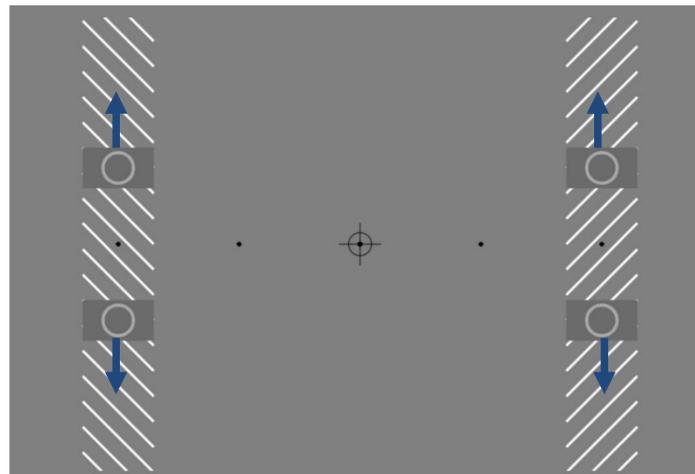
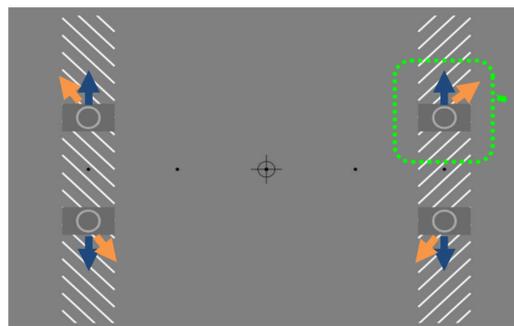


Partial Object Doubling Induced by Negative Afterimages

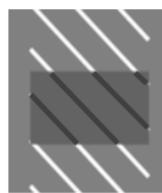


The Furrow Illusion



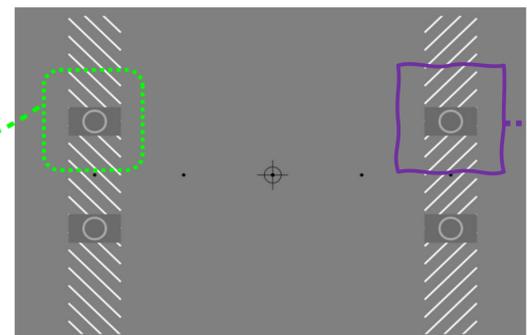
↑ Physical motion
↑ Perceived motion

What is common?



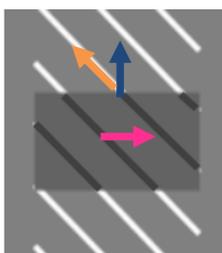
When the opaque target crosses a line, it releases a dynamic negative afterimage (Opponent process - Hering, 1892)

Partial Object Doubling

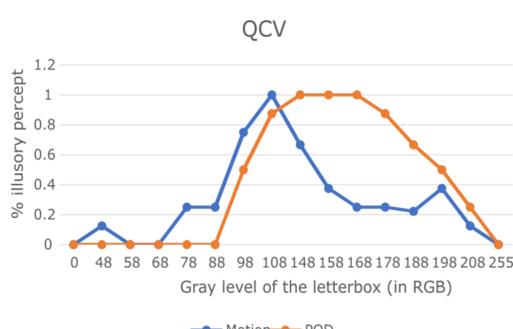
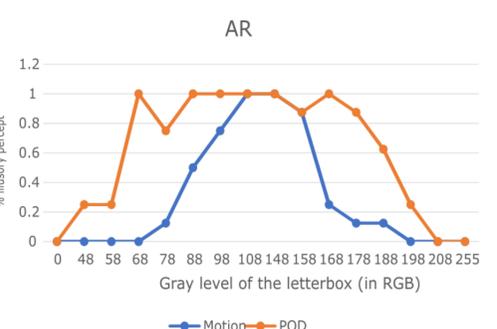
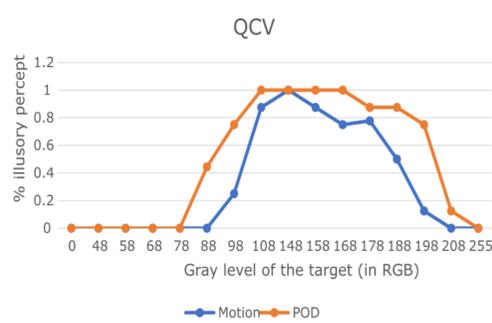


Possible Impact of Negative Afterimages

↑ Global motion (physical)
↑ Local motion (perceived)
↑ Texture motion



- Afterimages generate local motion signals, similar to those generated by physical edges.
- They provide an internal texture.
- Such a texture can also generate local motion signals:
 - Aperture effect (Shiffrar & Lorenceau, 1996)
 - Flow parsing (Warren & Rushton, 2007)



Key Points

- The contrast between the target and the background is crucial for the illusion.
- The dynamic release of negative afterimages seems to behave similarly to the edge junctions.
- Physically drawn contours interact with the negative afterimages, creating an apparent duplication of the target's contours - partial object doubling (POD - Thornton & Riga, 2024).
- POD is related to but most probably independent from the furrow illusion.