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Using pretense behavior to explore counterfactual self-simulation

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Abstract

What we do depends on what we know. But sometimes we try to decouple our behavior from our knowledge so that we appear not to know what we really do know. Such pretense behavior requires understanding how we would behave with different knowledge — and so provides a window into counterfactual self-simulation. However, little research has characterized and evaluated pretense relative to non-pretense behavior. Here, in a large-scale, pre-registered experiment, subjects played normal games of Battleships (trying to sink ships hidden in a grid), as well as 'pretend' games, where they were told all the ships' locations but had to pretend they were playing normally. Relative to normal games, 'pretend' games demonstrated similar but exaggerated behavioral patterns. Furthermore, pretenders played rationally, but less so than non-pretenders. Despite these differences, 'judge' participants could not detect 'pretend' games. We discuss implications of these findings for accounts of theory of mind and metacognition.