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Preface

Memory is essential for the retention of learning. In the presence of memory deficits, new learning is impaired and performance of previously learned habits deteriorates. What is the nature of memory? Where does it reside in the brain? What biological events are associated with the formation and retrieval of memory? These questions are explored in the first chapter of this volume. The answers are not final, but we have learned a great deal about memory processes during the past few decades.

Memory is influenced by most of the pathological processes that influence the brain such as infection, trauma, cerebrovascular disorders, and metabolic and degenerative diseases. The nature and course of memory impairment are unique for each of the disorders and are fairly distinguishable. More than fifty conditions are known to cause dementia, which now affects several million Americans. In Alzheimer's disease, memory disorder predominates for two to three years before other intellectual functions are affected. Many neurological diseases, such as Huntington's disease, Friedreich's ataxia, and multiple sclerosis, are associated with progressive memory deficits.

Forgetting is a problem that becomes progressively worse with age. Most individuals in their forties begin to experience some difficulty in quick recall of past events. By age sixty definite changes are evident in the process of registration, storage, and recall of memory. At this age the material that is to be remembered is processed more slowly, stored less firmly, and poorly recalled.

Functional disorders of memory have fascinated psychologists for centuries. Posthypnotic amnesia has been attributed to functional separation or dissociation in different types of mental processes. Hypnotically induced age regression highlights selective activities of childhood and does not involve total reinstitution of childhood mental processes and memories. The dissociative disorders of memory, such as psychogenic amnesia, fugue, depersonalization, and multiple personality, have moved up to the forefront of scientific investigation. Better understanding of memory impairment in depression and schizophrenia has led to innovative therapeutic interventions.

A large number of drugs have been shown to influence memory. Clinicians need to become more aware of the memory-impairing effects of various drugs, especially in the treatment of the elderly with marginal memory functions. Chronic use of alcohol, even in small amounts, appears to have an accumulative effect on the nervous system, producing progressive impairment of intellectual and memory functions.

The treatment of memory disorders is just beginning to receive the attention of clinicians and researchers. Memory clinics have been established in various medical centers. A large number of drugs, such as cholinergic drugs, stimulants, and nootropic drugs, are being experimentally employed in an effort to improve memory deficits. Other methods of treatment, such as surgical procedures to improve brain blood supply and rehabilitation methods to help older people better organize their daily activities, have become important tools in the management of memory disorders.

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Springfield, Illinois

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