Abstract

Lateralization of brain is ubiquitous quality of vertebrate brain. In this paper we rewiev examples of brain lateralization in birds and mammals and it's behavioral impacts. Than we discuss possible evolutionary origins of these asymmetries and their evolutionary significance. We try to explain individual as well as population level lateralization. We propose, that population level lateralization can, in principle, arise just on the genofondal basis, if the organism itself contributes to the enviroment with the lateralized behavior. Lateralized sensory input on the other hand should stand on the advantages of synchronizing with other individuals due to the disatvantage of predictability of lateralized population.

Keywords: Lateralization; laterality; population level lateralization; asymmetry; evolutionary significance