Miralem, M., Karmakar, S., & Forster, P.-P. (2025, August 26th). The illusion of absence. Illusion & Demo Night, 47th European Conference on Visual Perception.

Abstract:

When objects in our surroundings become hidden behind occluders, it is usually understood that they continue to exist based on prior knowledge about the world. However, especially small occluders can create a compelling visual impression that the space behind them is empty, despite insufficient information to support such a conclusion. Currently available research focused on exploring whether small occluders particularly elicit a strong illusion of emptiness. Fully occluding an object behind a small occluder requires a coincidental alignment between the hidden object and the occluder along the line of sight, eliciting a strong illusion of absence. This phenomenon can occur in real life even without the observer's awareness. In other words, the visual experience of emptiness might be perceptual in nature. The illusion can be entertaining in settings such as magic shows. Magicians use this illusion to hide an object from the audience's view, creating a surprise effect when the object suddenly appears out of thin air. However, the same mechanism that makes this class of magic tricks an enjoyable entertainment might have serious consequences in other settings. For example, accidental alignment of the A-pillar (the structure supporting the car’s roof on both sides of the windshield) and a pedestrian hidden behind it on the line of sight, can become a life-threatening event if the occluded space behind the A-pillar is perceived as empty. Aside from these practical applications, understanding conditions under which the illusion of absence occurs can also give some indications on how sensory versus cognitive processes influence perception. During the Illusion Night, we will show several examples of the illusion of absence at play in different contexts.

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