

# The role of higher order relational structure in relational category label extension

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**Abstract:** The perceived soundness of an analogy is influenced by shared relational structure between the analogs with higher-order relational (HOR) structure being the primary determinant (Gentner, Rattermann, & Forbus, 1993). We conducted a replication and extension to investigate whether the same pattern holds when deciding whether to extend a relational category label from a base example to a target. Participants were assigned to judge either category extension or analogical soundness (using a more direct version of the original measure) across four targets that shared HOR structure, surface similarity, neither, or both (literal similarity) with the base passage. We found that shared HOR structure led to a higher likelihood of both extending the category label and judging the analogy to be good. No effect of surface similarity was found. These results suggest that the generalization of relational categories follows the same principles of structure-mapping theory that are seen in analogical processing.