

The solitaire illusion generalises to large numerosities but not to changes in grouping

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The solitaire illusion takes the name from the regular configuration of colour disks in a board game (Frith & Frith, 1972). The elements in the centre appear more numerous. In the original demonstration the outside elements form groups of 2 or 4. We tested configurations in which number of elements were 4 or 9 times larger. We included two of the configurations introduced by Frith and Frith. We also tested brief or long presentations, two sets of colours, and a split configuration in which elements were separated spatially. The illusion was not affected by colour or presentation time, but it was absent in the split case. We conclude that grouping is the key variable, but groups have to be spatially segregated by boundaries (not only as clusters created by proximity) to generate an underestimation effect.