

description of nystagmus elicited by rotation, *i.e.*, perrotatory and postrotatory nystagmus, in healthy persons. Deviation of the cupula is considered to be the only cause of rotatory nystagmus, best evidenced by electronystagmography, in which the primary functions of nystagmus (amplitude and frequency) can easily be measured. The sum of the individual nystagmic pushes, the sum of the individual amplitudes and the angular velocity of the slow nystagmic phases are termed secondary nystagmus functions since they may be derived from the above primary functions. The criteria of latency and duration of rotatory nystagmus are considered to be integration limits of the secondary functions.

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Basic neurology.—J. F. Schadé and D. H. Ford. (American Elsevier, New York, 1973, 269 p., \$17.50).

Compared with the first edition published in 1965 this second version is something of a paradox. The material for the second edition was revised and improved, but curiously two major chapters of the first edition were omitted. In the "Preface to the First Edition" the authors stressed the importance of including subject matter from the major neurosciences since all of the disciplines have much to contribute to an understanding of the human brain. The new preface does not explain why the authors have now virtually ignored all of the neurosciences except neuroanatomy and neurophysiology.

The changes in the book have resulted in a needed improvement in readability. Most of the text material is now organized around figures with lengthy discussions in addition to the abbreviated captions which appear near the figures. Color has been used in the figures resulting in outstanding visual aids to learning. Figures have been frequently rearranged, enlarged and relabelled. The topic headings are much clearer, sections better organized and a larger page size used to permit a better figure-text organization.

There are two sections in the book, "Neuroanatomy" and "Neurophysiology". The 140 pages on anatomy are mostly excellently done including a new section of 14 pages on blood vessels. A rather serious omission remains from the first edition in that there is nothing, other than a sentence or two, on the autonomic nervous system. Some minor annoyances persist from the first edition, such as, illustrating a synapse with one from the brain stem of a fish when one from a human would have been better, and in another figure not identifying synapses as to type or animal.

The remainder of the book, on neurophysiology, is greatly improved. The authors now include and discuss stretch reflexes (very briefly), muscle spindles, motor organization, including cerebellar roles in motor control, and integration of sensory-motor events. Some errors cannot be overlooked. The functional distinction between muscle spindles and Golgi tendon organs is not correctly explained, for the authors attribute the measurement of muscle length *and tension* to muscle spindles and assert that firing thresholds are different for the two receptors. Elsewhere it is incorrectly stated that stellate cells in the cerebral cortex do not have spines and a heading that was proper in the first edition, "Electrical Events in Receptor Cells", has been improperly titled, "Electrical Events in Other Synaptic Functions".

It would seem that the omissions in the second edition, as compared with the first, will make the new version less appealing than it could have been. There is now nothing on brain composition, brain metabolism, emotion, learning, memory, drug effects on behavior, motivation, sleep and perception. This is a pity because what has been included is generally excellently presented and the book can be recommended for beginning courses on the nervous system. However, it will now be necessary for students using this text to find other sources covering the material omitted. The first edition is not a good choice for this purpose since it is about 10 years old.

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