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Detecting Large Concept Extensions for Conceptual Analysis

When performing a conceptual analysis of a concept, philosophers are interested in all forms of expression of a concept in a text---be it direct or indirect, explicit or implicit. In this paper, we experiment with topic-based methods of automating the detection of concept expressions in order to facilitate philosophical conceptual analysis. We propose six methods based on LDA, and evaluate them on a new corpus of court decision that we had annotated by experts and non-experts. Our results indicate that these methods can yield important improvements over the keyword heuristic, which is often used as a concept detection heuristic in many contexts. While more work remains to be done, this indicates that detecting concepts through topics can serve as a general-purpose method for at least some forms of concept expression that are not captured using naive keyword approaches.