The Effects of Alcohol on Working Memory and Change Detection

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Abstract: The prevailing account of how alcohol affects attention suggests that intoxication reduces attentional focus and capacity. To better understand presumed cognitive consequences of intoxication, the present study tested the effects of moderate intoxication (.07 BAC) on both change blindness and complex span tasks. Change blindness tasks require finding a small change across alternating versions of a scene. Complex span tasks consist of interleaved processing and storage components. As expected, intoxication significantly decreased performance on the complex span tasks. But, surprisingly, it improved performance on the change blindness task. The results are interpreted as evidence that intoxication decreases attentional control, and causes a more diffuse attentional state. This can harm performance on some tasks where attentional control or focus are required, but may actually facilitate performance on other tasks.