Implicit learning of a natural syntactic rule

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Abstract: Implicit learning research has generally examined form-level regularities with little work being directed at learning abstract rules of the kind underlying language. We constructed an artificial analogue of French in which the verb agreed in gender with the object in object-extracted sentences but not in subject-extracted sentences. We tested whether English native speakers (n = 25) could learn that verb agreement was conditioned by extraction type. After reading grammatical sentences in a segment-by-segment reading task, verbs with gender marking were read more slowly in subject-extracted (ungrammatical) than in object-extracted (grammatical) sentences. The effect was also significant for a subset (n = 11) of participants who were classified as being unaware on the basis of confidence whilst making grammaticality judgements. The results show implicit learning of an abstract syntactic rule and that self-paced reading can provide online evidence of developing sensitivity to syntactic violations.