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Special Issue Reprint

# Spatial Perception and Navigation in the Absence of Vision

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In congenital blindness (CB), tactile and auditory information can be reinterpreted by the brain to compensate for visual information through mechanisms of brain plasticity triggered by training. Visual deprivation does not cause a cognitive spatial deficit since blind people are able to acquire spatial knowledge about the environment. However, this spatial competence takes longer to achieve but is eventually reached through training-induced plasticity. Even though complete visual deprivation leads to volumetric reductions in brain structures associated with spatial learning, blind individuals are still able to navigate. However, the neural structures involved in this function are not fully understood. In this Special Issue, leading experts in the field contributed reviews and original research on spatial navigation in the absence of vision from a variety of approaches to advance our understanding of multisensory spatial knowledge acquisition. We further show that people who are congenitally blind, late blind, and sighted use multisensory information to perceive spatial information.

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