some the relatively simple expressive mechanisms or receptive functions seem to be more disturbed than the higher and more complicated aspects of the language process. In the others, when there is more extensive and proportionate deterioration in all parts of the language process, non-language performances are well preserved in some and considerably disturbed in others.

(5) It is apparent that aphasia is not a unitary disorder, but a group of disorders representing different types of disintegration within the language process, and sometimes involving changes in mental functioning beyond the language process.

(6) (*a*) Apraxia the author limits to disturbances in familiar and more or less automatic acts, which do not depend on sensori-motor defects.

(*b*) Agnosia he limits to disturbances in the perception of formerly well-known objects, forms and sounds, when there are no sensory defects to explain the disturbances.

(7) There are two types of apraxia, one involving movements of the muscles of speech, and the other, familiar acts, such as manipulating an object or winking. The first type is the only apraxic condition which appeared in the clear-cut cases of aphasia. Some of the aphasic patients were unable to take positions of the lips, teeth and tongue at command or by imitation when the production of actual sounds was not in question. The apraxic symptoms of the other type appeared in cases of general deterioration with aphasia or in cases of bilateral lesion.

(8) Agnosic disturbances in the recognition of well-known sounds other than speech sounds, of objects or of forms, other than letter symbols, were not found in patients of the aphasic group. Probably agnosic disturbances, as defined, do not occur in clear-cut cases of aphasia. They may, like the apraxic disturbances of the second type, occur in cases of general or extensive cerebral deterioration.

(9) From the standpoint of localization there was definite evidence of the site and extent of the lesion in three cases in which autopsies were obtained, and some idea of the localization of the lesions in eleven other cases of tumour, and in seven traumatic cases. Analysis of the side where the lesions appear in relation to handedness shows that the dominance indicated by handedness is a criterion of the crucial hemisphere for speech in about 95% of the cases. The lesions were preponderantly in the anterior portion of the brain and to a less extent in the parietal and temporal zones. In the receptive cases as a group the neurological symptoms also indicate a preponderant implication of the anterior part of the brain, but less than in the expressive cases, and with a greater involvement of the parietal and temporal zones.

In the expressive-receptive cases the neurological symptoms point strongly to implication of the anterior part of the brain, but because of the patients' great language difficulties, little can be determined about the extent to which the posterior areas are involved.

In all the amnesic cases, the lesions consisted of tumours, four of which were large, slowly growing gliomas. These cases emphasized the fact that a relatively specific language disorder can occur with extensive lesions, and pointed to the importance of the nature of the lesion. Language disorders go far beyond the speech process; language is the result of the unified activity of the whole brain.

G. W. T. H. FLEMING.

*The Argyll Robertson Pupil.* (*Arch. of Neur. and Psychiat., vol. xxx, p.* 357, *Aug.*, 1933.) *Merritt, H. H., and Moore, M.*

The authors define the Argyll Robertson pupil as having (1) absence of reaction to light; (2) miosis; (3) imperfect dilatation in response to instillations of atropine and to painful stimuli; (4) absence of reaction to vestibular stimulation; and (5) active reaction on accommodation for near objects. These five features the authors consider as due to destruction of the pupillary light reflex fibres and the sympathetic fibres. These fibres run together for a short distance in the anterior end of the brain-stem just ventrally to the posterior commissure, so that a lesion at this point would explain the phenomena. Occasionally cases with gliomatous

involvement of this area will show the Argyll Robertson pupil. In a series of 749 cases of neurosyphilis, the authors found the Argyll Robertson pupil present in 38·3%. G. W. T. H. FLEMING.

*Concerning the Striatal Localization in Chronic Progressive Chorea.* (*Journ. Nerv. and Ment Dis., vol. lxxviii, p.* 470, *Nov.*, 1933.) *Neustaedter, M.*

The author describes the pathological findings in three cases of chorea, two of the Huntington type, in a brother and sister, and one senile arterio-sclerotic.

All his cases showed convolutional atrophy involving the frontal and central gyri and a corresponding diminution of the white matter. The caudate nucleus and putamen were atrophic in the brother and sister. In the other case these nuclei appeared fairly normal. The globus pallidus was considerably shrunken in the brother and sister. Microscopically the cortex, in the brother and sister, showed obvious disorder of the cell arrangement in the third and fourth layers. In the third case all layers presented this disarrangement, and in addition many areas of softening were present. Changes in the small cells of the neo-striatum in the brother and sister were of a chronic degenerative type, while those of the other case were of an acute type due to arterio-sclerotic changes. The pallidal cells were not involved in any case. In the third case the thalami, red nuclei and olives were markedly affected. The cell destruction was of a chronic nature antedating that in the neo-striatum. In the cerebellum the changes in the first two were slight, but in the third case the dentate nuclei showed considerable cell destruction of a chronic type. The author concludes that in all three cases the choreiform syndrome was probably due to the destruction of the small cells of the neo-striatum. The third case supports the views of Jakob and Vogt with respect to the rôle played by the basal ganglia and cerebellum in their relation to the neo-striatum in the production of the choreiform syndrome. G. W. T. H. FLEMING.

*A Comparison of the Viscosity of Muscles in Catatonic and Parkinsonian Rigidity.* (*Arch. of Neur. and Psychiat., vol. xxxi, p.* 87, *Jan.*, 1934.) *Finkelman, I.*

The author found that the muscles of patients suffering from catatonic dementia præcox possess a higher degree of elasticity and but little internal friction (viscosity). Catatonic rigidity differs in this respect from the rigidity of chronic encephalitis. The difference between the muscle tonus curves of chronic encephalitis and catatonia is evidence that the muscle rigidity in these two conditions is not due to physiological interruption at the same levels. G. W. T. H. FLEMING.

*A Contribution to the Study of Late Cerebellar Atrophy with Rigidity* [*Contribución al estudio de la atrofia cerebelosa tardía con rigidez*]. (*La Semana Méd., vol. xli, p.* 109, *Jan* 11, 1934.) *Dimitri, V., and Victoria, M.*

The description and discussion of a case leads to the following conclusions: It is possible to have states of plastic rigidity with integrity of the basal ganglia. A cerebellar symptomatology may coexist with Parkinsonian rigidity. But it is also possible to meet with two alternatives: (1) The cerebellar symptoms may be partly or wholly replaced, during the later stages of the illness, by Parkinsonian symptoms; (2) the Parkinsonian syndrome may be replaced, before the end of the illness, by a typical cerebellar syndrome. M. HAMBLIN SMITH.

*The Syndrome of the Median Cerebellar Line* [*Sindrome de la línea media cerebelar*]. (*La Semana Méd., vol. xli, p.* 2, *Jan.* 4, 1934.) *Obarrio, J. M., Dowling, E., and Pedace, E. A.*

The structures of the middle line of the cerebellum are the seat of a series of new-growths, of characteristic histopathology and of very varied evolution. The clinical picture produced by one of these growths is, with slight variations, always the same; for this reason the title set out above is the most suitable. The syndrome