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Sensitivity to Nonadjacent Dependencies Embedded in Sequences of Symbols

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Abstract: In natural language, dependencies occur between elements of a sentence that do not follow each other directly (e.g. IS always talkING). Previous studies have shown that such nonadjacent dependencies can be learned statistically. This study investigated whether or not people can become sensitive to nonadjacent dependencies embedded in longer sequences. Participants had to memorize sequences of up to five symbols, which referred to pictures of bugs in different orientations with respect to plants and fruits. The second and fourth symbols (for orientation and bug) were paired; the others (for frame, natural object and background color) varied randomly. At test, participants were presented with new sequences of five symbols in the absence of pictures. They distinguished sequences that followed the same pattern as before from sequences that did not with 72.7