



Figure 2: (a) Prevalence prior distributions empirically elicited for twenty-one animal properties. Prior distributions summarized by two parameters of a structured Bayesian model:  $\phi$ —a property’s potential to be present in a category—and  $\gamma$ —the mean prevalence when it is possible for the property to be present in a category. Inset plots display example empirical prior distributions over prevalence and corresponding  $L_1$  model predictions: the posterior after hearing a generic utterance. Intervals on the top of plots show human judgments about the prevalence of the property within a target category. (b) Human acceptability judgments compared with model predictions (left) and the target-category prevalence (right) for thirty generic utterances about familiar animals and properties. Color denotes target-category prevalence of the property, with darker colors indicating lower prevalence. Error bars denote 95% Bayesian credible intervals