

a characteristic appearance in the tissues. The consideration of the histology and the distribution of the lesions, also, contributes enough factors to make full identification possible. Many other cases probably exist in nature not yet studied, for which other forms of *torulæ* or yeasts may be found. The present classification aims merely to prevent confusion and to make clear the distinctions possible up to this time. The term blastomycosis has resulted in confusion of different diseases in the past and will continue to do so if used in the future, on account of its insufficient biological significance. Oidiomycosis is the proper name for the diseases occurring near Chicago and caused by the organisms budding in tissues and producing mycelium in cultures. *Torula* infection, coccidioidal granuloma, and yeast infection sufficiently designate the other diseases studied.

JELLIFFE.

CLASSIFICATION OF NERVOUS DISEASES. S. E. Jelliffe and W. A. White.
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The authors suggest that the present classification for nervous diseases in our textbooks is somewhat unsatisfactory, especially in the division of nervous and mental diseases, as not properly showing the interrelation of the two. Recent developments of physiology and internal medicine show the way to the needed change. Reference is made to the development in knowledge of the vegetative nervous system and the endocrine glands which have served the twofold purpose of bringing the several functions of man into a closer knit harmony and at the same time correlating that harmony with the manifestations of the organic activities as found in the lower animals. This last, they say, has been the result because the developments have had to do with what are called lower, simpler or, more properly, phylogenetically older forms of activity or forms of reaction. The expression "phylogenetically older" is the key to the principle of the classification which has long governed in the biologic sciences, the simpler and older merging by insensible gradations into the more complex and more recent. After a long period it can now be perceived from our physiologic data how the integration of the human unit as a whole has come about, and Sherrington has illustrated how this integration has been accomplished through the nervous system "in the simple reflex with its innervation of agonists on the one hand and antagonists on the other, and the channeling of final common pathways for nervous discharge. The conflicting tendencies, the ambivalency, the path of opposites—the final issue in high integrations made possible by tension of reciprocal innervations at sensorimotor levels—is found also to be the rule in the vegetative nervous system, that phylogenetically older division, with its double set of pharmacodynamically demonstrated opposed elements mediated, at least in part, by equally opposed, exciting and inhibiting chemical substances secreted by the endocrine glands, the hormones. Finally, an analogous ambivalent mechanism is seen working at the highest, the most complex levels, the psyche, which determines conduct with the assistance of the phenomena called consciousness, in which a psychologic symbolism is found replacing sensory and motor neurons, and exciting and inhibiting hormones." The nervous system may be divided into these three levels of activity, the vegetative or physicochemical, the sensorimotor and the psychic or symbolic. The lowest and earliest biologic activities are physical and chemical, and the portion of the nervous system controlling them can be classed with the vegetative nervous system and that part of neurology concerning them be properly designated as visceral neurology. Here we find the disturbances of the glandular, gastro-intestinal, genito-urinary, vascular, respiratory, muscular, cutaneous and bony systems, also certain complex clinical groups involving mostly the

glands of internal secretion—the endocrinopathies. These have been largely studied in recent times, especially in connection with what are usually reckoned as other specialties of internal medicine, but can be adequately explained only through visceral neurology. Some parts of this field are yet but little elucidated and some are only known as symptoms in other systems, and much that is false is now being taught in regard to them. Sensorimotor neurology is that part of the general subject which is usually considered as if it included the whole. The field is pretty well cultivated and the classifications pretty well accepted. The third, the psychic level, is the most complex. Its function is no longer simply one of integration of the various parts of the individual, but has to do with the relation of the individual as a whole to his environments. It has been usual heretofore to consider only the phenomena of consciousness regulated by intelligence, but the error of the psychologists has been to suppose that the matter stopped here. It has been clearly well established that lying back of consciousness is a broader and more important territory furnishing motives of conduct, and the greatest deficiency in the psychology of the last century has been the neglect of the importance of the unconscious. With the help of the hypothesis of the unconscious it has come to be recognized that the psyche has its embryology and its comparative anatomy just as the body has; in short, its history which must be utilized. The two concepts of body and mind have originated from the nonrecognition of the unconscious, but now it has come to be recognized that the psyche is the end-result of an orderly series of progressions in which the body has used successively more and more complex tools to deal with its integration and adjustment. The hormone is the type of tool at the physicochemical level, the reflex at the sensorimotor level, and finally the symbol at the psychic level.

TASTE, PERIPHERAL AND CENTRAL. Kappers. (*Psychiatrische en Neurologische Bladen*, 1914, Nos. 1, 2.)

Kappers has been able, in his own researches and those of others, to follow the course of the taste organs in their distribution and development throughout the vertebrate series. Experiments show a very close relationship between the tactile and taste sensations. This functional correlation forms a basis for demonstrating the anatomical structure which serves the taste sensibility, both peripherally and centrally. The sensory taste fibers arise from the facial, glossopharyngeal, and the vagus. The vagus in man is much limited in the taste area, while a few fibers of the superior laryngeal are also concerned. In lower forms the vagus and glossopharyngeal innervate the caudad portion of the mouth cavity and the gill pockets, where these are present. The glossopharyngeal is acceded by all authors as the nerve supplying the hindmost third of the tongue and the pharynx in man. But the innervation of the forward two thirds of the tongue is still a matter of controversy. It is claimed by some that the trigeminus, fifth, supplies the proximal taste area. However, there seems to be more abundant evidence in favor of attributing this function to the facial nerve. This evidence can be followed in the lower vertebrates where the wider distribution of the taste buds, particularly in fishes, gives opportunity to observe the anatomical correlation of touch and taste. It is found that hypertrophy of the proximal area accompanies hypertrophy of the facial but never of the trigeminus nerve. Where taste buds extend over various parts of the body it is again the branches of the facial rather than of the trigeminus that are likewise extended. Again atrophy of the taste area in birds is accompanied by atrophy of the seventh sensory root. Moreover, the peripheral course of the proximal fibers is generally accorded to the chorda tympani, and this receives its fibers from the facial ganglion, the ganglion geniculi, the cells of which do not