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Title: The Visual Field Dependence of an Audiovisual Illusion

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Abstract: Our daily sensory experiences are largely multisensory. Information across sensory domains is often complementary, but it can also be competitive, such as in cases of multisensory illusions. Using a variation of the classic Double Flash Illusion paradigm, we are mapping the relationship between visual and auditory stimuli through their multisensory interaction across 24 retinal locations. We recruited naive sighted participants, including those with and without visual correction. We found that participants with prolonged visual acuity deprivation, e.g., myopia or near-sightedness, exhibit stronger double flash perception, resulting in a negative correlation between visual acuity and double flash perception such that lower visual acuity yields increased double flash perception. Our data suggests that crossmodal reorganization resulting from visual acuity deprivation may lead to simultaneously presented auditory information being weighted more strongly relative to visual information, thereby strengthening the double flash illusion.