

Peripheral Vision – the Basics

Hans Strasburger, Ludwig Maximilian University of Munich

www.hans.strasburger.de

Peripheral vision is a vaguely defined term – the opposite of *central vision*, which is also used in various meanings. Its unifying property is its strangeness, which, even though more than 99.9% of the visual field is affected – we are not aware of, and which seems incompatible with common sense. We can recognize patterns without knowing where they are. Or see movement without something moving. For more than a thousand years it has been researched. In almost every textbook, by the way, the limits of the visual field are wrongly stated, even though known since the Renaissance – Germans call that a “textbook duck” (cf. the “Zeitungs-Ente”). Textbooks also routinely say that the lower spatial resolution were the main limit of peripheral vision. Again a “textbook duck” because the crowding effect is usually the limiting property. I will review the history of research on peripheral vision, beginning with the 10th century, up to the present. And discuss important basic concepts: resolution, crowding and Bouma's law, crowding vs. masking, visual angle vs. retinal angle, the “correct” cortical magnification factor, foveal vision vs. seeing in the fovea, visual field. And will discuss some myths.