

Blind Spot

More Details

Where the optic nerve and blood vessels leave the eye in a tight bundle, we see nothing. This does not mean, however, that we perceive a hole or a dark shadow in the area of the blind spot. Rather, our brain fills the affected area with the colour and even with the pattern of the surrounding area.

Bigger than you thought

The blind spot has amazing dimensions. By way of comparison, its surface effect is almost nine times as large as that of the full moon in the sky.

Want to try again? If you close your right eye, focus your left eye on an object and then move your left eye to the right, you can, with a little practice, make any object disappear through the blind spot. This game was already played by the English King Charles II (1630 - 1685), who was very interested in the sciences and founded the Royal Society. He used to visually "decapitate" prisoners sentenced to death before they were actually executed. Some people have the same fun with unpopular colleagues during lengthy meetings.

No cat slices

It is rather unlikely that our visual system developed the refill technique only to deal with the problem of the blind spot, because normally our second eye easily compensates for the perception gap of the first one.

Rather, "surface interpolation" (filling in of the visual blind spot) has developed in the course of evolution so that we can still recognise continuous surfaces and contours in nature even if they are partially covered and thus appear to be broken. Thus, for example, we perceive a cat behind a picket fence as a complete animal – and not just as "cat slices".

Physiologists are currently investigating the neural mechanisms behind this phenomenon. This involves observing how individual nerve cells in the visual centres in the brain react to objects, some of which are hidden by the blind spot or by visual barriers.