

**Original citation:**

Jones, Katie, Watson, Derrick G. and Kunar, Melina A. (2015) I know what you're doing! Awareness of other people's intentions interfere with cognitive task performance. In: European Conference on Visual Perception, Liverpool, 23-27 Aug 2015

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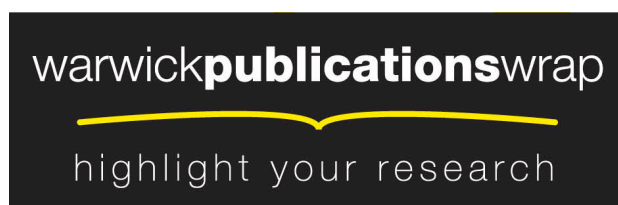
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**I know what you're doing!: Awareness of other people's intentions interfere with cognitive task performance**

Katie Jones, Derrick Watson and Melina Kunar

In shared environments it can be advantageous to have an awareness of the goals and intentions of others. Recent research has found that co-actors form a representation of each other's tasks even when neither necessary nor beneficial to their own performance. The current study used a novel method to investigate task interference between individuals who have differing intentional relations to a jointly attended stimulus. Pairs of participants were shown the same stimulus (a letter surrounded by two squares of different colours, superimposed at 0 and 45 degrees) on a shared display. Each participant was given their own instruction set asking them to indicate whether a specific conjunction of features was present in the stimulus. Both co-actors were looking for a vowel (shared criterion) in addition to an individually assigned colour present in either of the squares (non-shared criterion). Reaction times and error rates were influenced by which of the co-actor's target features were present in the stimulus, despite being irrelevant to task goals. Importantly, this was only the case when participants were explicitly aware of their co-actor's instructions. These findings provide evidence that it is difficult to suppress irrelevant representations of a co-actor's task, even when detrimental to individual performance.