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Authors

Abel, Hillary

Drummey, Anna

Vicari, Stephanie

et al.

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Rapid acquisition of novel information: Is disjunctive syllogism necessary for fast mapping?

Hillary Abel

Villanova University, Villanova , Pennsylvania, United States

Anna Drummey

Villanova University, Villanova , Pennsylvania, United States

Stephanie Vicari

Villanova University, Villanova , Pennsylvania, United States

Irene Kan

Villanova University, Villanova , Pennsylvania, United States

Abstract: We investigated two possible mechanisms that may mediate the rapid acquisition of novel words and their corresponding referents (i.e., fast mapping, FM). In the standard paradigm that examines FM, a novel label is presented alongside a novel object and a familiar object, and subjects are asked to identify the item that corresponds to the novel label. Acquisition of name-object pairing is subsequently assessed. One possible mechanism underlying FM is disjunctive syllogism: the active rejection of the familiar item, which allows for the novel object-to-label mapping (e.g., “I know this is a cricket, so “torato” can’t be referring to that; it must refer to the unfamiliar item.”). Another possible mechanism involves activation of a relevant semantic network (e.g., insect) into which the novel concept can be incorporated. We found that semantic network activation alone is sufficient, and that active rejection is not necessary, for the rapid acquisition of novel object-name associations.