

We see the modern psychologist rather in the laboratory than in the study room¹ – The alley experiments by Franz Hillebrand (1863-1926)

Pierre Sachse*, Ursula Beermann**, Peter Goller***, Stefan E. Huber*/****,

Marco R. Furtner*****, Thomas Maran*****, Robert Marhenke*, Hisaaki Tabuchi*,

Alexandra Hoffmann*, Christian Büsel* & Markus Martini*

* Leopold-Franzens-University of Innsbruck, Department of Psychology

** UMIT – Private University for Health Sciences, Medical Informatics and Technology, Hall i.T.

*** Leopold-Franzens-University of Innsbruck, Archives

**** Leopold-Franzens-University of Innsbruck, Department of Basic Sciences in Engineering Sciences

***** University of Liechtenstein, Institute of Entrepreneurship, Vaduz

***** Leadershipwerk, Vaduz, Liechtenstein

ABSTRACT

The experimental psychologist Franz Hillebrand (1863-1926), who had been trained by Ewald Hering and Ernst Mach, worked in Innsbruck for three decades. His scientific research during this time focused on experimental investigations of spatial perception. His pioneering „alley experiments“ initiated the clarification of the important question of the geometrical structure of visual space. His study results suggest that visual space is inhomogeneous with respect to its geometry, which he assumes to be locally Euclidean or hyperbolic. Initiated by Hillebrand's experiments, research received crucial and internationally visible input in a variety of fields such as spatial perception, the geometry of visual-spatial orientation, size constancy, as well as in the development of mathematical models and theories such as in the area of perception psychology. Additionally to the history and the results of the above-mentioned studies, the life and work of the pioneer of this research, Franz Hillebrand, will be introduced.

Keywords

Visual space perception – geometry of visual space – non-euclidean space perception – alley experiments – Franz Hillebrand

¹ UAI Nachlass Franz Hillebrand, inaugural lecture on October 19, 1896, „Experimental Psychology, its formation and its tasks“ (orig. „Die experimentelle Psychologie, ihre Entstehung und ihre Aufgaben“).