

Practice makes perfect: Competitive Scrabble players push the boundaries of accepted visual word recognition

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Word recognition behavior can be fine-tuned by experience and practice, according to a new study by Ian Hargreaves and colleagues from the University of Calgary in Canada. Their work shows, for the first time, that it is possible to develop visual word recognition ability in adulthood, beyond what researchers thought was achievable. Competitive Scrabble players provide the proof. The study is published online in Springer's journal *Memory & Cognition*.

Competitive Scrabble involves extraordinary word recognition experience. Expert players typically dedicate large amounts of time to studying the 180,000 [words](#) listed in The Official Tournament and Club Word List. Hargreaves and colleagues wanted to establish the effects of experience on visual word recognition. They compared the visual word recognition behaviors of competitive Scrabble players and non-expert participants using a version of the classic word recognition model - the lexical decision task - where subjects need to make a quick decision about whether the word shown to them is a real word.

In a series of two experiments, the authors showed participants words presented both vertically and horizontally, as well as common concrete (e.g. truck) and abstract (e.g. truth) words and measured how quickly, and how, they made judgements about those words. The first experiment among 23 undergraduate students established a baseline i.e. what we might typically observe in individuals. The second experiment compared the performances of 23 competitive Scrabble players and 23 non-expert controls of the same age, to account for the effects of age i.e. older adults are likely to have a larger vocabulary and have had greater exposure to printed material over the years.

Competitive Scrabble players' visual word recognition behavior differed significantly from non-experts' for letter-prompted verbal fluency (coming up with words beginning with a specific letter) and anagramming accuracy, two Scrabble-specific skills. Competitive players were faster to judge whether or not a word was real. They also judged the validity of vertical words faster than non-experts and were quicker at picking up abstract words than non-competitive players. These findings indicate that Scrabble players are less reliant on the meaning of words to judge whether or not they are real, and more flexible at word recognition using orthographic information.

The authors conclude: "Our results suggest that visual word recognition is shaped by experience and, that with experience, there are efficiencies to be had even in the adult world recognition system. Competitive [Scrabble](#) players are visual word recognition experts and their skill pushes the bounds of what we previously considered the end-point of development of the word recognition system."

More information: Hargreaves IS et al (2011). How a hobby can shape cognition: visual word recognition in competitive Scrabble players. *Memory & Cognition*.
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