Representing Conceptual Knowledge: A Network Analysis

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Abstract: We adopted social network analysis and investigated how concepts related to living things (e.g., organic objects such as dogs, cats, and trees) and artifacts (e.g., desks, tables, and cars) are organized. Our analysis shows that there is a basic division between the two types of concepts (living things and artifacts), and that the division emerges partly from the fact that living things are highly interconnected as compared to artifact concepts in their attributes. Three network measures, density, clustering coefficients, and complete triplets, indicate that organic concepts are heavily clustered by their attributes as compared to non-organic artifacts.