Better associative learning when confusable shapes serve as cues rather than as associates.

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Abstract: Recent research in adult word learning suggests that associations between objects and labels are learned more successfully when objects precede labels than vice-versa. Here we investigated whether this asymmetry is unique to language learning or can be found in a purely visual domain. To test this hypothesis, we constructed two pairs of visually similar shapes ("X shapes," corresponding to confusable exemplars) and two pairs of highly dissimilar shapes ("L shapes," corresponding to easily discriminable labels). Each X shape was associated with an L shape. We presented these cue-associate pairs in an unsupervised learning paradigm, manipulating the temporal order across pairs: two pairs were learned in X-L order, and two in L-X order. After this unsupervised learning, subjects demonstrated better associative learning on pairs originally presented in X-L compared to L-X order. This provides preliminary evidence that the ordered learning effect found in word-learning may be the result of a domain-general mechanism.