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GUGLIELMO MARCONI

1874 - 1937

Guglielmo Marconi, the inventor of the radio, was born in Bologna, Italy, in 1874. His family was quite well-to-do, and he was educated by private tutors. In 1894, when he was twenty years old, Marconi read of the experiments that Heinrich Hertz had performed a few years earlier. Those experiments had clearly demonstrated the existence of invisible electromagnetic waves, which move through the air with the speed of light.

Marconi was immediately fired by the idea that these waves could be used to send signals across great distances without wires. This would provide many possibilities of communication that were not possible with the telegraph. For example, by this method messages might be sent to ships at sea.

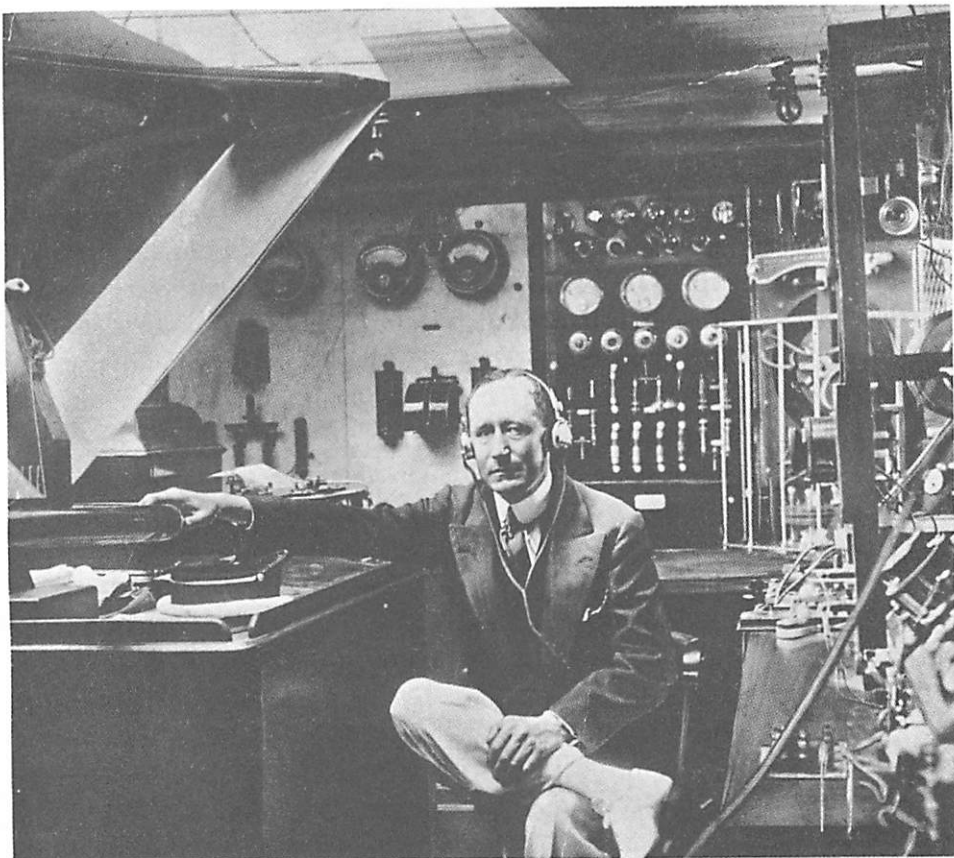
By 1895, after only a year's work, Marconi succeeded in pro-

ducing a working device. In 1896, he demonstrated his device in England, and received his first patent on the invention. Marconi soon formed a company, and the first "Marconigrams" were sent in 1898. The following year, he was able to send wireless messages across the English Channel. Although his most important patent was granted in 1900, Marconi continued to make and patent many improvements on his invention. In 1901, he succeeded in sending a radio message across the Atlantic Ocean, from England to Newfoundland.

The importance of the new invention was dramatically illustrated in 1909, when the S.S. *Republic* was damaged in a collision and sank at sea. Radio messages brought help, and all but six persons were rescued. That same year, Marconi won a Nobel Prize for his invention. The following year, he succeeded in transmitting radio messages from Ireland to Argentina, a distance of over six thousand miles.

All these messages, by the way, were sent in the dot-and-dash system of Morse code. It was known that the voice could also be transmitted by radio, but this was not done until 1906.





Marconi in his floating laboratory, the yacht "Elettra."

Radio broadcasting on a commercial scale only began in the early 1920s, but then its popularity and importance grew very quickly.

An invention to which the patent rights were so extremely valuable was certain to stimulate legal disputes. However, this litigation died out after 1914, when the courts recognized Marconi's clear priority. In his later years, Marconi did significant research in shortwave and microwave communication. He died in Rome, in 1937.

Since Marconi is famous only as an inventor, it is clear that his influence is proportional to the importance of radio and its

direct offshoots. (Marconi did not invent television. However, the invention of radio was a very important precursor of television, and it therefore seems just to give Marconi part of the credit for the development of television as well.) Obviously, wireless communication is enormously important in the modern world. It is used for the transmission of news, for entertainment, for military purposes, for scientific research, and in police work, as well as for other purposes. Although for some purposes the telegraph (which had been invented more than half a century earlier) would serve almost as well, for a large number of uses the radio is irreplaceable. It can reach automobiles, ships at sea, airplanes in flight, and even spacecraft. It is plainly a more important invention than the telephone, since a message sent by telephone might be sent by radio instead, whereas radio messages can be sent to places that cannot be reached by telephone.

Marconi has been ranked higher on this list than Alexander Graham Bell, simply because wireless communication is a more important invention than the telephone. I have ranked Edison slightly above Marconi because of the vast number of his inventions, even though no one of them is nearly as important as the radio. Since radio and television are only a small part of the practical applications of the theoretical work of Michael Faraday and James Clerk Maxwell, it seems fair that Marconi should be ranked considerably below those two men. It seems equally clear that only a handful of the most important political figures have had as much influence on the world as Marconi has had, and therefore, he is entitled to a fairly high place on this list.