Category directedness

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Abstract: The answer to the question of what constitutes a category generally comes in two guises. The first refers to the set of characteristic features associated with the category (category intension). The second refers to the set of items in the world that is delineated by the category (category extension). Although intension and extension are two complementary depictions of what a category is, little is known about their interrelation. We will present a theory of semantic categories that assumes both exemplars and features to vary along a common latent scale. Evidence for this theory will be provided through an analysis of feature by exemplar applicability matrices with the two parameter logistic model. This item response model for unidimensional data not only fits the applicability matrices, its parameters naturally account for the varying representativeness of the constituting features and exemplars.