Donald Olding Hebb was a Canadian born to two physicians in Chester, Nova Scotia, in 1904. He excelled in schoolwork until his reactions to authority led to difficulties in his later teenage years. He completed his undergraduate studies at Dalhousie University receiving a BA degree in 1925. He traveled to the beat of his own drum, engaging in teaching, farming, and common labor while he continued in self-study reading works within the developing field of psychology. In 1928, he enrolled in psychology at McGill university, where he received his MA in 1932. His studies were combined with part-time teaching, and he suffered from health problems and the death of his wife during his graduate studies. After these struggles, he left Canada in 1934 and began serious graduate study with Karl Lashley at the University of Chicago. Lashley left Chicago for Harvard in 1935, and Hebb moved with him. In 1936, at age 32, he received his PhD based on his research on the brains of rats.

After a brief stint teaching first at Radcliffe, Hebb taught for three years at Queens University from 1939 to 1942. In 1942, he moved to Orange Park, Florida, to the Yerkes Laboratories and worked again with Lashley, who had become its director. While at Yerkes he wrote his influential book, *The Organization of Behavior*. In 1947, he moved back to Montreal and to McGill, to study human brain functioning with Wilder Penfield, and he remained until he retired in 1974. He moved back to his undergraduate university, Dalhousie in 1980 and was an Emeritus Professor there until his death in 1985.

Hebb received numerous honors for his enormous contributions to neurophysiology and what is now called neuroscience. He was president of the American Psychological Association in 1960 and received the association's Distinguished Scientific Contribution Award in 1961. The Canadian Psychological Association gives the D. O. Hebb award to those who have made distinguished scientific contributions.

During his time with Penfield and at Queens, Hebb met the problem that determined the course of his later work. Some cases of large loss of brain tissue showed little effect on intelligence as measured by IQ tests or as seen in everyday life. How could one explain a high IQ with a damaged brain? The theory of cell assemblies was proposed as an answer, and this turned out to be relevant to other problems. Experiments confirmed the importance of early experience in the growth of mind and intelligence, and at maturity, the continued need of exposure to a normal sensory environment for mental health.

Perhaps Hebb's most important contribution was his theory of the relationship of neuronal firing and how this affected learning. Hebb's notion of grouping of cells into a processing unit, cell assemblies, and how cell assemblies affect incoming stimuli and learning, was the essence of his theory. His work was extended by his successful doctoral students including Milner, Melzack, and many others.

**Suggested Readings**
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