

Clones and donors have opposite inclinations (in vision)

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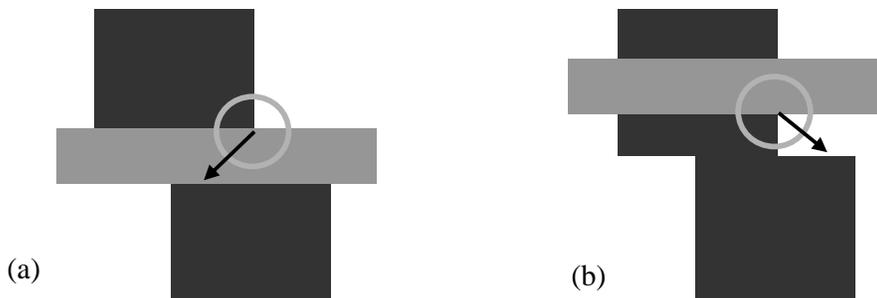
(Università di Siena e Università di Padova)

In Figure 1 a particular version of *café-wall illusion* (Gregory and Heard, 1979) is reproduced. In this configuration rows of red squares, shifted of half a phase, are present. An illusion occurs when two dotted straight lines are drawn as interposed between the rows of red squares: these lines appear to tilt toward the centre of the stimulus configuration.

Figure 2 is the exact copy of Figure 1 with each dotted line replaced by two ones drawn at a close distance. The direction of the apparent tilt reverses with respect Figure 1.

The illusory phenomenon is not generated by the doubling of the dotted lines because the effects persists even if one of the horizontal lines of the pairs drawn in Figure 2 is deleted. At the origin of this effect there is the displacement of the horizontal line from the location it has in Figure 1 to a short distance from the border dividing two red squares rows.

Explanatory Hypothesis (Parlangei and Roncato, in preparation). The two illusory tilts perceived in Figure 1 and in Figure 2 have the same source. The two effects are generated within a local pattern in which a T-junction is close to an edge parallel to its top edge.



The circled area encloses a T-junction. The top edge inverts the contrast sign when it is intercepted by the perpendicular “stem-edge”, here a bounding process arises that leads to perceive the top edge to join with the parallel edges of the same contrast sign. The arrows in the two figures depart from the top edge of the T-junction where it changes the contrast sign and point to the nearest edge of the same contrast polarity. As one can check the slid upside of the grey line in (b) generates a tendency to tilt in a direction opposite to the direction one observes in figure (a).

Gregory, R. L. and P. Heard, (1979) "Border locking and the café wall illusion," Perception, **8**, 365-380