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Ilse Gloning, K. Gloning and H. Hoff: Neuropsychological Symptoms and Syndromes in Lesions of the Occipital Lobe and the Adjacent Areas. Collection neuropsychologia, monographies de neuropsychologie. Gauthier-Villars, Paris 1968. Numerous tables, 1 fig., 98 p., 237 references. The authors present the result of neuropsychological investigations in 241 anatomically verified cases (58.8% by operation, 41% by autopsy). As to the etiology tumors predominate: 95 gliomas, 51 encephalopathies, 34 meningiomas, 21 metastases, 20 traumatic lesions, 8 angiomas, 7 intracerebral haematomatas, 3 brain abscesses, 2 sarcomas. The neuropsychological methods employed were published earlier [Gloning, 1965; Gloning and Quantember, 1964]. Minute details of symptoms and syndromes are described as the table of contents shows: cerebral blindness and asthenopia, Anton's syndrome, obscuration, cerebral metamorphopsia, oblique vision and inversed vision, visual allesthesias, dysmetropia (dysmegalopsia), polypia, hallucinations (elementary and complex), visual disturbances of body image, Balint's syndrome, unilateral spatial inattention (unilateral spatial agnosia), spatial agnosia, reflections concerning the development of space, Gerstmann's syndrome, 'pure word blindness' (visual alexia without agraphia) and 'colour agnosia', visual agnosia. Statistical evaluations of each group was carried out (chi² method). Some general reflections on the problem of function and localisation are mentioned. The authors conclude that right-sided lesions may disturb the spatial-temporal “background” of man's world image (Weltbild) while left-sided focuses may cause troubles of symbol behaviour which both undisturbed make the man in combination to a speaking and thinking subject.

K. Whitla: Handbook of Measurement and Assessment in Behavioral Sciences. Addison-Wesley, Reading/Menlo Park/London/Don Mills 1968. 508 p. 140 s. The book is divided into two sections; part I deals with statistics, and part II deals with application of measurement and assessment techniques. The first chapter (Tatsuoka) deals with the history of mathematical model-building in the behavioral sciences. In chapter II (Rulon and Brook) we find an interesting method of statistical presentation. In chapter III (Bock and Haggard) the recent advances in multivariate analysis are reviewed. In chapter IV (Harman) a comprehensive view of factor analysis is presented. The following chapter (Steven) discusses some work of Fechner and of Thurstone, and then presents a record on current procedures and findings in the fields of effective quantification. Peaker (chapter 6) develops the effects of stratification, stage sampling and repetition; his methods of approximating significance, simulation and evaluation of an experimental design deserve attention. Also very interesting is the article by Guilford on the structure of the intellect (where he lists 5 categories of factors: cognition, memory, divergent production, convergent production and evaluation). Chapter VIII (Seibel) summarizes on the basis of numerous examples the basic concepts in testing. Chapter IX (Wing) is centered on 3 approaches to personality assessment: clinical observation, experimental manipulation and statistical manipulation. Chapter X (Barron) deals with the measurement of creativity: an evaluation of the Psycho-
diagnostic, of questionnaire and preference inventories. Creative ability can be measured only in fragments; however, many attempts are made to tap them. In chapter XI (Measurement of Interest, Berdie and Campbell) research over the past 25 years is covered. In the following chapter, Howell summarizes the works of Viola, Kretschmer, Sheldon; his thesis, that body typing has not been extended much beyond the relation of body form and disease, and the statement of the two main approaches (analysis of body composition and synthetic approach of physical typing) close the first part of his discussion. The second area deals with practical anthropometry (assessing growth). In the 13th chapter, Tiedeman and Field present their view of the guidance process and propose their dynamic prediction model with its capacity for incorporating the steps of exploration, crystallization, choice and clarification. The last chapter (college admission process, Whitla) permits an examination of the decision process through many psychological, sociological and statistical models.

As stated in the introduction, the chapters range widely over the theoretical and applied areas of measurement and assessment. They represent an effort to come to grips with salient problems in the behavioral sciences and, in the process, to advance the science of measurement.

G. Benedetti, Basel

The volume contains the reports given at the '5th Conference on Brain Function', which was sponsored in November 1965 by the Brain Research Institute, University of California, Los Angeles. The problems of aggression is considered from different viewpoints: the anthropological (Louis S. B. Leakey), the ethological (S. A. Barnett, Syunzo Kawamura, Kenneth S. Norris), the ontogenetic and maturational (Irenaus Eibl-Eibesfeld), the neurohumoral (Alan R. Rothballer), the neurophysiological (Irving Kaada), the neuropsychological (L. R. Delgado), the experimental psychological (Leonard Berkowitz), the psychiatric (Henry W. Buxton), the sociological (Stanley C. Pierce), and the political (Harold D. Lasswell).

Three aspects emerge from the discussion: a) the dichotomy: interspecific versus intraspecific aggression; b) aggression as an attack or as a defence (and the related question of anxiety); c) aggression as an inborn mechanism or as a learning process.

Furthermore, the following points seem to me to be of special interest: 1. the research of the anthropologist Leakey on the origins of aggression among the early human and prehuman evolution; 2. the findings of Welch on the biochemical and morphological characteristics in aggressive rats brought about by means of genetic selection as well as through rearing in postnatal selection (that means that a psychogenetic manipulation leads to structural changes of the body); 3. the studies of Kaada on the neurophysiological basis of aggressive behavior; 4. the experiments of Delgado, which show how it is possible to evoke by means of telemetric control of electrodes implanted in the central gray and in the nucleus caudatus, respectively, an increase of aggressivity or a disappearance of it and of dominant behavior in apes.
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As the book is the record of a symposium, the relations are followed by interesting discussions among the 35 participants. G. Benedetti, Basel


The first edition of this flexible text book was an immediate success. Mumenthaler's book is consulted by all medical students and residents in internal medicine, neurology and other specialities. Its advantages are obvious: the price is low, the text is modern and well written, the different subjects are treated to an equal extent, the schematic figures well chosen and the list of references extensive. No wonder that the first edition got rapidly out of print, followed by a second revised edition. The volume and the text are essentially the same as in the first edition, but some new developments are added, a number of definitions are corrected and the list of references is revised. No doubt, this text book will not only remain to be a bestseller but will contribute a great deal to the instruction in neurology of the young generation of physicians. The book is recommended to the students almost unanimously by the teachers in neurology.

A few remarks may be stated in view of the third edition. The explanation of extrapyramidal rigidity as being due to lack of central muscle spindle innervation is only half-correct; the same is true for the definition and explanation of spasticity. Tremor in Parkinson's disease is not only present at rest but throughout a movement although of smaller amplitude and often higher frequency. The complicated schematic figures 37 and 39 might well be replaced. One may wonder if it is justified to mention liver cirrhosis as a cause of polyneuropathy. These few remarks do in no way diminish the importance of this excellent text book. H. E. Kaeser, Basel


Three main themes as presented in various reports and discussions are dealt with in this third international symposium organized by Spiegel and Wycis: 1. dyskinesias, 2. sensory, emotional and psychic aspects in stereoecephalotomy and 3. technical innovations in stereotactic brain surgery.

The majority of the reports on extra-pyramidal motor disturbances concerned themselves with Parkinson's disease. The main target point continues to be the ventrolateral thalamic nucleus, whereby the peroperative procedure of probing the nuclei with microelectrodes, as introduced by the Guiot team, has experienced increasing usage. In addition, there are now stereotactic operations on the cerebellar nuclei which specifically influence the rigidity and much less the tremor.

The previously existent fears concerning bilateral operative procedures are still in evidence, although it has diminished somewhat when only small lesions are en-volved. Reports on the effects of Dopamine and the Catecholamines in Parkinson's syndrome are still inconclusive.

In thalamic pain operations, emphasis is being shifted by the majority of people from the specific spino-thalamic system to the second unspecific pallo-spino-thalamic system. Thereby, the pain is more effectively relieved without affecting

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sensibility. The high recidivistic rate after central pain operations is explained by the various afferent pain connections. Psychosurgical procedures are now being performed in the intralaminar thalamic nuclei as well as in the dorso-medial thalamus. Many authors have concerned themselves with technical improvements in stereotactic operations. Some are mainly concerning themselves with the search for minute precision using impedance measurements, roentgenological improvements or refinements of stimulation techniques, while others have shown that a precise relationship to various skeletal structures can often be sufficient. The initial results of stereotactically guided operations on the spinal cord (chordotomy) have shown that interest in these procedures has continued to spread.


The author has reported his experiments in establishing epileptic foci in the sensorimotor cortex in rabbits and cats by the aluminium hydroxide method of Kopeloff. A new finding is that in this location spontaneous seizure remission is frequent. This is in contrast to other authors who almost always induced status epilepticus with foci in the limbic cortex. The author interprets this fact as an inhibitory effect of the caudate nucleus in the sense of a secondary autoregulation. The problematic nature of the focus concept was commented upon; the focus should not be considered as a localized anatomic but rather as a functional entity with its multiple connections. The tabular documentation, the EEG reproductions and the description of the seizures are good. It would have been desirable to recount the intercritical activity in the different sleep phases. The book has many good points; however the exemplary experiments of E. Walker are not cited. The monograph is worthy of recommendation for the experimentor in the field of epilepsy. G. Scollo-Lavizzari, Basel


The author describes in this first volume, neurosurgical procedures of the anterior and middle cranial fossae. As opposed to other books of operative neurosurgery, whose chapters are divided on the basis of the pathological classification of the lesion, the chapters in this book are arranged according to the topographical location of the lesion. This simplifies and strengthens the three dimensional visualization, which is a prerequisite for every neurosurgical procedure.

Each typical operation is clearly and precisely described. Details of the technical procedures and especially of the anatomical and topographical relationships are thoroughly examined. In addition for each stage of the operation valuable suggestions for techniques to simplify and assist in many of the manipulations are precisely presented. Special dangers that may be encountered during each stage of the operation and the manner in which they can be mastered are also specifically detailed. These exceptionally understandable descriptions are complemented by an abundance of half-schematic illustrations. Thus, there is recorded not only the operational procedure, but also a description of the topographical relationships of the lesion as a composite as well as in detail, before and during each new procedural step. Many of the individual illustrations are descriptions of the operational field as the surgeon himself would see it with magnifying lenses. Special emphasis is given in this book to the surgery of benign tumors at various
locations (meningiomas, pituitary tumors, ventricular cysts). An equally thorough description of basal aneurysms and arterio-venous congenital malformations is presented. On the other hand, it is our opinion that consideration of the gliomas is insufficient, as they are presented only in connection with lobectomies. The operations in cranial injuries (intracranial hematomas, basal liquorrhoea) and the temporal rhizotomy in trigeminal neuralgia are adequately presented.

Intentionally omitted are neuroradiological procedures and operations involving hydrocephalus. The book is based on the practices of an experienced neurosurgeon of the Walter Reed Military Hospital in Washington, D. C. Rather than enumerate all the possible technical variations, the book attempts, in every situation, to give the reader an insight into those successful methods gathered by the author from his experience. It is written with such didactic clarity and descriptive brilliance that it will soon take its place as an indispensable advisor in every neurosurgical library.

A. Levy, Basel


The author examined 129 patients with parkinsonism of varying etiologies. Clinical and psychical tests before and in varying intervals following a stereotactic operation (method Riechert) were conducted. The patients were divided into 5 groups on the basis of the type and extent of their psychical disorder. Even though preoperatively there were no patients without a psychical derangement, there were only a few patients in this operative series who were classified as demented. The author was able to demonstrate that only in those cases where the vital drives were severely affected, did the significant neurological deficits lead to marked decreases in personal performance. These patients are thus classified in the markedly disturbed category. Employment and self sufficiency also are more dependent upon changes in the vital drives than is the extent of the neurological deficits.

The actual duration of the ailment had no influence on the psychic disturbance. The etiology of the parkinsonism, on the other hand, was often a factor in that with post-encephalitic parkinsonism, systemic manifestations and especially cerebral arteriosclerosis are rarely seen. Alleviating the neurological symptoms with a stereotactic operation led to an improvement in the mental status of 83 % of the patients. The relatively less severe alterations, such as reactive depression, were often eliminated. The more intelligent patients with parkinsonism, who often possessed a greater degree of mental strength with which to overcome the handicaps of the disorder, often profited to a greater extent from the stereotactic operation. However, this occurred only in those cases where the disorder had not yet led to a significant reduction in the vital drives or dementia. 32 % of the patients who underwent a second stereotactic operation were placed, postoperatively, in a psychically more severely disturbed category. Especially endangered were those patients who after their first stereotactic operation displayed either temporary psychical or electroencephalo-graphic disorders.

On the basis of his painstaking and diversified tests, the author comes to the conclusion that the psychical disorders in parkinsonism are usually a reaction to the neurological disorders, except in those cases where an extraneous organic cerebral lesion is present. This study simplifies the indications for an operative procedure in parkinsonism and clearly demonstrates which patients stand to profit from an operative procedure and which are to be excluded.

A. Levy, Basel

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This book gives an account on a symposium held in 1967 at the University of Chicago with the leading idea to strengthen interdisciplinary work in the field of brain research. Why choosing the teleost fish as an experimental animal? Neurologists may think that research in fishes may have little bearing on their clinical problems. Several papers demonstrate, however, that fishes are, in many respects, excellently suited for the study of fundamental mechanisms of brain function such as memory and sensory physiology.

Part I deals with morphology and function of the visual system. In several species vision is the dominant sense which make the fish an intriguing experimental animal for the study of the physiology of vision. A review on previous work and on own material is given in a concise paper by Jacobson. Single unit recordings from retinal ganglion cells and tectal cells revealed that the goldfish has a well developed colour vision (in contrast to cats) and a high degree of specialization among tectal units (directionally selective units etc.). Electrophysiological results and the analysis of the cone pigments indicate that the goldfish has a trichromatic vision like man; this fits well with behavioural experiments in which colour discrimination tests were used (Yager). As pointed out by Ingle, the aim of such studies is to find out the most proficient visual stimuli to release a definite motor behaviour; this might give the key to neurophysiologists in search for the neuronal mechanisms. The principles of visuo-motor integration are reviewed in the paper by Trevarthen.

Part II deals mainly with the olfactory system of the fish, another important sensory input. The study of olfaction in fishes has the advantage that it is relatively easy to manipulate specific olfactory stimulation (Von Baumgarten and Miessner). Regeneration studies revealed that odor discrimination is again achieved after sever-ence of the olfactory fibres. Besides integration in the olfactory system the forebrain in teleost seems also to be the origin of an unspecific arousal system giving its influence on lower centres and thus ensuring a high level of efficiency.

Of the part III and IV, which deal mainly with behavioural aspects of fishes, the most fascinating papers concern the memory system of fishes. The well-known experiments, designed to study the mechanism of fixation of the short term memory into long term memory, was performed in goldfishes. The learning capacity of goldfishes in a simple avoidance conditioning test was well established (Bitterman) and used as a model for the study of memory (Agranoff). Puromycin, injected into the brain, was shown to block the process of memory fixation without disturbing the mechanism of short term memory. Since the time of the original experiments other substances were found having the same effects at much lower concentration. These substances are interfering with protein synthesis which seems to play a major role in memory fixation. However crude and unspecific these methods may be, they certainly opened a new field of research in the study of one of the central problems in brain research.

This book is well set up and can be recommended not only to scientists actively engaged in brain research but also to neurologists interested in the basic mechanisms of brain function. M. Wiesendanger, Zurich
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The author investigates Goethe's attitude towards the problem of death as it can be found in the poet's work and biography. He concludes that the official image of Goethe, the 'Olympian', as of a strong and fearless personality accepting the natural course of life and death with equanimity, does not correspond to the reality expressed in his work. The evidence would rather suggest an extremely ambivalent attitude towards death: to a strongly expressed yearning for death as the wellcome door to transcendental life and experience with occasional glorification of suicide, considered to be the act of the strong and fearless, there is opposed the negation of death, which is either ignored to the point where the mere mentioning of the word becomes a taboo, or made harmless by likening it to sleep. The author suggests that the root of this marked ambivalence might be found in a very deep-seated death-fright which at times became so insufferably strong that Goethe only escaped the danger of a compulsory neurosis or a disabling psychosomatic disease - as frequently described in works of his time - by a continuous neurotic struggle, either glorifying death or denying its existence. In this struggle the poetic work might have had the function of self-treatment of the fear, symbolically fulfilling death-tendencies and so permitting survival.

As in all pathographical studies only hypothetical interpretation is possible, other explanations of the same material are conceivable, expecially as the origin of this very plausibly described death-fright is not further examined. Nevertheless this well-documented booklet contains many original suggestions for those interested in pathography, literature and the psychological problem of death. M. Lesjder, Basel


Arthrogryposis multiplex congenita, a hitherto ill-defined clinical entity, has always been a matter of controverse. Neurologists tend to distinguish between cases of congenital myopathy and congenital neurogenic atrophy with multiple contractures. Orthopedists, on the other hand, attribute the disease to a primary articular dysplasia. The author reviews the 1200 cases published since the original description by Guerin in 1880 and the denomination by Stern 1923, as well as the patients observed at the orthopedic clinic in Heidelberg. He arrives at a fairly precise definition of the syndrome (rejecting the majority of the cases described): 1. contracture of symmetrical joint of all 4 or the upper or lower extremities with restriction of all movements: 2. congenital disorder without progression or remission: 3. unphysiological contour of the affected limbs with cylindric or other shape and lack of muscle contour. Muscle hypoplasia in connection with fibrosis of the articular capsule is already present at birth. According to the author's experience a distinction between neurogenic and other cases is not possible on clinical grounds. The origin of arthrogryposis remains unclear, genetic factors do not seem to play a decisive role. The outlook is poor and the children do not seem to benefit from surgery. The monograph is well written, convincing in its conclusions. It is of interest for pediatricians, orthopedicians and neurologists. H. E. Kaeser, Basel