Representation of scientific knowledge vis-à-vis scientific progress

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Abstract

It is well known that knowledge representation is one of the most familiar concepts of AI, but the question which still begs for a proper answer is – "What is it?"

Will it ever be possible to automate the production of scientific knowledge? If so, what type of representation does it demand? Does the well established representation method which includes logical, procedural, network and structural schemes suffice for representation of scientific knowledge? What role can abstraction have in the representation of scientific knowledge? Will such representation blur the boundary between physical and social sciences, as with the notion of social entropy?

This talk will address some of the above questions based on opinions thought and expressed by persons working in the field including myself.