

## 45 度斜線は 135 度よりも生得的に選択される

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脳は生得的に 45 度の精神的斜線をベースとしているか

Hebb (1956) defined perceptual learning (PL) as a lasting change in the perception of an object or event resulting from earlier perception. However, Goldstone(1998) remarks about 'innateness' in PL. Fahle & Poggio (2002) remarks PL differs from associative learning because it relies neither on the mechanisms of classical nor on operant conditioning. Hubel & Wiesel (1963) found receptive fields and functional architecture in two nonstriate visual area (18 and 19) which responds most to the specific orientation of the presented 'line', not curve, and denoted orientation specific cells. By using 30-30-40 millisecond record behavior analysis system, Mittani(2003) found a horizontal line is more eye-attractiveness than a vertical one ( $p<.001$ ) and both patterns are perceived chiefly by "left hemisphere right-visual scanning(RVS)  $p<.001$ ". These results were not derived by Hubel & Wiesel. Mittani found also a patten is scanned chiefly from left(L) to right(R), namely L→R. Mittani (2012) found zebrafish swim chiefly left to right, namely asymmetrically L→R. Moreover, they prefer an inverted triangle rather than a circle innately which lacks lines without PL.

### Experiment 1 & 2 (ウイスターラット)

In addition, Mittani (2015) found rat prefer an inverted triangle to an equilateral triangle irrespective it is presented L (Experiment 1) or R (Experiment 2). Using the 30-30-40msec analyzing system, when the inverted triangle is presented at R in , animals chiefly look at the 60 degrees line. Even when the same inverted triangle is presented at opposite L side, the animals again chiefly look at the 60 degree line in spite of the situation or the Gestalt are different. The same "element", namely, the 60 degrees line is important in PL.

