ENCYCLOPÉDIE D'HISTOIRE NUMÉRIQUE DE L'EUROPE

EUROPEAN OBJECTS

# Between innovation and memory: Phonographic culture in Europe, 1877-1914

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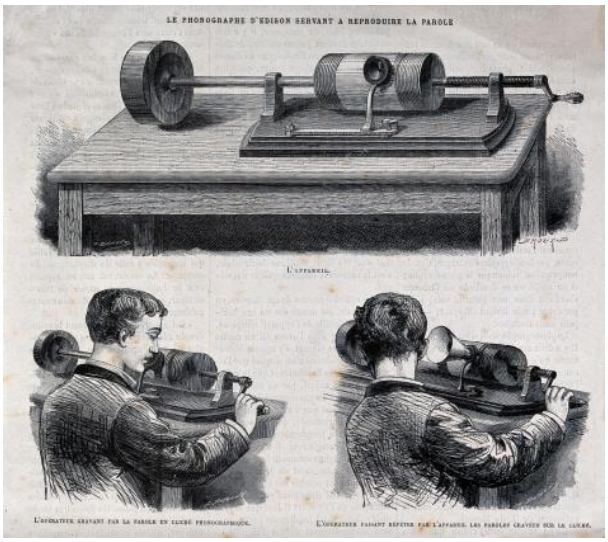
**ABSTRACT**

This entry begins with a synthetic description of the origins and functioning of Edison's talking machine (1877) in relation to earlier continental inventions such as Edouard-Léon Scott De Martinville's phonautograph (1857) and Charles Cros's Paleophone (1877). It retraces how the talking machine was first encountered in Europe, giving an overview of its changing critical reception and consumption across the period up to the First World War as new media practices progressively coalesced (with reference to a number of sites, devices and events such as the 1889 Universal Exhibition in Paris). The transnational origins of the recording industry—and the coexistence of a wide range of phonographic goods and practices—are also highlighted. Finally, the entry insists on recorded sound as a mnemonic device, which came to profoundly shape twentieth-century heritage practices—up to the present day.




*Using an Edison talking machine. Wood engraving, c. 1878.* Source : Wellcome Collection..

This entry surveys the technical emergence and early social life of the phonograph before describing how sound recording contributed to shaping novel infrastructures of memory.

**Development and dissemination**

When US inventor Thomas Alva Edison and his Swiss-born associate John Kruesi built the first phonograph in early December 1877, they brought to fruition the ancient scientific dream of preserving the human voice. A number of prototypes had preceded Edison's talking machine. In 1857, Edouard-Léon Scott de Martinville (a French printer and acoustician) invented the phonautograph: his machine, used in teaching acoustics, effectively captured sound vibrations but couldn't reproduce them. In April 1877, French poet and chemist Charles Cros imagined the 'Paleophone', a never-realised device for etching the voice on a rotating disc. Edison's phonograph incorporated aspects of the phonautograph and earlier scientific instruments for direct recording. To record, the user had to speak into a mouthpiece while manually rotating—as uniformly as possible—a cylinder covered in tinfoil. The mouthpiece terminated in a diaphragm with a stylus at its center, making indentations in the tinfoil as it vibrated with the sound. The sound recording – or phonogram – was played back using a stylus attached to a listening tube.

It is worth noting that the pioneering legacies of Cros and de Martinville would not be recovered until the mid-1920s: in its early decades, the phonograph was predominantly associated with a quintessentially American form of modernity. British engineer Henry Edmunds, visiting the Edison Laboratory in late 1877, was given an early opportunity to see the device before it was publicly demonstrated in the US. Greatly impressed, Edmunds notified *The Times* of its extraordinary potentials. On 17 January 1878, the London-based newspaper devoted an article to the technological novelty, a news item soon to be circulated across Europe. The talking machine was demonstrated in London the following month and subsequently toured European metropolises, with lucrative public demonstrations organized by continental agents of the newly created Edison Speaking Phonograph Company. European audiences, although they keenly attended phonograph demonstrations, had their hopes repeatedly disappointed and complained of the harshly distorted, metallic sound of tinfoil cylinders, which proved unable to persuasively replicate the human voice. The introduction of Edison's Perfected Phonograph (using wax cylinders) in June 1888 did much toward improving acoustic accuracy, contributing to the broader cultural dissemination and commercial exploitation of recorded sound in the 1890s.

**Production, reception and consumption**

The recording industry was one of the earliest transnational industries, involving a great heterogeneity of individuals, knowledge practices, sites and narratives. Not only were big firms—such as Edison-Bell, Columbia and Pathé—implemented in several countries across the world, they also relied on materials, capital and—increasingly—repertoires drawn from around the globe. A vast number of country-specific makes, based on Edison's patent, competed at the turn of the twentieth century, with thirty different types of wax cylinders manufactured in Britain alone. Germany was a key producer of talking machines and blank cylinders in Europe, exporting a large portion of its wares to Britain. Before being coopted as a domestic musical device, the phonograph was primarily marketed as a dictation device for use in the office. However, only two minutes of sound —the equivalent of 400 words—could be stored on early cylinders, seriously curtailing the phonograph's usefulness in a

professional setting.

The Perfected Phonograph graced the Crystal Palace (London) during the Handel Festival in June 1888, when a performance of the 'Israel in Egypt' oratorio was recorded. The following year, visitors from all ages and social backgrounds appreciatively listened to pre-recorded cylinders at the Paris Universal Exhibition. Although record-listening was frequently dismissed as a desultory and immature pastime by 'serious' music connoisseurs, a market for recorded sound was developing, with popular songs and military and brass band music being the most recorded genres of the period. It was now possible to record up to four minutes of sound, though cylinder duplication remained a laborious and time-consuming process. For instance, in order to obtain 200 copies of a recording, the piece had to be performed twenty times in front of ten recording horns. The introduction of Berliner's flat gramophone disc in 1887 solved the problem of mass duplication. Gramophone discs and cylinders coexisted for about twenty years before the former—a cheaper and sturdier format—came to dominate the market. As the disc became more widely adopted, several European specialised magazines were founded including the Berlin-based *Phonographische Zeitschrift* (1906), which published the earliest pieces of record criticism, legitimising phonographic listening as an educational and even mind-elevating occupation.

While private enjoyment of a phonograph still constituted a relative luxury at the turn of the 20th century, the talking machine was often experienced collectively in public spaces such as fairs, amusement arcades and circuses—as well as being visually consumed through the abundant print media of the period. The phonograph was promoted as a sophisticated totem of modernity, yet it remained tinged, especially in the late Victorian popular imagination, with superstitious beliefs. To record voices meant to capture 'ghosts': what would soon cease to exist, but would persist as an external acoustic trace.

**A mnemonic device**

Much like photography and cinematography, the phonograph came to profoundly challenge and alter people's relationship to the past, providing a tenuous yet tangible sensory route into vanished moments in space and time. The first institutional sound archives were established in Vienna (1899), Berlin (1900), and Paris (1911) to preserve voices and music, for scientific rather than cultural purposes. Amongst the first recordings to be collected were those of the 'great personalities' of the time – almost all of them male – including politicians and poets such as Bismarck, Gladstone, and Tennyson. The disquieting yet uncannily touching experience of listening to disembodied voices—especially the voices of loved ones—was effectively depicted by Marcel Proust throughout the autobiographical volumes of *In Search of Lost Time* (1913-1927). The advent of recording broke the seeming continuousness of time into small independent units repeatable at will. Previously ephemeral sounds could now be preserved and experienced in a nonlinear fashion as discrete objects. Although cylinders were fragile and largely ephemeral media artefacts, they nonetheless participated into the large-scale reification, storage and dissemination of the audiovisual past, a cultural process which intensified with the internet. There exist some striking resonances between the early reception and proposed mnemonic uses of the phonograph and the contemporary fantasy of the internet as a global cultural archive.

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