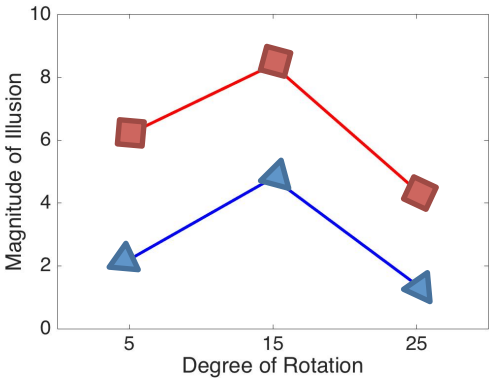
**ZIPPER ILLUSION**
Elisa Gallego
University of Tokyo

**ILLUSION**[*]:

On the screen, you can observe two straight parallel lines formed by aligned but tilted squares and a cross at one side of the screen (PPT slide 2). To see this illusion, one has to track the cross with the eye as it moves to the other side of the screen. As a result of tracking, you can see the lines either going closer to each other or apart from each other.




**Graph 1**: Magnitude of Illusion
Red line - squares; Blue line - triangle

**EXPLANATION**:

This illusion can be explained with the local motion detector. Each neuron in the V1 has a small receptive field, or a small aperture represented by a circle in the figures. As the fixation moves horizontally to the right, the circle becomes whiter. Thus, the white edge inside the aperture seems to be moving down (red circle) or moving up (green circle) towards the fixation point as it moves horizontally (Figure 1). As a result, the lines seem to move towards the cross. The opposite happens when the cross moves to the left as one observes the two lines moving away from each other.

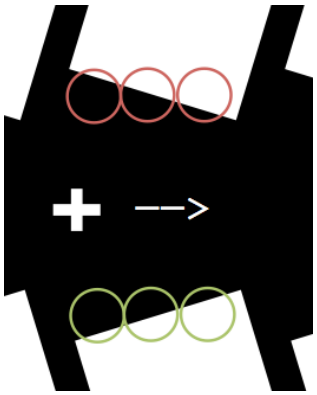


**Figure 1**: Squares

Moreover, the illusion works to a weaker extent when formed by triangles in comparison to squares (Graph 1[†]; compare PPT slides 4 to 9); and when formed by circles, it does not appear at all (PPT slide 3). The reason why the illusion is weaker with triangles is that there is less white filling the receptive field as it approaches the right side of the shape (Figure 2).

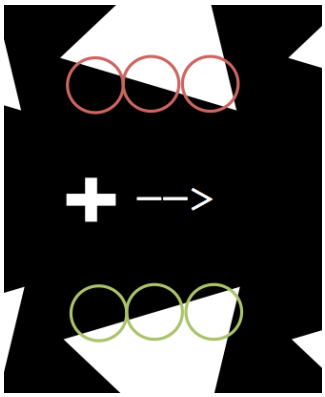


**Figure 2**: Triangles

Lastly, the angle of the rotation of the shape is important since the effect becomes stronger as the tilt approaches the optimal angle in which in this case, seems to be the 15 degrees rotation for both square and triangle (Graph 1).

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[*] File name: Zipper_illusion.pptx

[†] This experiment was conducted with 5 participants.