

## ABSTRACT

Visual object recognition is subserved by ventral temporal and occipital regions of the brain. To date, regions comprising the dorsal visual pathway have not been considered relevant for object recognition, despite strong categorical biases for tool-related information in those regions. Here we show that dorsal stream processes influence object categorization. We used two techniques to render prime pictures invisible: Continuous Flash Suppression, which obliterates input into ventral temporal regions, while leaving dorsal stream processes largely unaffected, and Backward Masking, which allows suppressed information to reach both ventral and dorsal stream structures. Categorically congruent primes suppressed under continuous flash suppression facilitate categorization of tools but have no effect on non-manipulable objects; in contrast, primes rendered invisible through backward masking facilitate target categorization for both tools and non-manipulable things. Our findings demonstrate that information computed by the dorsal stream is used in object categorization, but only for a category of manipulable objects.