

Assessing the dynamic character of legal terms

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Abstract In this article, a method for establishing hypotheses about the structure and content of expert knowledge as a basis for meaning construction in the field of legal discourse is presented. In the same way as in other fields of human linguistic meaning, a full picture of the actual complexity of meaning as it emerges in communicative situations presupposes the combination of an individual and a collective perspective on meaning. More specifically, meaning construction is performed by individuals on the basis of their individual knowledge base, at the same time as the process is inherently collective in order for it to be communicatively efficient. The method presented in this article chooses to give priority to the individual perspective, but also contains options for taking the collective perspective by aggregating individual results. The article starts out by discussing some of the basic issues of the methodological problem at hand. The concept from US law analyzed here (*criminal liability of corporations*) is described, as well as the chosen unit of description (i.e., *Matrix Frame*), is presented in some detail and used for a practical analysis of the concept. The article finally situates the presented method on three scales that are relevant for assessing its scope.

Keywords knowledge frames, legal concepts, legal discourse, semantic analysis, methodology

1 Introductory remarks

The topic of this article is the linguistic investigation of legal communication, and especially of the meaning of legal concepts as it emerges in this type of communicative situation. Legal concepts are, among other things, characterized by having as their *raison d'être* the solution of conflicts between different interests in society. This means that they often contain conflicting interests that have to be balanced against each other when applying the concepts in concrete situations. In the example presented in this paper (the concept of *criminal liability of corporations* from US law), the conflict of interests is between protecting society against wrongdoers and protecting corporations from being punished as a collective for something that an individual has committed (for more details on the concept, see Section 2). Consequently, such conflicting interests cause the meanings of the concepts to become potentially instable at the level of the individual language user as well as at the level of the speech community. Concerning the speech community, the balance between the conflicting interests vary over time because of general developments in society. Concerning the language user, in all instances of communication the communicating individual may choose to shift the balance according to specific factors in the situation or due to individual positions or interests. The main purpose of the present article is to demonstrate a method that takes such characteristics into account.

I take a constructivist approach to the description of human meaning. Such an approach makes the dual character of such meanings that emerge from communicative interactions come into focus:

- When people construct meaning in actual communication, this process runs on the background of their own personal stock of knowledge. This knowledge base is dependent on their own biography and experiences and thus necessarily *individual*.
- On the other hand, in order to achieve mutual understanding in actual communication, it is a prerequisite that a certain agreement about the general understanding of linguistic elements should exist at a *collective* level.

Here we see an interesting problem for the description of meaning in general as well as of specific meaning in concrete specialized communication: If meaning has this dual character, how can we then theoretically and methodologically grasp and represent its duality (= linguistic meaning as simultaneously individual and collective)?

The relations between linguistic meaning at an individual and a collective level are one of the topics that Ludwig Wittgenstein treats in his *Philosophische Untersuchungen*. Here he shows that the idea of a private language is absurd, because such a language would prevent users from knowing whether they still used a word consistently (Wittgenstein 1984: 361–365). Language as a rule-based entity is thus inherently a public and collective entity, and meaning is constructed in public language games, not in individual thought processes. However, at the same time, participants in the language games are individuals whose cognitive activity is based on their personal experience. And even Wittgenstein bases his argumentation on the assumption that personal experience does not necessarily have to be in accordance with collective knowledge (Wittgenstein 1984: 366). Although this is not a problem for philosophy, it still confronts us with an interesting psychological dilemma as presented in aphorisms no. 273 and 274 in Wittgenstein's *Philosophische Untersuchungen* (Wittgenstein 1984: 366–367):

- The word *red* when used in normal communication, does it designate a concept common to all of us? And should we all besides that have a second word that refers to our personal perception of the colour? In other words, are there conceptual differences between the collective and the individual?
- Or is it rather the case that when using the word *red* we designate the concept which we perceive as common and at the same time refer to and compare with our personal perception, checking that we individually know what we should know? In other words, are the collective and the individual two sides of the same coin?

In actual communicative situations, this relation is connected with a chicken-and-egg type of problem: Is the individual perception or the collective notion primary? Different authors reach different conclusions in this question.¹ However, what Wittgenstein's deliberations definitely show is that meaning has to be approached from two perspectives, viz. the collective/cultural perspective and the individual/representational perspective in order for us to describe its actual complexity.² Specialized communication as human linguistic communication is no exception here. Relevant investigations of the word meaning in specialized communication and the actual content of expert concepts thus require methods with the potential to grasp this duality.

This article describes the study of an example from US law, i.e., the concept of *criminal liability of corporations*. A frame-oriented approach to expert communication was used to analyze this concept. The final section of the article discusses the methodological conclusions derived from the analysis of this example.

2 Concept example: *Criminal liability of corporations*

The concept investigated here has three main components:

liability, n. **1.** The quality or state of being legally obligated or accountable; legal responsibility to another or to society, enforceable by civil remedy or criminal punishment

criminal, adj. **1.** Having the character of a crime; in the nature of a crime

corporation, n. An entity (usu. a business) having authority under law to act as a single person distinct from the shareholders who own it and having rights to issue stock and exist indefinitely; a group or succession of persons established in accordance with legal rules into a legal or juristic person that has legal personality distinct from the natural persons who make it up, exists indefinitely apart from them, and has the legal powers that its constitution gives it.

(Garner 2004)

We are thus talking about the responsibility for criminal activities of an entity (the corporation) that acts as an independent player by way of natural persons, but in its own right and as an independent legal person. The concept is especially interesting for our purposes, because as previously mentioned, it is an example of a legal concept that holds two conflicting interests at the same time:

- On the one hand, society wants to be able to punish the person actually responsible for criminal activities. And in some cases this is rather the *corporation* as such than the natural persons carrying out the activities. At the beginning of the 20th century the concept was introduced into US law in order to avoid situations, in which a corporation could take advantage of actions carried out by employees at lower levels of the hierarchy, for which only the employee could be punished.
- On the other hand, it is a basic principle in US law that criminal liability presupposes *criminal intent* or *mens rea*. And as corporations are not natural persons it is at least subject to discussion to what extent it is possible to ascribe such criminal intent to the corporation as such (and not merely to the natural persons acting on behalf of the corporation).

In expert discussions on this concept and its precise content, it is necessary to take into account the exact balance between the conflicting interests and the consequences of this balance for the relative weight of the components of the concept. Thus, knowledge about the different principles and their balance, when applying the concept, is part of the knowledge base necessary for participating in specialized legal communication on the topic. This fact makes the concept especially relevant for research on the structure and composition of specialized knowledge as an individual and a collective unit. Section 3 describes a methodological framework for the study of this type of specialized meaning in context.

Before approaching this part of the argumentation, however, a few words on the concept as an instance of US legal concepts are necessary. The legal system of the US is characterized by being a federal system, where concepts may differ from federal to state level and between the systems of different states. The concept of *criminal liability of corporations* is no exception here: According to different state laws and precedents, the details of the concept are different

in different jurisdictions. However, in all contexts in which I have encountered the concept the dichotomy of interests described above is present. In other words, one may say that across the conceptual differences in different jurisdictions a common conceptual core exists. And it is this common core rather than the exact terminological legal meaning that will interest us in this paper on specialized semantics. I think that we can here see a difference between the traditional interests of legal scholars (terminological orientation) and the interests of linguists investigating mental meaning structures (orientation towards human knowledge structures).

3 Conceptual Knowledge Frames – Matrix Frames

3.1 Basic characteristics

The basic unit of description used in our study was the knowledge frame as the organizational unit for knowledge stored in long-term memory, which language users apply when understanding and conceptualizing a situation. The concept goes back to Bartlett's (1932) concept of *schema*, which he characterizes as follows: "Schema' refers to an active organization of past reactions, or of past experiences, which must always be supposed to be operating in any well-adapted organic response." (Bartlett 1932: 201) Thus, we are talking about a way of conceptualizing the stable organization of an individual's long-term memory, and thus, the basis of understanding and reacting to stimuli from outside the individual's cognition. For our purposes, the attribute **active organisation** is important. It is regarded as a constantly open structure which reacts to new experiences and fine-tunes the stored structures, if necessary. Text understanding is seen as a constructive process in which incoming stimuli are mapped onto existing schemas and each incoming stimulus simultaneously functions as input to the stored schemas. This input may lead to a strengthening of the schema or to necessary fine-tunings.

The limited framework of this article and its focus on the application of the method proposed to a concrete example do not allow me to enter into a lengthy discussion of different approaches and basic assumptions underlying the frame concept.³ Instead, a short presentation of the basics of the specific frame concept applied here is provided, and its advantages underlined.

The method applied in this study, which could be termed *Knowledge Collection and Categorization Method*, is based on the conceptual-frames approach (Konerding 1993). The guiding principle in Konerding's approach is *frame heuristics*. This means that it works deductively with a limited number of *Matrix Frames* (twelve in total). The frames emerge from a process Konerding calls *Hyperonymtypenreduktion* (i.e., reduction to types of hyperonyms). In this process, Konerding starts with meaning paraphrases in articles in major German dictionaries and looks for hyperonyms to the investigated concept. For each hyperonym found the search process for a new hyperonym is repeated, until a level is reached where circularity emerges, or where hyperonyms do not carry specified meaning any more. Thus, the Matrix Frames have emerged from an empirical and inductive process.

One of the basic assumptions of the approach is that all noun-based concepts are subsumable under one of these Matrix Frames. The process is mainly intuitive, but hardly poses objectivity problems, as the small number of Matrix Frames limits possible overlaps. This characteristic is relevant in connection with assessing the ontological status of knowledge frames. Due to their roots in Bartlett's original idea about schemas, knowledge frames basically have to be conceptualized as cognitive entities.⁴ Such mental entities are not directly observable, as even introspection does not give us any direct connection to knowledge frames in their actual

structural entirety. Instead, we have to fall back on textualizations of the knowledge and analyze these texts as hypothetical reflections of background knowledge.

This process of establishing hypotheses may in principle be carried out either inductively or heuristically-deductively. In an inductive approach the analyst reads the texts and comes up with hypothetical frames that are in accordance with the textual input. In the heuristic and deductive approach, on the other hand, the analyst works on the basis of a 'straitjacket' of possible types (Matrix Frames) and structures (inside each Matrix Frame). Konerding (1993: 303–364) works with the following nine empirically established basic Matrix Frames:⁵

- Object (concrete)
- Organism
- Person / Actor
- Institution / social group
- Event
- Action
- State
- Part of
- Whole

This list has some resemblance with top-level ontologies like for example GFO.⁶ This is not surprising, as such ontologies share with the Matrix Frames the intent to be all-inclusive concerning possible concepts to be evoked in communication at a high level of abstraction. However, Matrix Frames are basically constructed inductively, where top-level ontologies are often constructed deductively and on the basis of principles of logic. Furthermore, ontologies normally represent the concepts they consist of in a hierarchical system. The Matrix Frames are in principle independent of each other, although some of them have subdivisions (see note 5 below). The idea of hierarchies of concepts plays no significant role in the development of the Matrix Frames. They are only meant to function as points of crystallization, under which concepts and the knowledge connected to the concepts may be subsumed. However, the results from a collection of knowledge on the basis of Matrix Frames may certainly serve as starting point for building a (domain-specific) ontology. For the output of the application of the frames is knowledge as reflected in the analyzed texts.

For each Matrix Frame Konerding has established a list of questions (on the basis of investigations of semantic valency of verbs connectable to the basic concepts) that establishes dimensions of the concept type that are potentially relevant for describing concepts of that type. By subsuming a concept under a specific Matrix Frame, the analyst thus receives a set of dimensions, which can be used for sorting the knowledge laid down in the investigated texts. The concrete analysis consists of reading through texts looking for excerpts (full sentences or parts of them) that treat the concept and may be interpreted as answers to the questions from the Matrix Frame (thus the term *Knowledge Collection Method*). When working with longer texts or higher numbers of texts, a way of making the method feasible is to concentrate upon stretches of text, in which the concept is explicitly mentioned (Lönneker 2003). All answers to the same question are categorized together (thus the term *Knowledge Categorization Method*). The structure of the concrete concept then consists of a specific choice of dimensions, and the specific content of the concept is visible through the concrete text excerpts subsumed under the dimensions.

Especially the Categorization part of the method is prone to some subjectivity in the interpretation process. For the categorization is based mainly on the knowledge of the researcher and his or her interpretation of the stretches of text. In order to reach a sufficient level of stability and replicability it is therefore necessary to include some of the methods used in interpretive studies from qualitative paradigms in sociology and discourse studies like employing more interpreters and measuring the interrater reliability. In this pilot study I have not applied this approach, but below I present the selected chunks subsumed under one question and highlight the elements that have lead me to interpret them as answers to this specific question. Thus, the basis is made visible. But a degree of subjectivity will remain in the interpretation process. I think it is a necessity, if we, as this method does, intend to assess the actual knowledge applied by individuals in their communicative interaction.

The main advantage of a heuristic and deductive approach like this one is that it is applied in the above-mentioned 'straitjacket': As the goal of the analysis is to establish hypotheses concerning the content and structure of knowledge frames that are only accessible in an indirect way, it is crucial to diminish the degree of subjectivity of a method as much as possible. A method working with a fixed set of questions is more appropriate for assessing knowledge frames since it is more independent of the structure of the texts being studied. It thus presents a less subjective basis for establishing hypotheses regarding the structure and content of knowledge frames than an inductively based approach.⁷

Furthermore it is important to note that the goal of the methodology is not to assess the full textualized and presupposed knowledge base that the author applied when writing the text. Thus, the interest is not primarily on the actual structuring of knowledge from the point of view of the text itself, just like I am at least for the time being not interested in the specific instantiations of the concept in different jurisdictions at US state level. Instead the method is directed towards assessing the author's knowledge of the investigated concept and presenting it in a systematic format in order to give the analyzer an overview of the knowledge represented in the text from the point of view of the investigated concept. The systematic format consists of the heuristic set of questions, through which the text is analyzed. In other words, it is not the text and its structure, but rather the external set of questions that is the governing factor when gathering and categorizing knowledge elements.

3.2 Example

A relevant example is the concept of *criminal liability of corporations*. This concept may be subsumed under the Matrix Frame 'State', as being criminally liable is a state, in which the corporation ends after legal scrutiny. Consequently, the following list of questions from the relevant Matrix Frame was used as basis for the analysis:

1. In what context does *criminal liability of corporations* typically occur? Of what does one typically say that it is liable?
2. What phase of existence of what entity is involved?
3. How can one see that *criminal liability of corporations* exists (= that someone is in this state)?
4. How is *criminal liability of corporations* measured? What are the standard measurements?
5. In what functional contexts does *criminal liability of corporations* play a role?

6. What is the function of *criminal liability of corporations* in these contexts?
7. What are the characteristic elements of *criminal liability of corporations*?
8. What is the functional role of these characteristic elements?
9. Under what circumstances does *criminal liability of corporations* emerge?
10. What is the function of *criminal liability of corporations* in its context?
11. What other names exist for *criminal liability of corporations* and how widely known is it in the field?
12. In connection with what human activity [within the field treated here] does *criminal liability of corporations* play a role?
13. What is the relevance or use of *criminal liability of corporations* for humans / society?
14. What other qualities or states is *criminal liability of corporations* closely related to, and what are the differences?
15. Are there specific theories concerning *criminal liability of corporations*?
16. To what extent do legal experts agree on these theories?
17. What does the existence of *criminal liability of corporations* in someone say something about?

This list of questions has been taken as point of departure for a pilot study of a corpus of a total of 9 articles randomly selected from US legal law reviews. As a first step, one of the texts was analyzed. This analysis was followed by the aggregation of the results of one question across all texts of the corpus.

The text initially analyzed was the article by the US lawyer Becker (Becker 1992). Table 1 shows which questions were answered in the article and how many text parts were subsumed under each question:

Table 1: Questions answered in Becker (1992)

Question	Number of subsumed text parts
7	5
13	6
14	1
15	1
16	4

According to Table 1, the dimensions “Characteristic elements” (7), “Relevance for humans/society” (13) and “Agreement among legal experts” (16) are central in the text. The hypothesis is then that they are also central elements in the knowledge frame of the author.

Next, the answers to question 13 (Relevance of the concept for humans/society) as the most frequently answered question in the text were analyzed. I categorized six sections of the text as answers to question 13. The knowledge in these sections pertains to arguments for developing the legal concept of *criminal liability of corporations* and to discussions about whether the concept is at all justified:

- The **four purposes** offered for holding individuals criminally liable are **deterrence, retribution, rehabilitation, and incapacitation**. Of these, deterrence has emerged as the **main purpose** when dealing with corporate misconduct. (439)
- It is well established that corporations are motivated by money, which takes the form of profits in the corporate context. This would tend to indicate that **civil penalties are sufficient**. (441)
- The problem with both sides of this analysis is that the commentators do not address the real issue: **can a corporation have the guilty mind (mens rea) required for the committal of a crime or for the imposition of liability? No!** It is that simple. Certainly, in some cases, the directors and management can formulate a scheme and conduct it behind the cloak of the corporation. But one should hold them liable, not the corporation! (463)
- The main reason for not imposing criminal liability on a successor corporation is that **only the party that commits a crime should have to suffer the stigma of a criminal prosecution**. In successor situations, the successor corporation does not commit a crime. (469)
- The **purpose for imposing criminal liability in the corporate context is deterrence**. (470)
- The **best way to deter corporations** is to hit them where it hurts – their profits! Criminal stigmatization will not likely cause substantial financial harm to a corporation. A large fine would cause direct harm and therefore provide a greater deterrent. Any arguable loss in the deterrent effect is the price society has to pay as a result of the fact that corporations do not have a *mens rea*. Because of this, they do not merit criminal liability (476)

Elements central for subsuming the text parts under this question have been highlighted. The text excerpts indicate that according to the author, the purpose of the concept of criminal liability should be deterrence through *the stigma of criminal prosecution*. However, this instrument should only be applied in cases where this is truly justified (*only the party that commits a crime should have to suffer ...*). However, in the case of corporations the instrument is not deemed optimal (*The best way to deter ...*).

What is studied here is thus the textualization of parts of a personal knowledge complex in the text of an individual. Taking heuristically assumed structures outside the text as point of departure for the analysis, it is possible to focus the textualized knowledge thematically, follow the textualization of a concept in a text, and represent the elements found in a systematic format, which is not primarily dependent on actual textual structures. If such individual representations of knowledge laid down in texts are collected from various individuals and converted into an aggregated representation, this may offer the perspective of the collective.

Figure 1 shows text sections that have been collected and paraphrased from nine articles in US Law Journals that have been categorized as answers to question 13:

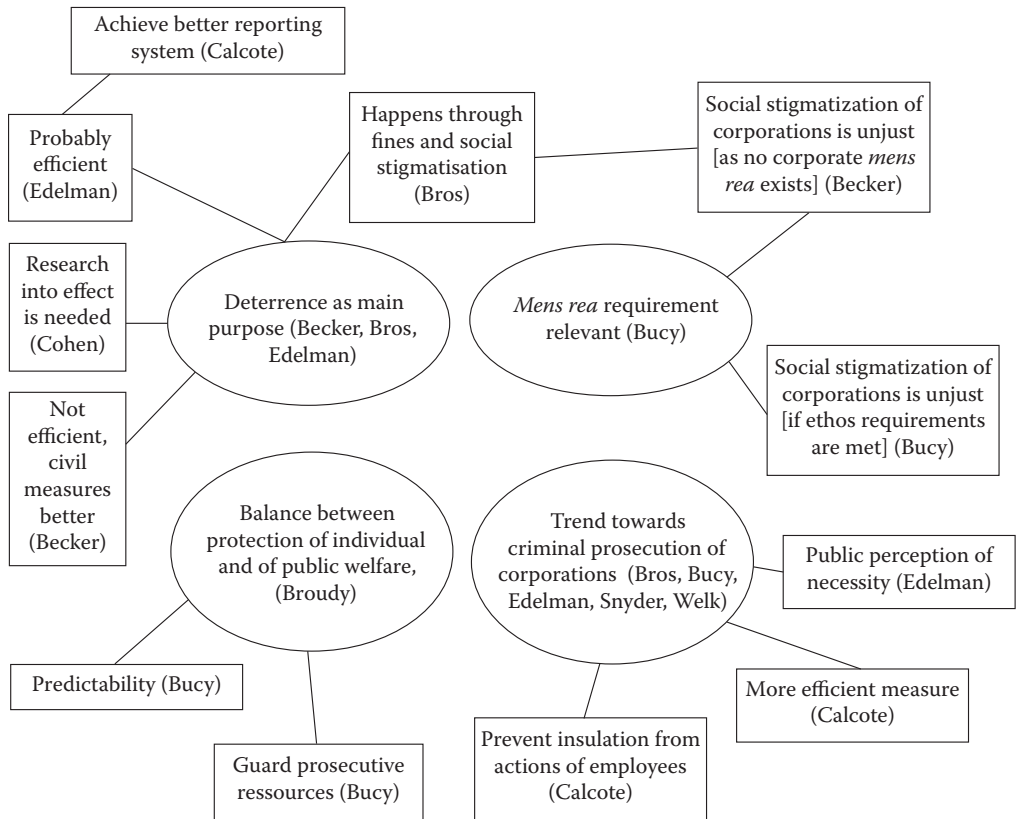


Fig. 1: Knowledge chunks represented in corpus; answers to question 13; aggregated picture

In the nine articles I collected and categorized a total of 15 different knowledge elements as related to this question. Some knowledge elements only occurred once, whereas others were represented by more authors. In connection with each knowledge element the authors textualizing this element are indicated. The structure of the network is the result of a subsequent classification of the knowledge elements found by the analyzer. Four knowledge elements (round forms) were classified as more basic than the others on the basis of their level of abstraction. Two of these knowledge chunks appeared in more than one article, viz. *Deterrence as main purpose* (Becker, Bros, Edelman) and *Trend towards criminal prosecution of corporations* (Bros, Bucy, Edelman, Snyder, Welk). All other elements were only represented once. The chunks in round forms were regarded as more basic than the ones in squares since the chunks in squares were seen to presuppose the chunks represented in round forms. For example, a logical presupposition for Becker’s argument that civil measures are more efficient (top left corner) is that deterrence is the main goal of making the behaviour of corporations criminal. The first chunk is only logically relevant in the context of the second. All relations in Fig. 1 are of this same type, viz. PRESUPPOSITION-OE.

What qualified as an independent knowledge element was not explicitly laid down in advance, the categorization emerged inductively from handling the material and was a result of a subjective interpretive process. However, textual clues (coherent stretches of text are seen

as one knowledge element) played a decisive role in the assessment. Again, in major studies it will be necessary to include other interpreters, preferably interpreters with relevant specialized knowledge. Here, furthermore it could be considered to work with a more automated process of proposition reduction, maybe inspired by the macrorules suggested by van Dijk (1980: 46–50) in order to connect micropropositions with macropropositions in processes of understanding.

The general picture obtained from the aggregation of the analysis of the individual authors' knowledge systems is that the knowledge chunks extracted from the different texts form a very coherent picture: Knowledge chunks mentioned in one article presuppose knowledge chunks presented in one or more other articles. Generally speaking, the chunks are mutually compatible, and reflect a coherent picture of the knowledge connected to the concept of *criminal liability of corporations*. However, the analysis contains two exceptions to this state of affairs:

- The basic round element *Deterrence as main purpose* is related to three elements in square format, which are mutually exclusive (*not efficient, research needed, probably efficient*, top left corner). These positions are hotly debated in the community of legal experts.
- The basic round element *Mens rea requirement is relevant* (top right corner) is related to two elements in square format, which represent different conclusions regarding the same basic assumption: Becker (1992) concludes that the claim is relevant in general (due to the nature of the concept in US criminal law), but that it is not applicable in connection with corporations (due to the nature of corporations); Bucy (1991), however, arrives at the conclusion that the claim is also applicable in connection with corporations as long as the *mens rea*-requirements are met by applying a relevant standard, which the author suggests. So again here we obviously have disagreement between legal experts.

The aggregation supplies us with a way of modelling the collective knowledge and especially of showing where the collective knowledge is still not absolutely stable. The reason why this is interesting is that such unstable points are typically an arena of discursive attention (as experts have to position themselves on these questions from the point of view of their stance in the discipline). And these are also the points where developments in the collective knowledge are most likely to happen.

A final word of caution concerning the results is relevant: I have here concentrated on assessing the knowledge of legal experts as represented in law review articles. However, this knowledge is not necessarily identical with the institutionally upheld and thus legally binding meaning of the treated concept. For in law, some players, viz. judges, are institutionally more powerful in the field of instigating meaning than the rest. Thus, a hierarchy may exist among disputed elements, if judges tend to opt for one of the competing meanings. The principle chosen in Fig. 1 to classify the knowledge chunks does not catch this type of hierarchy, but it would be possible to insert it on the basis of parallel studies of textualizations in court decisions, or through studies of textualizations of the hierarchies in the law review articles themselves. Relevant knowledge chunks may be categorized as a specific answer type under question 16 (*To what extent do legal experts agree on these theories?*). Thus, the hierarchy could be shown by combining knowledge from different categories or from different sources.

4 Conclusions

In this paper I have demonstrated the basic characteristics of a method of analysis oriented towards assessing the knowledge underlying specialized communication. In connection with evaluating methods for such a task, I have considered three scalar dichotomies to be relevant: collective vs. individual perspective on knowledge, inductive vs. deductive approach, and textual vs. conceptual perspective.

- *Collective vs. Individual Perspective on Knowledge:* The Knowledge Collection and Categorization Method described in this article chooses the individual perspective as its vantage point. Thus, the basic operation is to assess what knowledge each text author lays down in his or her text. However, in a second methodological phase, it is possible and relevant to aggregate the results of the scrutiny of the individuals, as shown in Figure 1. Therefore the method provides a way of studying the collective perspective of knowledge despite the predominance of the individual perspective. In this choice, the method is related to the approach suggested by Krause (2008), whereas it differs somewhat from the method applied in Faber, Montero Martínez et al. (2006). The latter approach uses corpus study as its primary basis, thus focusing from the beginning upon the collective perception, whereas the method presented here focuses on each text as the reflection of the knowledge of an individual and only takes the collective concept into consideration in its subsequent phases.
- *Induction vs. Deduction:* This method is predominantly deductive and heuristically oriented since it uses a very general set of Matrix Frames, composed of generally applicable questions/dimensions as a basis for collecting and categorizing the knowledge elements found in the text. However, in practical analyses it was necessary to supplement the basic set of dimensions in order to cater to aspects with specific relevance for the specialized domain. For example, the dimension of *historical development* turned out to be central for the legal discourse, although it was not part of the original set of questions connected to the Matrix Frame. And when the aggregation step is introduced, focus shifts towards induction, at least in the present version. One way of introducing stronger elements of deduction in this second step would be to include the specialized knowledge of legal experts and establish aggregated structures in dialogue with them on the basis of their expertise. Such a procedure would be akin to the Termontography approach by Temmerman and collaborators. In this latter approach, the categorization framework used for sorting the data gathered from a domain-specific corpus is set up in interaction with experts and expert presentations (Kerremans et al. 2008: 184).
- *Text Perspective vs. Conceptual Perspective:* The Knowledge Collection and Categorization Method is centred on a conceptual perspective. This means that instead of textual structures, it focuses on the general structure of the Matrix Frame, which constitutes the basic point of view in the analysis. This perspective means that the analyzer may choose the level of granularity relevant for the investigative task at hand, as shown in the examples presented in the article (individual result vs. aggregated result, common conceptual core vs. specific instantiations in different jurisdictions). Methods oriented more towards textual structure such as semantic network analysis tend to be more elaborate and thus more tuned towards assessing the individual situation in which the text is used.⁸ In contrast, the approach presented here uses examples from individual texts to

gain a much clearer representation of the collective perspective than is offered by more textually oriented methodologies. •

Notes

- ¹ See, e.g., Chomsky (1986: 24-36), who focuses on the so-called *I-language*, i.e., the internal language of the individual language user, as opposed to Searle (1995), who focuses on the social and collective perspective. Harder (1999), Sinha (1999), Sinha/Rodríguez (2008) and Engberg (2009), on their side, rather favor a multi-perspective approach.
- ² Krause has presented a series of works which intend to meet this challenge by approaching meaning from two perspectives: She distinguishes between a primary, individual and discourse-based unit *Konzept* and the secondary, collective and system-oriented units *Wort* and *Begriff* (e.g., Krause 2008). The methodology to be presented in this paper equally sees the individual unit to be primary and therefore takes its point of departure in the equivalent of the *Konzept*.
- ³ See Engberg (2007) for a deeper discussion of these topics.
- ⁴ Konerding (1993: 130) states that he wants his frame concept understood not as cognitive knowledge frames, but as *Verbalisierungsergebnisse* (i.e., results of verbalization). Thus he can from a research methodological perspective focus upon the investigation of how people verbalize on the basis of knowledge frames. However, for my purposes this restriction is not sensible, as I am actually interested in establishing (hypotheses about) the stored knowledge and not merely in investigating the results of verbalization.
- ⁵ Konerding actually works with twelve different matrix frames, as he subdivides Object into *Natürliche Art / Artefakt / Diskontinuitivum* and Person / Actor into *Person mit temporärer oder dauerhafter Eigenschaft* and *Person in berufsbezogener Rolle*. For our present purposes the list without subdivisions is sufficient. See also Lönneker (2003) for a slightly more elaborate system of basic frames constructed on the basis of Konerding's system.
- ⁶ General Formal Ontology, see <http://www.onto-med.de/ontologies/gfo/index.jsp>.
- ⁷ For a pilot study supporting this assumption, see Engberg (2007). For another example of a frame approach applied to specialized discourse, which also favors a heuristic and deductive approach, see Faber/Montero Martínez et al. (2006). They assume that specialized domains are characterized by specific events and use the logical format of an event (consisting primarily of actors, processes, instruments, patients and results) as the format for categorizing the elements of knowledge found through analysis of a corpus of specialized texts.
- ⁸ For an example of applying this method to assessing the knowledge of an individual in a specific situation, see Engberg (2009).

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