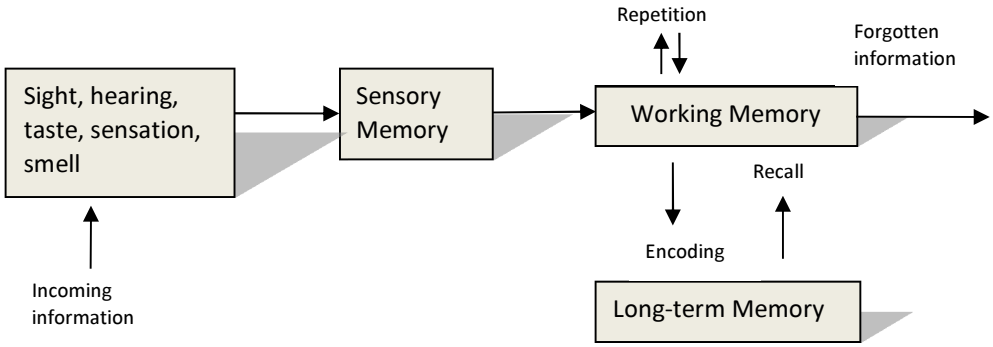
INTRODUCTION

From birth and throughout life, we are constantly dependent of our memory. In almost all human activity a memory function is involved: when we read the newspaper in the morning, when we drive our car to work, when we solve a task together with our colleagues, or when we watch TV in the evening. Without functioning memory, many everyday activities become overwhelming.

MEMORY

In our daily lives, we are constantly exposed to information that is first processed by our sensory systems, such as hearing and sight. A small part of the information we receive falls into our consciousness and is managed by our working memory. Of the information that we process in our working memory only a fraction will, in turn, be stored in our long-term memory as a result of deeper processing.

FIGURE 1: MEMORY - FROM INCOMING INFORMATION TO ENCODING



SENSORY MEMORY

In our sensory memory we store incoming information from our senses for a very short time. All new information will first pass through our sensory memory before it is transferred to other parts of our memory system. The sensory memory consists of different types of sensory registers that handle information from our various senses such as hearing, sight and touch.

WORKING MEMORY

We need working memory to maintain, process and use information in “real time”. It is also a necessary component in order for us to learn new skills. A characteristic feature of working memory is that its capacity is limited. Working memory will be described in more detail later in the book**.**

LONG-TERM MEMORY

Our long-term memory can store a very large amount of information over a long period of time, sometimes for life. A common view is that information passes through working memory before storage in long term memory.

Long-term memory is usually divided into two sub-categories: declarative memory and non-declarative memory. Declarative memory is primarily information that we can put into words and can in turn also be divided into two types: semantic memory and episodic memory. In the semantic memory we store general knowledge, for example names of capital cities, as well as information about the meaning of various words; it is therefore closely related to learning. In the episodic memory we store information about our personal experiences and it often answers the questions where, when, and how? For example: Where was my vacation last year? When did my cousin get married? How did we celebrate my eighteenth birthday?

Non-declarative memory involves experiences we intuitively find difficult to put into words and can be divided into two types: procedural memory and perceptual memory. Procedural memory is the memory of how we carry out various practical activities. Knowledge about how we ride a bike or drive a car are examples of information stored in procedural memory. Perceptual memory is our memory for different types of sensory experiences for example how a strawberry tastes or how corduroy feels to touch.

FIGURE 2: AN OVERVIEW OF THE MEMORY SYSTEM