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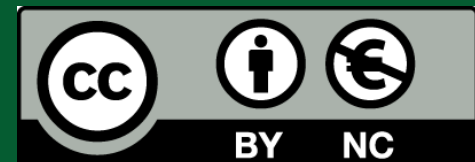


recognise
Legal Reasoning
& Cognitive Science

Materials from Recognise Video-Lectures

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Cognitive metaphors and legal concepts

PART 1:

Introduction to metaphor theory: between concrete and abstract concepts

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Abstract - concrete dichotomy and legal concepts

Abstract concepts

- Abstractness as a feature of a concept means that the concept does not represent any object existing in a physical sense (Borghini, Binkofski 2014; Desai et al. 2018).
- Abstract objects are objects that are not tangible, visible etc.—these objects exist merely as a social kinds or pure fiction.
- Pivotal legal concepts are abstract, e.g. “justice”, “property”, “crime” or even “law.” They have no identifiable referents. Justice is an idea or principle, property is a right, crime is a specific kind of human acts and law is an abstract artefact (see Roversi 2015; Burazin 2016).

Concrete concepts

- Concrete concepts represent objects that can be experienced with senses.
- Concrete objects are what we encounter in our everyday life.
- Many legal concepts are concrete.
- Concrete concepts can be more or less abstract – in sense of abstraction, not abstractness.

Embodied cognition

Embodied cognition: the main idea

„Embodied cognition is the latest sexy topic in cognitive science. There is, however, a great deal of confusion about exactly what it means and how to study it”.

<https://www.psychologytoday.com/us/blog/beyond-words/201202/embodied-cognition-what-it-is-why-itsimportant>

Mental simulation: fMRI studies

According to the theory of embodied multimodal simulation (Bergen 2016, Barsalou 2008), when we think about (for instance) apples, the same parts of the brain are active as when we see or eat apples.

Analogously: thinking about a telephone is linked to the reactivation of the areas of the brain responsible for speech production (Kiefer 2008); thinking about cinnamon is linked to the reactivation of the olfactory cortex (Gonzalez 2006). Numerous neuroscientific experiments are regarded as a corroboration of the theory of embodied simulation (Barsalou 2008, Dove 2015).

The idea of mapping

- All sensory information, features of the human body and interactions with the environment are fundamental to our thinking. Our cognition is based on simulation, which is multimodal, namely based on the information perceived by different senses (e.g. sight, touch) and gained by interactions with the environment (Bergen 2012; Borghi et al. 2017).
- Concepts—as representations—are modal (based on sensory experience) and analogical (Barsalou 1999), that is to certain extent similar to objects they represent.
- The theory of mental simulation works well for the processing of concrete concepts (concepts that represent perceivable objects). It is unclear how simulation may be the mechanism responsible for the processing of abstract concepts.
- As crucial legal concepts are abstract, there is no sensory information that may enable the mind to simulate the objects represented by these concepts.
- Legal concepts—as a subgroup of abstract concepts—are then a challenge for embodied cognition (Borghi et al. 2017).

The idea of mapping

- Concrete and abstract domain
- A theory that may allow us to explain the legal concepts in light of embodied cognition is conceptual metaphor theory, which is currently evaluated as the most plausible theory (or one of the most plausible theories) of abstract embodied concepts (Lakoff, Johnson 1980, 1999; Evans, Green 2006; Jamrozik et al. 2016, Borghi, Binkofski 2014), in spite of the many controversies it raises.
- “Metaphor” is interpreted as a “bridge” between the multimodal simulations (and analogical representations) of concrete, perceivable objects, and abstract representations.

Cognitive (conceptual) metaphor

- Lakoff and Johnson (1980):
 - „The heart of metaphor is inference. Conceptual metaphor allows inferences in sensory-motor domains (e.g., domains of space and objects) to be used to draw inferences about other domains (e.g., domains of subjective judgment, with concepts like intimacy, emotions, justice, and so on). Because we reason in terms of metaphor, the metaphors we use determine a great deal about how we live our lives.”

Cognitive (conceptual) metaphor

- The metaphors are present in the language, but mapping is a cognitive mechanism; it allows us to think about abstract objects we are not able to experience „bodily” (= to process the abstract concepts)
- The analysis of linguistic expressions may uncover metaphorical mappings that - to some extent – determine our ways of thinking

Examples of metaphorical abstract concepts

- Law
- „hierarchical” concepts
- intellectual property
- Crime
- Justice (?)