Beliefs are represented as neither maps nor sentences in the head: "Format blind" processing and specialization for theory of mind

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Abstract: Is the encoding of content and format necessary for representing beliefs? In three experiments using "false-representation" tasks, we explored whether beliefs were processed like non-mental representations, under the assumption that non-mental representations require both content and format to be processed. First, beliefs were compared to sentences (linguistic medium) while keeping representational content constant, under either format-stressed (experiment 1) or content-stressed (experiment 2) conditions. Reaction time advantages for probes about belief over notes suggested belief processing did not include computational demands for specifying a linguistic format. In a third experiment comparing beliefs to maps (spatial medium), responses to probes about beliefs were faster than those to maps. These results suggest belief processing is "format blind" such that specification of a representational medium is unnecessary. This difference in computational demands between mental and non-mental representations may be a source of specialization for the processing of mental states like belief.