

1937

The Stability and Adaption of the Human Brain Rhythm

B. K. Bagchi
State University of Iowa

Let us know how access to this document benefits you

Copyright ©1937 Iowa Academy of Science, Inc.

Follow this and additional works at: <https://scholarworks.uni.edu/pias>

Recommended Citation

Bagchi, B. K. (1937) "The Stability and Adaption of the Human Brain Rhythm," *Proceedings of the Iowa Academy of Science*, 44(1), 155-156.

Available at: <https://scholarworks.uni.edu/pias/vol44/iss1/65>

This Research is brought to you for free and open access by the Iowa Academy of Science at UNI ScholarWorks. It has been accepted for inclusion in Proceedings of the Iowa Academy of Science by an authorized editor of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

AN ITEM ANALYSIS OF THE ADJUSTMENT QUESTIONNAIRE

EMMA McCLOY LAYMAN

Following a preliminary analysis of 782 personality test items, a questionnaire of 97 items of the yes-no type was administered to a group of 276 freshman men. A statistical analysis of the results was made, and the list was reduced to 67 items. Tetrachoric correlation coefficients were computed between these 67 items and these were submitted to a factor analysis, using Thurstone's technique. It was found that at least 12 factors are necessary to account for the intercorrelations between the items. Of the 67 items, 38 were found to be sufficiently pure that they had factor loadings greater than .50 for only one factor.

Reliabilities of the items were obtained from a group of 40 graduate students, the test being administered at the beginning and at the end of a three-week period. Of 67 items, only 8 had reliabilities greater than .90.

DEPARTMENT OF PSYCHOLOGY,
STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

THE STABILITY AND ADAPTATION OF THE HUMAN BRAIN RHYTHM

B. K. BAGCHI

The purpose of this study was to investigate to what degree experimental situations involving repeated or continuous performance of tasks affected the potential rhythm of the brain.

Preliminary results show that the initiation of any activity almost always depressed the waves or caused a sudden shift of potentials, but its continuance brought about different results. Breaking a key repeatedly with the left index finger had, after a certain time, no observable influence on the size of the waves in 80 per cent of records. The rhythm adapted itself, that is, regained its amplitude, more or less, during a continuous mental addition some-

times lasting for five minutes. Raising the arm at elbow produced prolonged and often 100 per cent adaptation with occasional depressions. In a supplementary experiment, in which the subject's name was repeatedly called by *E*, waves did not return normally until after the fourth call, sometimes later. There were individual differences in regard to pattern, extent and nature of adaptation and amount of depression.

It was concluded that, in general, psychological and neuromuscular adaptation to a task showed a great deal of correspondence with the adaptation (i.e., regaining of amplitude) of the brain rhythm.

DEPARTMENT OF PSYCHOLOGY,
STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

BRAIN POTENTIALS DURING SILENT AND ORAL READING

JOHN R. KNOTT

Brain potentials have been recorded during silence, during silent reading, and oral reading. While it has been assumed that potentials cannot be picked up during strong, complex stimulation, the results indicate that they can be.

Analysis of the data indicates an hypothesis to the effect that complexity of cortical functioning is associated with complexity of the electrical activity of the cortex.

DEPARTMENT OF PSYCHOLOGY,
STATE UNIVERSITY OF IOWA,
IOWA CITY, IOWA.

THE RELATIONSHIP BETWEEN BRAIN RHYTHMS AND CERTAIN MUSCULAR RHYTHMS

CHARLES N. COFER

In this study an attempt was made to find out whether there is a relationship between the electrical potentials from the left motor area of the brain and the tremor of the third finger of the right hand. Some records also were taken from the visual area and