

Psych156A/ Ling150

Winter 2009

Review Questions: Poverty of the Stimulus & Learning Biases

(1) Terms/concepts to know: set, subset, superset, poverty of the stimulus, impoverished data, prior knowledge, auxiliary verb, yes/no questions, complex yes/no questions, Subset Problem, Subset Principle, conservative learner, Size Principle

(2) Why is the set of sentences actually in English a subset of the set of sentences that could *possibly* be in English?

(3) Is the set of sentences children encounter while they're forming their mental grammar larger than (a superset of) or smaller than (a subset of) the set of sentences they need to be able to eventually generate as competent speakers of their native language? How do you know?

(4) How can the data that children encounter be considered an impoverished data set?

(5) What does prior (or innate) knowledge accomplish in the poverty of the stimulus argument? What behavior do children need to display in order for prior (or innate) knowledge to be supported?

(6) How do children's performance on complex yes/no questions in English demonstrate constrained generalization in children?

(7) What is the difference between the Subset Problem and the Subset Principle?

(8) Why did the control condition in the first Gerken (2006) experiment train children on data that was only compatible with the more-general generalization? That is, in what sense was this a control for the experimental condition in the first experiment?

(9) Which generalization did Gerken (2006) find that children prefer when they are given data compatible with multiple generalizations?

(10) Under what circumstances could adults in Peña et al. (2002) use algebraic computation?

(11) What was the key structural difference in the stimuli used by Peña et al. (2002) in their experiments and the experiments done by Newport & Aslin (2004)? What was the point in choosing the particular stimuli Newport & Aslin chose?