http://orcid.org/0000-0002-4324-6700

Bartosz Brożek¹ Jagiellonian University

Legal Interpretation: Towards a New Paradigm?²

Abstract: This paper considers the foundations of legal interpretation against the background of the theory of embodied cognition and mental simulation. It is argued that interpretation has a double, concrete-abstract nature. The understanding of concrete language is made possible by the mechanism of mental simulation. In turn, the interpretation of abstract language (and hence of most of legal language) requires to apply the procedures of exemplification, paraphrase and embedding. The relationship between these two modes of language comprehension is analyzed and the thesis is defended that they represent two extremes of a continuous spectrum rather than isolated mechanisms. Finally, the significance of such a conception of interpretation for legal methodology is considered. It is argued that the conception provides a unifying, foundational framework for any theory of legal interpretation, as well as generates fresh insights into the nature of understanding legal statutes.

Keywords: interpretation, legal interpretation, embodied cognition, mental simulation, abstraction

In this essay I shall venture to consider legal interpretation from the perspective of the paradigm of embodied cognition. For many decades, numerous and multifaceted theories of interpretation in law have been developed. They constitute a blend of various philosophical stances (analytical philosophy, phenomenology, hermeneutics) (Stelmach, Brożek, 2006) and practical requirements stemming from the legal practice. So far, legal methodology has paid little attention to the developments in the cognitive sciences (see Brożek, 2020, pp. 4–6). Meanwhile, in the previous 30 years experimental psychology and neuroscience have done much to re-conceptualize our understanding of the human cognitive capacities.

Department for the Philosophy of Law and Legal Ethics and Copernicus Center for Interdisciplinary Studies, Jagiellonian University, Kraków, Poland.

This paper has been supported in the framework of the program DIALOG of the Minister of Science and Higher Education of the Republic of Poland for the years 2016–2019.

It seems only reasonable to use these insights for reconsidering the nature and limits of legal interpretation.

I will begin this essay with a general description of the idea of embodied meaning, highlighting the pivotal role of the mechanism of mental simulation in language comprehension. Next, I will try to face the biggest challenge of the embodied cognition paradigm, i.e. the problem of processing abstract language. In my solution to the problem, I will stress the fundamental role of three procedures: exemplification, paraphrase and embedding. Finally, I will try to show how a theory of language comprehension developed in this essay may influence our understanding of the interpretation of legal statutes.

1. Embodied meaning³

According to experimental research (and, let us add, our everyday experience), people have the ability to imagine objects and events, 'represent them' in their heads. The existence of this capacity may easily be explained in the evolutionary terms: to be able to 'test' in imagination some potential solutions to the encountered problems makes it possible to avoid errors at a relatively little cost. If I mentally simulate various methods of delivering a lecture in front of a demanding audience, I significantly increase the likelihood of giving a well-paced, interesting and engaging talk. When one is to attend a difficult meeting with one's employer, it is reasonable to imagine its course, in order to prepare oneself for what might happen (cf. Brożek, 2016a, p. 111 ff.).

Even if we can offer a persuasive explanation of the emergence of the ability of mental simulation, the question remains what is the mechanism behind imagining objects and events. In this context, much insight comes from the experiments based on the so-called Perky effect, i.e. the fact that using imagination interferes with visual perception. Why such an effect occurs? A natural explanation is that mental simulation takes advantage of (at least partially) the same neural circuitry which is active when the actual visual perception takes place. This conclusion is reaffirmed by a number of recent experiments with the use of brain imagining techniques (cf. Bergen, 2012, pp. 73 ff.). When participants were placed in an fmri tube and shown a picture of an object, e.g. a hammer, there was registered an increased activity in the same groups of neurons which 'fire' when the participants were only to imagine the object. Importantly, this effect is not limited to visual perception and imagery. If one watched a movie, wherein someone drives a nail with a hammer into a wall, the same neural circuits would be active (encompassing not only the visual cortex, but also motor

The first two sections of this paper have been adapted and translated from Brożek, Heller, Stelmach, 2019, pp. 81–100.

and sensory cortices), which activate when one executes the action oneself or only imagines doing so. Of course, the activations of the relevant neural structures during a mental simulation are weaker than in the case of an actual observation or action. However, the fact remains that various regions of the human brain perform a double or even a triple function: they are active when an action is executed, observed or merely imagined (cf. Bergen, 2012, pp. 195 ff.).

We arrive here at the most intriguing and theoretically fruitful finding of psychologists and neuroscientists. It turns out that when one hears, reads or says the word 'hammer', (partially) the same groups of neurons fire which are activated when one sees a hammer or imagines it. This is a profoundly important insight. It suggests that when processing ('understanding') language, we use (at least partially) the same brain circuits which constitute the mechanism behind perception, action and imagination. How do we know that this is the case? The needed evidence is provided by various behavioral experiments.

Let us consider the following example. One experiment involved the use of a screen and three buttons: a grey one, a black one and a white one. Pressing and holding the grey button showed a sentence on the screen. If the sentence made sense, the subject was supposed to release the grey button and press the black one, which was located closer to the subject; if the sentence did not make any sense, the subject was to press the white button, which was located at a greater distance from the subject. It turned out that if a meaningful sentence - whether declarative or imperative - described an action involving movement towards the body, the subjects reacted faster than in the case of sentences describing motion in the opposite direction. This means that understanding the meaning of the sentences must have relied on performing an adequate simulation and if the simulation was at odds with the motion that the subject was about to make (e.g. the sentence was about a movement away from the body and it made sense, so the button closer to the body had to be pressed), the reaction was slower (Bergen, 2012, pp. 81 ff.). We encounter here what may be called 'the generalized Perky effect': it pertains not only to visual perception and imagination, but embraces also other modalities (motor, olfactory, tactile, etc.).

Numerous studies based on this experimental paradigm support the same conclusions. Moreover, also the studies using neuroimaging as well as transcranial magnetic stimulation together with observations of the behavior of people with damage to particular regions of their brains, all lead to the claim that people perform perceptual and motor simulation while they're processing language. They do so using the same parts of the brain they use to perceive the world and execute actions. Moreover, when specific aspects of embodied simulation are hindered, people have more trouble processing language about those specific aspects of perception or action. And finally, when brain regions dedicated to action or perception are damaged or temporarily taken offline, people have more trouble processing language about the specific perceptual or motor events it en-

codes. Taken together, all this evidence makes a pretty compelling case that embodied simulation plays a functional role in language understanding. (Bergen, 2012, p. 238)

Let us consider now what are the consequences of the above enumerated facts. First and foremost, it must be noted that there exists a continuity between pre-linguistic and linguistic understanding. We are able to understand the situation we face, recognize possible courses of action or formulate predictions regarding the future events, thanks to our embodied knowledge of the world. When at an airport we spot a strangely behaving person, we become nervous; however, when we next see that person taking an anxiety pill, our emotions would likely transform into sympathy for the stressed co-passenger. We understand events in the world because we interact with the environment, thus forming a 'conceptual scheme', enabling us to navigate in the complex reality (cf. Churchland, 2012, passim). In the same way, we grasp situations which are only imagined. Also here, the embodied knowledge of the world is activated, providing means to predict what may happen and what are the possible courses of action. Finally, the same mechanism constitutes the 'background' to language processing. We understand linguistic utterances because - usually unconsciously - we mentally simulate their content.

Let us also observe that the described mechanism brings embodied knowledge into language comprehension. Our brains, trained through innumerable interactions with the environment, are prepared for (or expect) the co-occurrence of certain things or events. The fact that a certain object is red *eo ipso* means that it is not blue. To understand this, one needs no inference: the understanding in question is a derivative of the architecture of our brains and minds (cf. Churchland, 2012, p. 35 ff.). When someone tells us a story of a person, who wanders through the Negev desert, we understand – again with no recourse to a chain of reasoning – that the person cannot reach Champs-Élysées in Paris within a couple of minutes. It is also the source of our anxiety and confusion accompanying strange dreams or reading an avant-garde literary work.

Another important aspect of the language comprehension mechanism analyzed here is the fact that mental simulations are multimodal. They are not limited to visual representations, but include also other modalities: auditory, tactile, motor, emotional, etc. It has far reaching consequences. In the traditional model which may be traced back to Plato and Aristotle, language is a tool for depicting the world. Because of that, nouns have a preeminent place in the structure of language, since they refer to objects. Objects constitute the fundamental substrate of the world, and whatever happens to them – that they move, are used to do something, or undergo a change – is, in a sense, derivative. This approach is clearly visible in the way logical systems are constructed. E.g., in the first order logic the universe of discourse is constituted by an arbitrary set of individual objects, of which various things may be predicated (e.g., that they have certain

properties or are constituents in certain relations). However, if we process language thanks to multimodal mental simulations, this traditional picture is simply false. We understand that the word 'hammer' refers to an object in the same way as we understand that the word 'drive' refers to an action. I do not want to suggest that there are no differences between perception, simulation and – hence – understanding of objects and actions. In particular, objects are relatively stable (they are easy to identify and re-identify), when actions and properties do not have this feature. However, given the above described mechanism of language comprehension, it is not a critical difference; in other words, philosophical theories pertaining to the structure of language simply overplay it.

One more remark should be added here. The primary function of language is not to describe the world. Language serves numerous purposes: informing of relevant facts or mental states, influencing the behavior of other people, but also their attitudes and emotions, or doing something together (from complex undertakings to children's play). For example, it is easy to explain how the use of language generating mental simulations prepares an organism for action. If I say to someone "Close the window!", and they – unconsciously – 'play out' a relevant simulation, the neural structures will be activated which are responsible for the execution of the action of closing the window. In this way, the organism has an easier passage from the verbal instruction to the actual behavior. Meanwhile, if I say to someone – who is about to close the window – "Open the door!", it would interfere (as illustrated by many experiments) (cf. Jeannerod, 2001, pp. S103–S109) with the execution of the currently undertaken action (cf. also Brożek, 2016b).

Let us repeat: there exists a continuity between extra-linguistic and linguistic understanding. The comprehension of linguistic utterances takes advantage of the embodied knowledge of the world, and the functions of language are not limited to picturing reality. However, these conclusions apply only to the (relatively) concrete language. The situation is different when we try to understand (interpret) the abstract language, including legal language.

2. Between the concrete and the abstract

While it is relatively easy to explain what does the mental simulation of concrete linguistic expressions consists in – 'drive a nail', 'Peter closed the door', 'tree' or 'yellow submarine' – it is much more difficult to grasp what does imagining the content of abstract utterances is⁴, such as 'legal person', 'Hilbert's space', 'love' or

The concepts of 'abstraction' and 'abstractness' are understood in many ways. In the classical Aristotelian approach, which constitutes a point of reference for this essay, abstraction was an

even 'to commit a crime'. Even if the expressions such as 'Riemann's zeta function' or 'strict liability' may cause some conscious or unconscious mental simulations, it is doubtful that they are similar in different English speaking persons.

Let us observe that the above mentioned abstract expressions are quite different. 'Legal person', 'human being', 'crime' or 'entity' are names referring to classes of objects of events. 'Legal person' is every organization which fulfils the conditions set forth in the relevant statutes; and a 'human being', at least according to Aristotle, is every rational animal. 'Love', similarly to 'justice', 'beauty' or 'economic efficiency', are concepts referring to no concrete object in spacetime; one can say that they refer to some states of affairs, however there seems to be something artificial in this way of speaking. 'Hilbert's space', 'Mandelbrot's set', 'imaginary number' and other mathematical concepts are still a different case. They refer neither to objects or physical events, nor to states of affairs. A platonic philosopher would say that they name mathematical structures which exist independently of the physical realm; a constructivist would argue that they are our common mental constructions; and the nominalist would consider them mere linguistic entities, which refer to nothing in the extra-linguistic reality.

In addition to this heterogeneity, abstraction has one more interesting feature: it is gradual. Indeed, even the most concrete linguistic expression (with the exception of proper names) is connected to some measure of abstraction. Let us consider the name 'the author of *Waverley*'. Even though this description can serve to univocally identify a concrete person – sir Walter Scott – it is abstract in the sense that it ignores infinitely many features of the actual Scott. 'The author of *Waverley*' is, at the same time, more concrete than 'human being', which in turn is more concrete than 'animal', which is more concrete than 'a living organism', which is more concrete than 'entity'. Similarly, the sequence of mathematical concepts: 'equilateral triangle' – 'triangle' – 'plane figure' – 'geometrical figure', is ordered from the least to the most abstract.

These two properties of abstract expressions – heterogeneity and gradation – constitute an intriguing puzzle, which suggests that it is impossible to explain the generation and understanding of abstract concepts with recourse to one simple mechanism.⁵ At the same time, the two properties may also guide us in our search for an acceptable solution to the puzzle. From this perspective, it seems that one can speak of (at least) three different, but interconnected ways of creat-

operation of the intellect consisting in detaching and retaining some property from a thing (cf. Anglelelli, 2004, pp. 11–35). From this perspective, general concepts such as 'a plant' or 'an entity' are abstract for the same reason as concepts referring to mathematical objects. According to an alternative approach, generalization is distinguished from abstraction: abstract concepts are those which refer to non-spatiotemporal objects (cf. Rosen, 2018).

It may be argued that the mechanism of conceptual metaphor proposed by George Lakoff and his collaborators, although it undoubtedly plays an important role in the process of abstraction – cannot constitute the only mechanism serving this function. Cf. Lakoff, Johnson, 1999.

ing abstract concepts. The first is generalization: when we have a concept referring to a class of objects – e.g., apples – we can, by 'disregarding' some features of apples, create a more general concept (e.g., of fruits). Let us further observe that we do not necessarily begin with the most concrete concepts, but with those which (in the given natural and cultural environment) are the most useful. For example, the name of an apple cultivar such as 'Jonathan' is more concrete than 'apple'; however, mothers first teach their children to distinguish between apples and other kinds of fruit, and only after that (if at all) explain what are cultivars of apples (cf. Rosch, 1978, pp. 6–7).

The second method of generating abstract concepts may be called 'structural mapping'; conceptual metaphors are a good example here. A metaphor is a mapping of the inferential structure from a more concrete domain (e.g., pertaining to war) to a more abstract domain (e.g., in order to speak of argumentation in terms of attacking arguments, argumentative strategies or winning an argument) (cf. Lakoff, Johnson, 1999, *passim*). Various studies show that the processing of metaphorical language is based, to a certain degree at least, on mental simulations (cf. Bergen, 2012, pp. 195 ff.).

It may further be speculated that there exist concept generating mechanisms which have nothing to do with mental simulations: everything happens at the level of linguistic symbols. For example, it is quite likely that non-Euclidean geometries were created in this way. Lobaczevsky and Bolyai simply considered what would happen if the fifth postulate of Euclid was to be negated. I do not want to suggest that their thinking on the matter involved no mental simulations whatsoever; however, these simulations must have been highly idiosyncratic and, further, do not constitute a condition of understanding non-Euclidean geometries. Let us further note that this way of creating abstract objects requires a relevant theoretical framework: non-Euclidean geometries were developed against the background of the Euclidean geometry. There was no *creatio ex nihilo* here, but a re-modelling of the existing conceptual structure.

The above considerations make it possible to better understand the gradual nature of abstraction. From this perspective, linguistic expressions form a hierarchy. Those which are more concrete are strictly connected to mental simulations. When one says 'hammer', 'apple', 'grasp', or 'drives a nail', one understand these utterances through (usually unconscious) mental simulation of their content. However, when we move higher on the scale of abstraction, the role of mental simulation decreases and formal relationships between concepts and entire theories come to the fore. A metaphor, which already leads us into the domain of abstraction, remains connected to the embodied schemes developed in the interactions with the environment. The creation of purely theoretical constructions, however, such as non-Euclidean geometry (not to mention even more abstract mathemat-

⁶ E. Rosch calls them 'the basic level objects'; see Rosch, 1978, p. 5 ff.

ical objects), is independent of any particular mental simulation. We understand them not because we can imagine their content, but because we are able to place them within a broader theoretical framework.⁷

Thus, understanding has a double, concrete-abstract nature. On the one hand, we understand linguistic utterances, because we have the ability to mentally simulate their content. From this viewpoint, understanding is embodied, since it is deeply rooted in the motor and perceptual schemes developed in our brains during our interactions with the environment. On the other hand, linguistic expressions become meaningful within the context of broader theoretical structures. It is a space where new abstract constructions may be developed with no recourse to embodied schemes. It must also be stressed that these two ways of language understanding are not isolated mechanism which have nothing to do with one another; rather, they are two extremes of a certain spectrum. Usually, understanding is neither 'purely' embodied nor 'purely' theoretical (see also Salmon, 1990).

In order to sharpen the conception outlined above, it is reasonable to have a look at three tools which may be used in the process of interpreting abstract linguistic expressions. These are: exemplification, paraphrase and embedding. Exemplification consists in providing a concrete or generic example, to which the given expressions refers (positive exemplification) or does not refer (negative exemplification). A philosopher developing a theory with the use of the concept of 'being' may explain it by indicating that beings include, inter alia, this particular chair, every tree, an equilateral triangle or every natural number. When a lawyer says that "a crime may only be committed with direct intent", we may understand them by considering cases in which there is 'direct intent' on the part of the perpetrator, as well as situations in which it is not the case.

How do exemplifications enable the understanding of abstract utterances? They activate our embodied knowledge of the world and (although only locally) connect it to the interpreted expression. A student of law, who during criminal law classes is exposed to a number of cases in which the behavior of the perpetrator was classified as either involving direct intent or not, develops an intuitive ability to distinguish these two types of actions. The same holds for speculative philosophical theories: we understand them better thanks to concrete examples and hence we can be more comfortable in applying them to other phenomena. If I were to simply repeat after Kant that I should "act only according to that maxim through which I can at the same time will that it should become a universal law" (Kant, 2002, p. 37). I will not become a good Kantian moralist. However, if

⁷ In the psychological literature a similar – although much more detailed – conception of language was proposed by A. Apivio (the so-called dual coding theory). I do not introduce it here in order to avoid the technical jargon it employs. See Paivio, 2013.

In this context see also Brożek, 2014, chapters III and V.

I 'see' how the categorical imperative is applied in various concrete examples, it will be much easier to asses a novel situation in its light. My understanding of the Kantian ethics will increase considerably.

The second procedure used in the interpretation of abstract linguistic expressions is paraphrase. It consists in 'translating' the given expression into a different one, which - in the given context - is considered equivalent. This tool has been masterfully applied by Kant who introduced four different - but equivalent – formulations of the categorical imperative. Here they are: (I) "Act only in accordance with that maxim through which you can at the same time will that it become a universal law"; (II) "So act as if the maxim of your action were to become through your will a universal law of nature"; (III) "Act so that you use humanity, as much in your own person as in the person of every other, always at the same time as end and never merely as means"; (IV) "Act in accordance with the maxims of a member giving universal laws for a merely possible kingdom of ends".9 What is the purpose of these paraphrases? Let us imagine that we are considering whether the rule 'the most serious crimes should be punished with death' is reasonable. It may be argued that the rule is consistent with the formulations (I) and (II) of the categorical imperative; it is much more difficult to hold the same view in light of the formulation (III), since it is doubtful that the death penalty shows enough respect to the humanity inherent in the perpetrators of the most serious crimes. Similarly, the rule stating that homeless people should always be financially supported, although it seems fully consistent with the formulation (III), raises some doubts in the context of the formulations (I) and (II).

This shows that paraphrase performs an auxiliary function vis-à-vis exemplification. When we try to understand a certain abstract expression (e.g., 'being, 'Act only in accordance with that maxim through which you can at the same time will that it become a universal law, 'love'), we ultimately want to determine whether it applies to some concrete objects and events. In this endeavor, we encounter borderline cases ('Is an equilateral triangle a being?', 'Is death penalty consistent with the categorical imperative?', 'Is love possible only among humans?'). Paraphrases make such exemplifications easier. When we say that 'being' is 'any potential object of thought', we shall conclude that the equilateral triangle is a being. When we follow Kant in assuming that the categorical imperative also means that we should treat humanity in others always as an end, and never merely as means, we shall be forced to admit that the death penalty is unacceptable. When we accept Spinoza's peculiar definition that 'love is nothing else but pleasure accompanied by the idea of an external cause, we shall conclude that one can love not only people but everything which may be the source of 'the idea of an external cause', e.g. a chocolate bar, a dog, or a particularly beautiful mathematical structure.

All these formulation can be found in Kant, 2002, pp. 37, 38, 46, 47.

The last procedure, which helps to understand abstract language, is embedding. It boils down to checking how the given expression – or its paraphrase – 'fits within' our theoretical knowledge. It is a maneuver which is usually considered as the 'essence' of interpretation, at least in these domains of reflection where much attention is given to the methodology of understanding. It seems to be lawyers' favorite game, especially when they apply the rules of the so-called systemic interpretation of law. If I were to paraphrase the first part of the Article 8 of the Polish Penal Code ("A crime may be committed only with intent") and assumed that it is equivalent to 'A crime may be committed only when the perpetrator is willing to commit it, the paraphrase would be inconsistent with Article 9 §1 of the code ("A prohibited act is committed with intent when the perpetrator has the will to commit it, that is when he is willing to commit or foreseeing the possibility of perpetrating it, he accepts it.") This inconsistency must lead to the rejection of the contemplated paraphrase. However, consistency is not the only criterion for the acceptance or rejection of paraphrases. Usually, we are looking for such an understanding of the interpreted expressions as to reach the highest level of coherence with what we know. For example, a rule which states that vehicles are not allowed into a park may be paraphrased in two ways: as referring only to means of transport equipped with an engine (cars, motorcycles), or as saying that also bicycles and scooters cannot enter the park. It may be argued that the first paraphrase is more coherent with the fundamental legal principles (in dubio pro libertate) and with the purpose of the analyzed statute (protection of environment), although the second one generates no inconsistency.

Thus, the role of embedding is the selection of paraphrases: from among the possible ways of reformulating the interpreted expression we choose those which are a better fit for our broader theoretical context. We do so because a coherent worldview is epistemically preferable: it simplifies the understanding of complex phenomena, and hence makes it easier to solve problems we face in our struggles with physical and social reality.

3. Legal interpretation

As I tried to show in the previous sections, interpretation – analytically speaking – is realized in two different ways. Concrete language is understood through mental simulations, while abstract language is processed with the utilization of the procedures of exemplification, paraphrase and embedding. It is necessary to stress two facts. First, concrete language processing is more fundamental than the abstract; in a way, abstract language is but a scaffolding facilitating relevant mental simulations. Second, I have indicated that the distinction between two kinds of interpretation is analytic. In the actual interpretive practices both di-

mensions are closely intertwined, since both more and less concrete (abstract) expressions often feature in the same linguistic utterances.

Let us now consider the question, what is the significance of the above sketched conception of language understanding for the theory of legal interpretation. At the outset, it should be observed that the theoretical reflection over legal interpretation constitutes no coherent whole. Rather, we have to do with a plethora of different, and often competing views (cf. Stelmach, Brożek, 2006, passim). At the most general level, however, one may observe that the interpretative practice in the law revolves around three different dimensions. In the continental tradition they are, respectively, called the linguistic, the systemic and the functional interpretation. The rules of linguistic interpretation pertain to the language utilized in the legal text and urge one to stick - when understanding a legal provision – to the ordinary meanings of the expressions featuring therein; or to give precedence to the meaning of the interpreted terms as specified in legal definitions; or to assume that in the legal text there are no synonyms or homonyms; or not to treat any part of the legal text as redundant. The rules of systemic interpretation are based on the fact that the law constitutes a system of norms, and include, inter alia, the precept to avoid loopholes in the legal system; or reject interpretations leading to inconsistencies within the system; or to take into account the hierarchical position of the interpreted legal provision. Finally, the rules of the functional interpretation refer to the purpose of legal regulations and prescribe to take into account the ratio legis of the legal act, social consequences of adopting one rather than another understanding, or to consider the interaction between the law and the commonly accepted moral standards (cf. Wróblewski, 2002).

In the common law tradition, one can find the canons of statutory interpretation. They are divided into three kinds: the textual, the substantive, and the deference. The textual canons are rules of thumb which help to understand the meaning of the words employed in the given legal provision. Among them, one should mention 'plain meaning' (ordinary meaning of words should be ascribed to the expressions featuring in the legal text), 'rule against surplusage' (no part of the legal text should be treated as redundant), 'in parii materia' (when a statute is ambiguous, its meaning may be determined in light of other statutes on the same subject matter), 'Noscitur a sociis' (when a word is ambiguous, its meaning may be determined by reference to the rest of the statute), and others. The substantive canons, in turn, such as Charming Betsy or rule of lenity, urge one to interpret statutes in such a way that they are consistent with international law or some fundamental values (e.g., the presumption of innocence). Finally, the deference canons instruct the court to defer to the interpretation of another institution, such as an administrative agency or Congress (e.g., the canons of constitutional avoidance or of avoiding absurdity) (Scott, 2009).

Although there are clear differences between the continental and the common law approaches to statutory interpretation, there exist, nevertheless, close ties and common foundations between them. First, legal text is treated *as a text* – composed of linguistic expressions which have their meaning in the ordinary language (even if the law can, and sometimes indeed does, deviate from how the given term is ordinarily understood). Second, legal acts (and provisions they are constructed of) are considered a part of a bigger whole, consisting not only of other legal texts, but also past interpretive decisions. Third and finally, the law has a social purpose and hence is value-laden. This fact is also used as a point of reference in pinpointing the meaning of legal provisions.

It is easy to notice that this general approach to legal interpretation, deeply rooted in both continental and common law traditions, fits well within the theoretical framework I sketched in the previous sections. Most importantly, the meaning of legal provisions is not – and cannot be – determined solely on the basis of the meaning of words they are composed of (i.e., the rules of linguistic interpretation are not sufficient). Legal language is quite abstract and hence in order to understand legal provisions one needs to embed them into a broader whole (as prescribed by the rules of systemic interpretation) and take advantage of extra-linguistic, contextual criteria for selecting paraphrases (as suggested by the rules of functional interpretation).

Thus, the general conception of language understanding I have developed above provides a unified framework for a more specialized theory of legal interpretation. Please note that some of the more traditional views of language – both mentalist and causal – are not properly suited for this job (cf. Speaks, 2019). In particular, they are blind to the crucial distinction of concrete and abstract language. On these approaches, both the systemic and the functional dimensions of legal interpretation are puzzling: they seem to constitute somewhat artificial additions to the foundational theory.

In addition to providing a unified theoretical framework for the theory of legal interpretation, the conception outlined in this paper leads to a number of fresh insights regarding the understanding of legal language. On the one hand, it strongly underscores the importance of exemplification in interpretation. Of course, lawyers are well aware that citing examples – i.e. past or merely imagined legal cases – is a useful tool in legal reasoning. In particular, legal thinking often makes use of *ab exemplo* and *per analogiam* arguments. However, these are only two among numerous kinds of arguments a lawyer may consider when justifying a particular interpretive decision. From the general viewpoint adopted in this paper, it is difficult to escape the conclusion that the textbooks on legal methodology do not recognize in full the fundamental role of examples. Further, one needs to remember that the ultimate task of a lawyer is to determine what are the legal consequences of a concrete case (set of circumstances). In this context, elaborate theoretical constructions and argumentation schemes are only auxilia-

ry constructions: they are a scaffolding behind which there is the real edifice of law, consisting of concrete cases and consequences attached to them. This marks an important shift in perspective, potentially leading to profound insights in legal methodology and education.

On the other hand, the theory outlined here helps to identify another issue largely neglected in the methodological reflection over the law, i.e. the procedure of paraphrase. When one considers the practice of legal interpretation, e.g. by looking closely at judicial opinions or delving into the vast commentaries of the doctrinal legal scholarship, paraphrases can be found in abundance. Judges explain their decisions by restating legal provisions in different terms; legal scholars consider and contrast different ways of understanding the given fragment of the legal text. At the same time, the concept of paraphrase is virtually absent in legal methodology. Of course, the rules of linguistic interpretation constitute, in essence, an instruction of how to paraphrase legal provisions. The problem is that they put emphasis on understanding individual words rather than the whole sentences, thus obscuring the interpretive task every lawyer has to face. And so, again, one can speak of a shift in perspective: recognizing the importance of the procedure of paraphrase, one can look at legal interpretation from a fresh and potentially fruitful perspective.

In this paper I have attempted to sketch a new theoretical framework for legal interpretation. The framework is based on the conception of embodied meaning and the mechanism of mental simulation. Mental simulation constitutes a sufficient explanation of the processing of relatively concrete language. It falls short, however, of providing such explanation for the understanding of abstract linguistic expressions. Given that legal language is quite abstract, the framework developed here underscores a dual nature of interpretation. On the one hand, there is mental simulation, and on the other - the procedures of exemplification, paraphrase and embedding.

This general view of language understanding provides a solid foundation for any theory of legal interpretation. In particular, it constitutes a unifying framework in which the three dimensions of the interpretation in law – linguistic, systemic and functional – easily fit together. Moreover, it also leads to fresh and somewhat provocative insights regarding the role of examples and paraphrases in legal thinking. Whether this theoretical shift can be seen as a step towards a new paradigm, should become clear with further studies of legal interpretation from the perspective of embodied cognition and mental simulation.

References

Anglelelli, I. (2004). "Adventures of Abstraction". *Poznań Studies in the Philosophy of the Sciences and the Humanities*, 82, pp. 11–35.

- Bergen, B. (2012). Louder Than Words: The Science of How the Mind Makes Meaning. New York: Basic Books.
- Brożek, B. (2014). Granice interpretacji. Kraków: Copernicus Center Press.
- Brożek, B. (2016a). Myślenie. Podręcznik użytkownika. Kraków: Copernicus Center Press.
- Brożek, B. (2016b), "The Normative Mind: In Defence of a Heresy". In: J. Stelmach et al. (eds.). *The Normative Mind*. Kraków: Copernicus Center Press.
- Brożek, B., Heller, M., Stelmach, J. (2019). Spór o rozumienie. Kraków: Copernicus Center Press.
- Brożek, B. (2020). *The Legal Mind: A New Introduction to Legal Epistemology*. Cambridge: Cambridge University Press.
- Churchland, P.M. (2012). *Plato's Camera: How the Physical Brain Captures a Landscape of Abstract Universals*. Cambridge, MA: The MIT Press.
- Jeannerod, M. (2001). "Neural Simulation of Action: A Unifying Mechanism for Motor Cognition". *NeuroImage*, 14, pp. S103–S109.
- Kant, I. (2002). *Groundwork of the Metaphysics of Morals*. New Haven–London: Yale University Press.
- Lakoff, G., Johnson, M. (1999). Philosophy in the Flesh. New York: Basic Books.
- Paivio, A. (2013). *Mind and Its Evolution: A Dual Coding Theoretical Approach*. New York: Psychology Press.
- Rosch, E. (1978). "Principles of Categorization". In: E. Rosch, B.B. Lloyd (eds.). *Cognition and Categorization*. New York: John Wiles & Sons.
- Rosen, G. (2018). "Abstract Objects". In: E.N. Zalta (ed.). *The Stanford Encyclopedia of Philosophy* (Winter 2018 Edition). URL = https://plato.stanford.edu/archives/win2018/entries/abstract-objects/>.
- Salmon, W.C. (1990). "Scientific Explanation: Causation and Unification". *Critica*, XXII(66).
- Scott, J. (2009). "Codified Canons and the Common Law of Interpretation". *The Georgetown Law Journal*, 98(2).
- Speaks, J. (2019). "Theories of Meaning". In: E.N. Zalta (ed.). *The Stanford Encyclopedia of Philosophy* (Winter 2019 Edition). URL = https://plato.stanford.edu/archives/win2019/entries/meaning/>.
- Stelmach, J., Brożek, B. (2006). Methods of Legal Reasoning. Dordrecht: Springer.
- Wróblewski, J. (1992). *The Judicial Application of Law*. Dordrecht: Kluwer Academic Publishers.