

John von Neumann 1903 - 1956

John von Neumann, the famous mathematician and theoretical physicist, developed the mathematics of quantum mechanics, but later his interest turned to non-linear phenomena such as shock waves produced by explosions. The solution of this problem demanded huge amounts of calculation and Neumann had to use calculator machines. It was he who introduced importance of the binary code : 1 or 0, yes or no, (which correspond to electronic switch on or switch off). He was also interested in computation in order to extend the realm of mathematics to meteorology and climatic changes. Neumann had the idea in 1944 that not only the initial data but even the program can be electrically introduced to the computer and stored in it.

John von Neumann was born in 1903, in Budapest, to a very distinguished family. His father, Max von Neumann, was a banker, who must have served his country well because he was made a nobleman by the king.

From en early age John (also János) showed his high ability in mathematics. He was able to multiply eight digit numbers in his head. He had a brilliant memory and sometimes talked with his father in classical Greek.

From 1921 until 1925 Neumann was registered at Budapest University as a student of mathematics, but he spent most of his time in Zürich, studying chemistry.

He received his diploma in chemical engineering in Zürich and his PhD degree in mathematics in Budapest at about the same time. After that he moved to Göttingen to be an assistant of the prominent mathematician David Hilbert. At that time he developed statistical interpretations of quantum mechanics. He wrote 'The Mathematical foundation of Quantum Mechanics' which became a classic textbook.



He worked out the theory of poker



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When the Nazis came to power in Germany in 1930, Neumann moved to America. He obtained a post at Princeton University; Janós von Neumann became 'Johnny'.

At Princeton, Johnny soon became a leading scientist. Apart from science, Neumann was very fond of playing poker and driving. He even published a paper on the mathematical theory of poker and his work led to the foundation of the mathematical theory of games.

Before World War II Johnny started working for the military establishment at Los Alamos. Nemann participated in constructing the fission bomb, and even attended its testing in the South Pacific in 1949.

Neumann was married twice. His second wife, Klara Dan, became one of the first coders of electronic computers. He was considered by his colleagues as one of the most talented men around. Teller characterized him jokingly:

1. Johnny can prove any statement

2. Anything Johnny proves is right

Unfortunately, Neumann did not live long enough to see all the development of computer technology. He died in 1956 from cancer.

