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Brain Assymetry and its Implications In Cybernetics

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ABSTRACT

The discovery of the two halves in the brain with intricate interconnectivity between them has won Roger Sperry a Nobel Prize in the 60's. It has now been established that these hemispheres don't have exactly the same functions and this difference in the way the two hemispheres work is called functional asymmetry. This functional cerebral asymmetry is a fundamental feature of the human functional cerebral organization. Thanks to Billions of dollars of funding received during the 1990's, which is referred to as decade of brain research, very sophisticated tools like functional Magnetic Resonance Imaging (fMRI) have been developed and perfect. With these sophisticated tools, lot of insight has been gained about the organization and functioning of the two halves of the brain and the communication between them. The left hemisphere is more dominant in producing & processing speech as well as in planning & executing motor skills, where as especially spatial abilities is a function of the right hemisphere. The understanding of the human functional cerebral organization and its lateralisation (hemispheric Asymmetry) is bound to have a major impact on cybernetics & informatics in the coming years. An insight into the brain functioning will also help in the development of next generation computers with parallel processing capabilities.

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