based Legal Information Serving and Co-operative Dialogue in CLIME. In Hage, J.C., Bench-Capon, T.J.M., Koers, A.W., Vey Mestdagh, C.N.J. de, and Grütters, C.A.F.M. (eds.) *Proceedings of JURIX-1998*. Nijmegen: GNI, 1998, 131-146.
- [35] Winkels, R.G.F., Boscher, D.J.B., Boer, A.W.F., and Breu-ker, J.A., Generating exception structures for legal informa-tion serving, *Proceedings of the 7th international conference on Artificial intelligence and law*, Oslo, Norway, 182-189.
- [36] Wittgenstein, L. *Philosophical Investigations*, Oxford, UK, Blackwell, translated from *Philosophische Untersuchungen* by G.E.M. Anscombe, 1953.