

Summary talk Valeriya:

In my presentation I will claim, first, that studying semantic networks gives a new understanding of complex concepts, and second, that this understanding is relevant to the question of free will.

A common approach to concepts is to characterize them in terms of properties they comprise. Such an approach presupposes that there are basic atomic properties. A complex concept will then be a concept that comprises several atomic properties. The approach has an advantage of allowing us to compare complex concepts by comparing atomic properties they have.

If we think there is a sense in saying that concepts form a network in the brain, we need to give a more precise account of what this amounts to. The comparison mentioned can be used for ranging concepts by similarity but it is not sufficient for uniquely describing the conceptual network even if the set of concepts is fixed. This is because many concepts have some properties in common so different arrangements are still possible.

A neuroscientific context provides further restrictions on what the conceptual network should be but this also leads to new difficulties. For example, from the philosophical point of view, we could easily say that several concepts have the same property. In the brain, presuming that it makes sense to speak about a location of some concept, this can amount to saying either that the same information is stored in a multitude of locations (corresponding to where different complex concepts are situated) or that complex concepts have a dispersed character (with each atomic property occupying a unique location). The fact that the latter model is to some extent supported by neurosciences makes it necessary to elaborate a new dynamical vision of concepts, useful for both neurosciences and philosophy.

This new vision of concepts' formation brings it closer to processes where free will is often claimed to manifest itself, namely manipulation of concepts to obtain a thought or thoughts to obtain a reasoning. For all the three, a production of new, not induced directly by the environment items is possible. If complex concepts are not formed according to the proximity of their constituents, it is harder to explain their formation by internal factors such as random fluctuations as well. This understanding is thus compatible with, or even favourable to, the existence of free will.