

In the wake of analog-propositional debate. On mental representation of conceptual meaning

Научный руководитель – Иванов Иван Васильевич

Kam Alexander

Выпускник (специалист)

Московский государственный университет имени М.В.Ломоносова, Москва, Россия

E-mail: occammsc@gmail.com

The successful development of science requires a proper balance between the method of building up from observations and the method of deducing by pure reasoning from speculative assumptions. . .” I attempt to follow P. Dirac’s dictum in approaching two issues, which undergo considerable revision over the course of the last decades. The first is mental imagery viz., its position with respect to thinking and knowledge processing that is described by its representational mechanisms. Then I will proceed with some corresponding discoveries made in cognitive science. In their light, the conceptual knowledge seems to be in some important sense bound up inextricably with perceptual experience. Whereas both of the subjects have been developed primarily by means of empirical analysis, they appear to be successive stages of the outspread of new perspective on knowledge representation, which dramatically undermines the broad consensus on the symbolic nature of a concept that kept up in the province of philosophy.

According to the classical Representational Theory of Mind, the inherent property of mental states and mental processes, their intentionality, resides in the semantic content of inner representation. Several theories on the essence of the mental representation were proposed. These are of particular prominence: the first theory of British empiricists regards the mental representations as ultimate structures of thinking which are built around sensory experience; the second theory relates these mental objects to innate concepts compound a sort of ‘language of thought’ (also referred to as mentalese). This notion (stretched back to the times of Schoolmen) is rather to accent the discursive nature of the thought than to refer to natural language. The Grammatik of the language operates its basic structures featured by semantic content, in accordance with the clear system of logical syntax [Fodor 1987 p.113].

Thus, it seems crucial for the general account of mental processes to define the character of concepts. The two proposed extremes are nativism and empiricism. Nativism, arguably influenced by Universal grammar theory, propounds that concepts of natural language derives from innate concepts, and hence, there is no genuine learning and acquisition of the former. Conversely, empiricism about concepts renewed the old view of the constitutional effect of ‘mental images’ in cognition. These ‘images’ entails quasi-perceptual experience indeed forms a particular kind of mental representation [Stanford Encyclopedia: Concept, Mental Imagery]. Given that, such a representation runs on in any sensory mode and despite its apparent non-arbitrary nature bears the same sort of intentionality, experimental observations were interpreted as evidences for affinity between perception and imagery processes. This account, yet controversial, was enhanced with following inquiry: whether accompanying brain activity supports depictive or descriptive (symbolic) representation [Block 1983 p. 507]. The large mass of empirical data presented by both of the parties had brought forth the new controversies (for instance, whether mental imagery reflective of actual spatial properties of objects [Podgorny & Shepard 1978]). Therefore, it was not succeeded to provide the theoretical resolution of the debate, which, in the last analysis, bears on the possibility of the thinking ‘encoded’ anywise in visual representations. Whereat due mention should here be made of subject matter of the dispute. Both sides did not throw into question the very foundation of knowledge

representation either in natural language or in hypothetical mentales. [Stanford Encyclopedia: Mental Imagery]

However, along with remission of the debate, discoveries on the broad ground of cognitive science (which is alone solidly grounded in the Computational Theory of Mind) might acclaim the reconfiguration boundaries between cognition and perception and their ties with natural language. Initially striking evidences of the profound role of the quasi-perceptual experience in memory processing, and the impact of imagery representation in retrieval of necessary information were received [Paivio 1986], then this correlation was attested in terms of brain processes [Tye 1991 p.141]. Thereunto, studies in cognitive psychology were prolific in verification of the vagueness of the concepts employed by the subjects of categorization task experiment. The suggested prototype account of categorization expounds 'the categories are formed through experience with exemplars' following with the aggregation of their constituting properties in the ideal representor [Rosch, Mervis 1975 p.588]. (Recently the fact was confirmed by means of neuropsychological studies. As it was presupposed, these processes engage the same neural substrates as visual identification and visual recognition [Lech et al. 2016 p. 239]). The fact of the vast activity of brain sensory-motor system overall in the course of the concept processing was further reported [Gallese & Lakoff 2005 pp. 115-116]. Another key point in the development of the new vision of mental representation of concepts was made by Lakoff 1987. This research emphasizes the significance of metaphor and image schemata in conceptual processing by means of syncretizing the provisions of cognitive linguistics, philosophy of language, and psychology. These results are often handled according to the embodied cognition theory, within this framework we are told about the derivative character of discursive thought in respect to the pattern recognition processes [Edelman, Tononi 2000 p. 214]. Concurrently with further empirical research, new significant efforts were undertaken to weave received data together at more speculative basis [Damasio 1996; Malach et al 2002]. For instance, the hypothesis of Perceptual Symbol systems appears to be successive in elucidation some crucial underlying perceptual mechanisms in cognition on the whole [Barsalou 1999 p. 577]. Thus, addressing to the abovementioned converging results of Cognitive science among others complemented by commentaries on them in contemporary philosophy of mind and philosophy of language, I am looking forward to elaborate thoroughly the coherent account of the content of concepts (especially the abstract ones - which study has raised the most controversy) and reflect on: are we bound to the old-new theory of cognition based on imagination?

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