

Anne-Laure CERMAK, “Pneumatic Mail, an original system for the rapid transport of mail: the Paris network from its origins to its demise” (“La poste pneumatique, un système original d’acheminement rapide du courrier : l’exemple du réseau de Paris des origines à sa suppression, 1866-1984,”), master’s thesis in contemporary history directed by Jean-Pierre Chaline, Paris IV - Sorbonne, 2003.

In the 19th and 20th centuries the pneumatic mail played a special role for Parisians and in the history of the Post and Telegraph. Physically the pneumatic mail network was composed of steel tubes for the most part through which cylinders called cursors used for the transport of telegrams and urgent communications were propelled by differences in air pressure. These tubes traversed the city of Paris underground and arrived at specialized machinery located in post offices. There the pneumatic correspondence was received by postal employees before being forwarded by special mail carriers.

Little critical attention has been devoted to this system to date, with the exception of reports and scientific descriptions by engineers and network controllers. This study will attempt to demonstrate the historical value of the pneumatic mail in Paris.

The dates that bracket our study correspond to the first tests of the network after it was opened in 1866 to the end of service in 1984. By studying the entire period we are able to trace the different developmental stages of the network and its role in the history and politics of the Post and Telecommunications service, in post offices, and Parisian society in general. We conclude our study by looking at the network in the context of the various modes of transporting mail in the capital and changes in its size.

One of the special features of this network is its connection with the history of the post office, the telegraph, and telecommunications in the second half of the 20th century. Historically pneumatic correspondence was subscribed to the telegraph; this explains its attachment in 1866 to the telegraph and not the postal service. With the 1879 decree signed by Marshal Mac-Mahon, the network was officially opened to the public and the limit on the number of words transmitted was lifted. These messages were thought of as little post cards that were sent by tube instead of more traditional channels, and so the pneumatic mail was born in Paris. Until the network was closed in 1984, the Post Office was responsible for the postal operations of the system, while the telegraph service followed by the telecommunications sector maintained the tubes and the technical works of the underground factories that produced the air propulsion for correspondence.

This situation offers a vast field of study at the intersection of postal and telecommunications history: the network gave rise to issues related to its physical presence in the sewers and underground tunnels of Paris, to the economy but also sociology, given the type of work the Post and Telegraph staff was required to perform as well as its societal influence. The technical evolution of the system is closely linked to economic issues: the tubes that formed the structure of the network were not replaced when it was noted that the network was no longer profitable.

The network grew increasingly from 1866 to 1930, corresponding to a great phase of technical evolution as well as discovery and use by the Parisian public. Several factors account for the birth of the pneumatic mail: when the electric telegraph network became saturated during the Second Empire, Napoleon III decided to use another telegraphic mode and had the sewers fitted

out by the engineer Belgrand in order to accommodate many of the tubes for the network; the work of English and French engineers in the 19th century on the atmospheric transport of the mail also contributed to its development.

The French administration was widely influenced by English experiments with pneumatic mail, especially trials in London which was confronted a few years before Paris by the saturation of its electric telegraph network. From 1836 onward in France, Ador, a French chemist, had been interested in the transport of letters via compressed air well before the saturation problem was noticed. Other cities around the world like Berlin, Vienna and New York adopted an electric telegraph network during the 19th and 20th centuries. This study compares the rapid development and usage of the Paris network with the network in other cities. Did the Paris network, which reached its maximum length of 450 kilometers in 1934, benefit the most from technological innovations?

During the first main period of the history of the network, success was measured by the gradual extension of the network to encompass all Paris. It was originally limited to business areas in the center of Paris where the rapid exchange of information was significant: in 1868 the first set of tubes connected the two main telegraph exchanges located at the Stock Exchange and on the de Grenelle Saint-Germain street. Capable of routing correspondence in less than an hour, it soon became the fastest mode of sending communications in Paris, especially since there were problems with the installation of the telephone network for much of the 20th century. From its position as a backup, the telegraph became an entirely independent system. The Post and Telegraph service created its own special staff: the person who “manned” the tubes and was responsible for managing incoming correspondence, the mechanic who operated the steam machines, mail carriers who delivered mail by bicycle or motorbike from the post office to its destination.

We attempt to determine to what extent use of the pneumatic mail became “second nature” to Parisians. Familiarly called “le pneu” first by mail carriers and then the public, this nickname signaled its adaptation by the local population.

From the 1930s to the 1960s, a project to modernize the network preceded its decline. Our study shows that the modernization plan was left incomplete for several reasons. Ambitions were riding high: automatic receiving and sending machinery was to be installed in post offices to improve the performance of the network and reduce the painstaking work of the employees who handled the tubes. The other aspect of the modernization was the installation of electrical equipment that replaced the steam engines in the workshops where the air needed to propel the mail was produced. The electrical equipment was supposed to allow for an increase in air flow that would accommodate the ever-increasing amount of correspondence flowing through the tubes. The automation of routing techniques in this system corresponds to a similar period of modernization of the techniques for handling regular mail by the post office, such as the automation of mail sorting centers. It was even suggested that some of the sorting centers in Paris be connected by tubes, but this project was not followed up on.

In fact, from the 1960s and especially the 1970s onward, the network saw a period of decline: a drop in pneumatic circulation as well as in the credits conceded to the network, a physical structure that was wearing out; in short, there were so many problems that the Post and Telegraph decided to close down the network in 1983. We study the causes of this gradual abandonment of the network: with the general disinterest on the part of the Parisian public or the

post and telegraph service, the causes were complex. In July 1957 a “pneu” cost five times more than an ordinary letter. For the French postal service, the benefits of operating this system did not outweigh its deficit costs, at the same time as telecommunications services were turning toward new communications technologies such as the telephone or telex and were reluctant to renovate a system that had become a burden. With the exception of the hostility on the part of postal unions, the elimination of the pneumatic network ultimately met with no real opposition. Why was this network not adapted to new technologies and the environmental changes in the capital city? While the telephone made long distance communication possible and mail vehicles rapidly connected points in the suburbs, the pneumatic network remained restricted to Paris proper.

In the final analysis, one must recognize pneumatic network definitively marks the beginning of rapid communication. A symbol of the “birth of telecommunications,” it could not compete against other modes of communication. The failure of other pneumatic networks throughout the world for similar reasons underscores this hypothesis.