

The slalom illusion in the context of partially invisible trajectory

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The slalom illusion is the condition whereby the straight trajectory of a dot crossing a pattern of tilted lines is perceived as being sinusoidal (Cesaro and Agostini, 1998). The authors suggested that this illusion might be due to a local distortion of the moving dot when traversing each tilted line: When the dot approaches the lines, its trajectory is distorted toward the normalization, that is, the dot bends to enter the line perpendicularly (Swanson, 1984). Furthermore, there might be a perceptual tendency of the moving dot to continue along this *virtual* trajectory. However, as the physical trajectory of the dot is straight, the final perceived trajectory is a compromise between the virtual and the physical trajectory.

In the present experiment, we test this hypothesis by manipulating the area between the tilted lines. The area between the lines was either a) the same colour as the dot, to make the dot trajectory partially invisible; or (b) empty, leaving the dot's full trajectory visible.

Results show that the illusion magnitude increases when the dot trajectory is partially invisible, supporting the hypothesis that the illusion results from a compromise between the physical and the virtual trajectory.