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ARE MENTAL DISEASES SYNAPTIC DISEASES?

T. Mizuno
Psychiatry, Kosugi Memorial Hospital, Kashiwara, Japan

John Hughlings Jackson, an English neurologist of the 19th century, proposed that the nervous system was organised as a hierarchical system of three anatomical layers corresponding to a functional hierarchy. The concepts introduced in this description, for the most part in antinomic form, turned out to be fruitful for psychology and psychopathology: psychic evolution/dissolution, simplicity/complexity, organisation/disorganisation, stability/instability, automatism/intentionality, inhibition/disinhibition, brain topology, and Darwinian selection of the most stable states. Henri Ey's adaptation of this architectonic model to the psyche and conscience, which he called organodynamics, required making modifications such as including the intervention of nerve connections between the various brain areas, designated by the term "*transanatomical sets*". The most recent synaptic and neuronal models of conscience (J-P Changeux, G Edelman) are presented briefly and include the "selective stabilisation of synapses". Neurotransmitter anomalies in psychopathy; immunity, inflammatory and synaptic anomalies of certain acute psychoses; and the modifications of synaptic connections after electrical stimulation of the brain are also presented. The convergence of this theoretical and experimental data leads to a discussion of the hypothesis according to which mental diseases might be "synaptic diseases".

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