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Voices Through the Wires: The Reception and Experimentation of Bell's Telephone in Italy, 1877– 1878

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This talk examines the multifaceted scientific and technical reception of Bell's telephone in Italy during the crucial years of 1877–1878. After Bell patented his telephone in 1876, news of the 'speaking telegraph' reached Italy in February 1877 via the newly established journal *L'Elettricista*, edited by Lamberto Cappanera. Technical information subsequently circulated through specialised periodicals and the popular press, generating both enthusiasm and critical analysis and overcoming an initial scepticism arising from the device's American origins. From late 1877, pioneering experiments commenced, following distinct approaches: practical demonstrations in Milan by the engineer Marco Maroni and the Gerosa brothers; systematic investigations by Francesco Rossetti in Padua; and physico-mathematical analysis by Galileo Ferraris in Turin. Particular attention is given to the distinctive contributions of Alessandro Serpieri, who analysed not only the physical mechanics of transduction—proving sound transmission was possible even without the metallic diaphragm—but also fundamental questions of signal perception. Notably, Serpieri shifted the focus from purely technical matters to auditory perception's cognitive and epistemological problems. Through his ingenious phonetic experiments, which used unknown languages or words read backwards, Serpieri demonstrated that the telephone's apparent perfection depended less on the apparatus's technical fidelity and more on the listener's active cognitive processing. These diverse lines of inquiry—spanning technical experimentation, theoretical analysis, and cognitive investigation—integrated Bell's invention into Italy's scientific culture and contributed original insights that anticipated twentieth-century developments in psychoacoustics and communication theory.

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