Economic History of Opera

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Abstract

Using a database of performances at five major opera houses from c1750 to c1950 I document that a shift in the performance of operas occurred in the mid-19th century, away from performing only recent works and for a short while, toward the emergence of a growing canon of known works and composers. The shift occurs roughly at the same time in all the theaters, suggesting that continent-wide factors were at play rather than national idiosyncrasies.

Looking for economic forces to explain the shift, I document the financial history of one theater, the Paris Opéra, from 1803 to 1914. Like many other theaters at the time, it was mostly managed by for-profit entrepreneurs. Problems of rising costs and high risks were constant preoccupations. The main rise in costs appears to be in the wages of artists, particularly soloists, with increasing inequality and the emergence of a star system. A strategy of risk-avoidance may have driven directors toward programming works with known track record of success.

Apologies to EHES 2015 participants for this very rough, preliminary, and incomplete draft.

Keywords: (JEL ).

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1 Introduction

This paper is a first venture into the economic history of opera.

The first point is that a substantial shift in the performance of operas took place in the middle of the 19th century. Before then, operas were produced in relatively large quantities and performed for a few years before being forgotten. There were a few exceptions, mostly local (Paris tended to have a culture of classics more than other opera houses; Vienna tended to preserve the memory of Mozart when he was forgotten everywhere else).

Can this be explained by economic factors? Of course, it is possible to ascribe this to preferences, or intrinsic quality. The latter explanation is simple: until 1850, no works worth keeping were produced. This is a little problematic: not only were good works produced before 1850, in fact a substantial part of the modern repertoire is made up of those works, rescued from oblivion over the years. Preferences might explain the fact, as follows: until the mid-1850, opera-goers valued novelty over quality. After 1850, tastes shifted toward quality. This explanation is only partial (why the shift?) and also does not explain why new works were constantly added to the repertoire after 1850.

My approach is to look for a documented shift in factors external to the opera industry. The intuition (yet to be modeled) is that increasingly high fixed costs made the performance of new works financially risky, and drove risk-averse entrepreneurs toward the safety of known successes.

To document this I turn to the Paris Opéra, not perhaps the most representative institution but the one I could research relatively easily. From 1831 until the 1930s it was managed by for-profit entrepreneurs who leased the institution. Admittedly they operated under many constraints which I document. They also received a sizeable subsidy but, as I show, it was lump-sum and hence did not affect decisions at the margin. I reconstruct annual budgets from 1803 to 1914 and look at revenues and costs, as well as capacity and pricing. I focus particularly on salaries of artists, which was the main source of growth in costs until the 1880s (hence during the period of the shift I wish to explain).
Tentative speculations will be offered in lieu of a conclusion.

2 The Formation of the Operatic Canon

2.1 The Repertoires of European Cities

The starting point of the enquiry is a database of all operas performed in the major European opera houses:

- Paris: Opéra (1750–1945)
- Paris: Opéra-Comique (1826–1914)
- Naples: San Carlo (1738–1987)
- Milan: La Scala (1778–1963)
- London: King’s Theater – Covent Garden (1760–1957)
- Vienna: Burgtheater / Kärntnerthortheater – Hofoper (1770–1944)

There are in fact two databases: one containing the identity and count of each opera performed in each year and each theater, and another database of operas with their characteristics: composer name and biographical information (birth and death date and place) and date and place of the first world performance. I then use the two databases to study the characteristics of the repertoire (in one sense of the word, namely, what is being performed in a given place at a given time).

Figure 1 displays the basic pattern. It plots the average age of the operas performed in each theater. The age of a work is the time elapsed since its first world performance, and the ages are weighted by the number of performances in each year. A very clear pattern emerges, with two regimes. Before the mid-19th century, the average age in most theaters is between 0 and 10. Paris is a bit of an outlier: one can discern periods of rising average age, or aging repertoire, one peaking in 1770 (shortly before the works of Gluck replaced those of Rameau), and another peaking in the 1820s. From the mid-19th century, the average age begins a steady rise everywhere, with a pause in the late 19th century when new works are being added, but then resumes and continues at a 45-degree angle through the 20th century.

This may seem surprising to those familiar with the modern repertoire of opera houses: there was a time when operas were performed as soon as they were composed, played for a few years, and then tossed out. Opera, even of
the high-brow sort, was entertainment rather than culture, more like cinema today. Figure 1 dates the beginning of opera as canon to the mid-19th century.

The average is only one summary statistic. Many others can be computed. Figures 2 and 3 show the quantiles of the distribution. An important element of the pattern of aging becomes clear: new works are continuously being added, and some do join the repertoire, tending to lower the average age. But at the same time old works are also being resurrected and added to the repertoire, tending to counteract this lowering. Some vintages appear to contain more durable works, tracing parallel 45-degree lines in the age distribution.

Figure 4 shows the following statistic: in each theater and each 5-year period, I consider the works premiered, tally up their cumulative number of performances over time for those works, and show the average per cohort. A flat line means works from that half-decade are not performed, a rising line means works from that cohort are being performed. Some lines rise for a long time and then stop, indicating the emergence of “premature canons.”

Are the composers being performed dead or alive? Figure 5 shows the answer. The same broad pattern: there is a big difference between pre-1830 and post-1870, although again Paris is an outlier.
Although the pattern of aging is broadly similar across countries, there are important differences. One emerges when we consider the origin of works performed. Figure 6 shows the proportion of works performed in each theater that were premiered in that theater, that city, or that country. For this exercise contemporary rather than modern borders are used to defined countries, except for Italy, in which I included Lombardy (where Milan is located) and the Veneto (where Venice is located) even before their annexations in 1860 and 1866 respectively.

There is a pattern of internationalization of the repertoire through the 19th century, but it proceeds at different paces in the various cities, with London and Vienna being more open to foreign works earlier. Paris is the most closed city, with both the Paris Opera and the Opéra-Comique displaying a stronger home bias for longer.
A third database, which contains essentially all operas ever performed (somewhere around 33,000 distinct works) allows me to point out another interesting pattern, on the supply side so to speak.

A big shift starts in 1800, and is completed by 1850:

- the number of active composers doubles ("active" means he has already premiered his first work, not yet his last)
- composer productivity falls by half before the emergence of the canon
- the time elapsed between premieres doubles in the same period
- this is not sensitive to exclusion of lighter works or exclusion of "amateurs" (composers with only one work)

2.3 A hypothesis

As an economist, I look for economic explanations. I also share my tribe’s prejudice that preference-based explanations are, if not the last refuge of
scoundrels, a deeply unsatisfying route. This doesn’t mean I won’t model demand, and accept the notion of a quantity-quality tradeoff. But I wish to keep preferences constant.

Nor am I interested in the “objective quality” view. As a lover of Monteverdi, Cavalli, Lully, Haendel, Rameau, Mozart, and many other pre-Verdi composers, I will not postulate that works produced after *Il Trovatore* were simply better.

What I wish to explore is an exogenous shift in costs, which, combined with an undiversified, risk-averse entrepreneur, will bias programming choices toward works that are known to have a good track record, and avoid risky ventures on unproven works or composers.

The rest of this paper is a “deep dive” into the financial history of one institution, the Paris Opéra, over a century, a period that spans the shift that I wish to explain.

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1Sorry, Joel Mokyr. We’ll just have to disagree.

2Figures 7–9 suggest that something interesting is also happening upstream, on the production side.
Figure 5: Share of dead composers being performed.
Figure 6: Share of works locally premiered, by theater, city, and country.

Figure 7: Number and productivity of active composers.
Figure 8: Deciles of productivity of active composers.
Figure 9: Average time elapsed since active composers last premiered a work.
3 History of the Paris Opera

3.1 Management of the Paris Opera

The management of the Paris Opera varied considerably over its 350-year history. It can be roughly divided into four periods.

During the first period the State created a privilege but left its operation to others. The origin of the Paris opera lies in an exclusive privilege granted by the king in 1669 to Pierre Perrin, revoked in 1672 and granted to Jean-Baptiste Lully. The institution had an exclusive monopoly on French-language opera throughout the realm, which meant in practice that it charged licensing fees to any other theater that wished to perform sung music on a stage. Until 1749 the privilege was granted to a succession of entrepreneurs. In 1749 the privilege was ceded to the city of Paris, which either managed the theater directly or entrusted it to an entrepreneur. The government’s involvement consisted mostly in enacting general regulations, in particular two regulations of 1713 and 1714 governing the management of the opera.

From 1780 to 1831 came the second period, interrupted by the French Revolution, of direct management by the government. In 1780 the Opera was entrusted to the Master of Revels (intendant des Menus Plaisirs), an officer in the King’s Household. With the Revolution came the abolition of all privileges and the deregulation of theaters, and the Paris Opera lost its privilege. The Paris Opera continued as an institution. It was taken over by the city of Paris from 1790 to 1795 (during which brief period direct management, leasing, and management by the artists were all tried) but returned under government management, at first under the ministry of the Interior, then from 1803 under the Household of the sovereign (First Consul, Emperor, King). Under Napoleon the Opera regained the substance of its former privilege, namely the exclusivity over the operatic genre (1806) and payments from all other theaters in Paris (1811).

The third period begins in 1831, when the new regime of Louis-Philippe returned to the 18th century tradition of leasing to an entrepreneur, with a fixed subsidy. Private management was interrupted from 1854 to 1866, when serious financial difficulties led to an effective nationalization of the Opera. For a brief while the monarchical model of supervision by an officer of the Household was followed, but in 1864 the deregulation of theaters deprived again
the Opera of its legal privilege (payments from theaters had ceased in 1831), and the government returned to the regime of subsidized entrepreneurship.

The final period begins in 1939 when the government placed the two subsidized lyric theaters, the Opera and the Opéra-Comique under the Réunion des théâtres lyriques nationaux. The Opera has been a government-run institution ever since.

During the period of this study, the management of the opera oscillated between two regimes, depending largely on political and financial circumstances: direct supervision and leasing.

3.2 Direct supervision

In one regime, which only existed during monarchical periods, the government managed the theater directly, under the close supervision of the Minister of the Royal or Imperial Household. The responsibility for managing the theater was entrusted to either one person, a director, or to two individuals, a director and an administrator. Financial responsibility for profits and losses rested ultimately with the ministry. The government would edict regulations governing the operations of the theater. The minister or some lower-ranking official had direct control over many aspects of the theater, including choices of works to perform.

Préfet du Palais surintendant des spectacles (1 Nov 1807)

3.3 Leasing: the contracts

In the second regime, the theater was rented out to a private entrepreneur, chosen by the government, who took on all financial risks. The terms of his contract were called the cahier des charges.

The cahier des charges, terms of reference or, as I shall call them, the contracts, became a fundamental element of the leasing of the Paris Opera. The first contract was signed in 1831. The duration of contracts varied somewhat. the leases of 1831 and 1835 were for 6 years, the lease of 1841 was

3In 1874, after the theater burned down and the Opera moved to the Palais Garnier, the State agreed to allocated 2,400,000F to rebuild new sets for the new opera house, and the profits were split between the entrepreneur and the State; the losses remained the entrepreneur’s responsibility. This profit-sharing did not appear in any other lease.
for 8 years, that of 1847 for 10 years, those of 1866 and 1871 for 8 years, and
from 1879 the norm became 7 years.

The contract specified the obligations of the entrepreneur. The basic terms
were similar from contract to contract, with some variations and, in general,
an increase in the obligations. From 1847 on, there was a general statement of
the purpose of the Opera: the director was to manage it in a way that befitted
its status as the premier lyric stage of France and to maintain it in “a condition
of luxury that distinguishes it from all other houses from the point of view
of the richness of sets and costumes as well as the number of artists” (1847).
From 1866 it was not just the number, but also the talent of the artists; from
1871 it was to distinguish itself in “the selection” and from 1891 “the selection
and variety of ancient and modern works,” The 1879 went as far as to state
that “the Opera is not an experimental theater (théâtre d’essai), it must be
considered the museum of music,” although this formulation was not repeated
afterward. In 1907 the directors were required “constantly to maintain in the
repertoire the main works of classical composers.”

Until 1891 the genres were restricted to operas with orchestral recitatives
(thus excluding spoken dialogue) with or without ballet, and ballets. From
1891 all kinds of lyrical and dance works were allowable, although an exception
was made in the 1891 contract for the opéra comique (as defined in 1807)
which remained the privilege of the theater of that name. From 1894 no genre
restrictions were placed. The other meaningful restriction was on the number
of new works to be performed. The requirements varied over time (see below).
The quotas were yearly but (from 1835) evaluated on a 2-year period, and
waivers could be obtained when the success of a particular work justified it. In
principle a new work had to be staged every three months, and only one work
by the same composer and librettist was allowed in a given year. Until 1891
the staging of all works required prior approval of the minister.

Other constraints were placed on the number of performances. A minimum
of three performances per week was imposed, and until 1866 no more than four
per week. The theater was to remain open continuously, unless the government
decided that renovations of the theater were necessary. The total number of
performances required increased over time, to reach 194 per year in the 1907
contract. In addition the director was allowed to organize concerts and balls.

Concern about the quality of performances translated into requirements on
staffing. A minimum number of artists (singers, choir, dancers, ballet ensemble,
orchestra) was stated, and from 1841 to 1871 minimum budgets for the choir, ballet ensemble and orchestra were specified. From 1879 this was replaced by minimum salaries in each category. Interestingly, however, although the engagement contracts for singers and dancers were standardized, no restrictions were placed on their salaries (in contrast with the regulations of Napoleon I, which placed upper limits on salaries).

The buildings (theater, workshops, and warehouses) and all materials were placed at the disposal of the entrepreneur. He was responsible for maintenance but not for major works or repairs, like any tenant. Inventories were drawn up at the beginning of the lease and the entrepreneur was obligated to return materials of equal value; any excess, in particular new sets and costumes, belonged to the State. Requirements were initially imposed to create new sets and costumes for all new works, but from the mid-1840s they were waived and eventually dropped. The director was required to insure the materials against fire, and a minimum insured value was specified from 1866.4

Until the 1850s disputes regarding the contract were adjudicated by the ministry’s commission on theaters, but in the 1850s recourse was granted to the Council of State and from the 1870s the contracts fell into the jurisdiction of regular courts.

The entrepreneur was required to deposit a bond. How he financed his operations varied: in the 1830s Duponchel was allowed to set up a limited partnership. This form of financing became more common from the 1870s, but limited liability corporations and joint-stock companies were not allowed. The contract was always granted to a specific individual (or several, in the 1840s and 1850s), whom the government wished to hold personally responsible. From 1891 the entrepreneur could withdraw from the contract if his cumulated losses exceeded 300,000F.

This restriction on the form of financing is highly relevant for an economist. It means that the director cannot be the CEO of a joint-stock company owned by diversified shareholders. True, he can seek investors who will be diversified, and may be diversified himself. But the absence of limited liability means that,

4The entrepreneur was responsible for the value but only up to the sum for which he had been insured. It seems that the insurance was not always sufficient. When the warehouses of the rue Richer burned down in January 1894, the entrepreneur could have relinquished the lease but decided to continue and pay for the costs of rebuilding the sets, approximately 1,000,000F.
Table 1: Requirements for new works in the successive lease contracts.

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Works</th>
<th>Opera Works</th>
<th>Ballet Works</th>
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</thead>
<tbody>
<tr>
<td>1831</td>
<td>6</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>1835</td>
<td>4</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>1841</td>
<td>4</td>
<td>9</td>
<td>2</td>
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<tr>
<td>1847</td>
<td>4</td>
<td>9</td>
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<tr>
<td>1866</td>
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<td>6</td>
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<td>1879</td>
<td>2</td>
<td>6</td>
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<td>1891</td>
<td>2</td>
<td>6</td>
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<tr>
<td>1894</td>
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<td>-</td>
</tr>
<tr>
<td>1907</td>
<td>2</td>
<td>8</td>
<td>-</td>
</tr>
</tbody>
</table>

to a first approximation, a risk-averse entrepreneur is a better model than a risk-neutral one. Risks will matter.

New works required

A common clause to all contracts was the requirement for the entrepreneur to perform new works. The requirements varied over time, and Table 1 summarizes them in terms of the minimum number of new works and minimum number of acts.

There was always the possibility of waivers granted by the supervising authority, although the requirement of producing at least one grand opera per year was in principle non-negotiable. From 1879 it was explicitly stated that a work previously performed elsewhere could be counted as new if the staging expenses were sufficiently high, at the discretion of the minister (in 1905 the minister refused to allow the revival of Gluck’s *Armide* on the grounds that it had been a commercial success).

Fulfillment was evaluated over periods of two years, with the possibility of substituting forward or backward between the two years, again with approval. Between 1831 and 1854 there was some flexibility: the required smaller opera (of 1 or 2 acts) could be met with a translated work, and one the required 2-act ballets could be replaced with operas or smaller ballets, as long as the
total number of acts was met. From 1871 the requirements weakened, but the entrepreneur was asked to produce every other year a work composed by a recipient of the *prix de Rome*, to support young French composers. Furthermore, from 1891 the new works were to be by French composers, a requirement that produced no successful work.

The new work requirement, as all other conditions of the contract, were evaluated every year by the supervising authority. The main threat against the entrepreneur, short of depriving him of the lease, was withholding the subsidy. This, to my knowledge, never happened. Figure 10, furthermore, shows that except in the 1860s and early 1870s the requirement (in terms of new acts) was not binding.

*The subsidy*

The government subsidy is a common feature of both regimes, direct management and leasing. The nature of the subsidy, however, was very different.

When the State took direct control of the Opera in 1780, it became finan-
cially responsible. A government subsidy became a permanent feature of the Paris Opera budgets from 1794. The nature of the subsidy varied with the regime under which the Opera was managed. When the government managed it directly, the subsidy, even if it was set in advance, effectively covered all losses incurred. From 1831, it became part of the contract. Véron’s contract specified a decreasing subsidy over the duration of the lease, down to 620,000F in 1836, where it remained until 1854. All later contracts specified a fixed subsidy, whose purpose (stated in the 1841 contract) was to permit the performance of new works. In 1866 the subsidy was fixed at 900,000F. When the Empire fell in September 1870 the subsidy was cut to 600,000F, the theater was closed, and the entrepreneur declared the contract void and resigned. The theater reopened in July 1871, run by an appointed administrator on behalf of the artists, but the leasing system resumed in November 1871. In the new lease the fact that the subsidy, granted annually by the legislature, could not be depended upon was explicitly acknowledged. The director was protected by the following clause: if the legislature reduced the subsidy from the level of 800,000F, the director was allowed to close the theater for a period of time proportional to the reduction in the subsidy. This clause gave the entrepreneur a powerful tool to influence the legislature and ensure that the subsidy not be reduced. In effect, it remained constant at 800,000F until 1928, by which time inflation had reduced its real value by 80%.

The fact that the subsidy was a lump-sum which did not depend on the choices made by the director is crucial. It means that, at the margin, all decisions had to be made from a profit-maximizing perspective. But how credible was the government’s commitment to maintain a fixed subsidy independently of the losses? The period from 1847 to 1855 is important in this respect. The management had begun to run into financial difficulties in 1847, and the Revolution of 1848 compounded the difficulties. Although the directors changed, the new directors were required by the government to assume the debt of the earlier lease, thus cumulating the losses. An exceptional subsidy of 170,000F was voted by the legislature in 1848. In January 1852 allowed an addition of 60,000F per year for 6 years, and when the Opera was nationalized another sum of 600,000F was allocated to liquidate the debts of the Opera.

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5Only 800,000F appears in the budgets, paid from the State budget. An additional 100,000F was paid out of the Emperor’s civil list in a special escrow account to form the bond of the entrepreneur.
This precedent explains the concerns raised in the 1870s after the Opera was devolved again to an entrepreneur. The ministry’s commission on theaters advised against this regime in 1878, arguing among others that the State would always end up bailing out a bankrupt entrepreneur. In spite of the problem of moral hazard, the leasing regime continued for decades, with some entrepreneurs incurring losses but without bailouts. Indeed, the clause, inserted in 1891, that allowed an entrepreneur to relinquish the privilege if his losses exceeded 300,000F was perhaps designed to give a way out only to the entrepreneur but also to the State, and mitigate the moral hazard problem.

To be complete, there were two other forms of subsidy. When Napoleon restored the duty owed by smaller theaters to the Paris Opera in 1811, he was recreating the source of income that the Opera derived before the Revolution from its monopoly on all musical performances. The tax was 1/15th of gross receipts, and amounted to around nearly 200,000F by 1828. After the restoration of the Bourbons under a constitutional monarchy in 1814, the theaters complained that this duty was an illegal tax, because it was not voted by the legislature. The courts rejected the argument, but after the Revolution
of 1830 the theaters simply stopped paying, and the duty was indefinitely suspended in 1831.

The other form of subsidy, which does not appear at all in the budgets, is the subsidy in kind coming from the free use of the Opera’s buildings and materials. The entrepreneur was responsible for depreciation on this capital, and all improvements to the structures that he made, and additions to the stock of sets and costumes, remained the property of the State at the end of the contract. Nevertheless the State paid for the buildings. The theater built in 1821 cost 4m F, and the Palais Garnier and extravagant 40m F, the costliest opera house in Europe. An idea of the magnitude of that subsidy can be derived from the expense of renting the Ventadour theater in 1874, after the theater of the rue Le Peletier burned in 1873 and before the inauguration of the Palais Garnier in January 1875: the rent was 390,000F, paid by the State through an exceptional subsidy.

Figure 11 shows the size of the subsidy compared to revenues. The different regimes are clearly discernible: until 1831 the subsidy varies annually, as losses are covered retroactively. During the periods of leasing the subsidy is constant. As revenues increase over the course of the century the relative importance of the subsidy declines, from 55% of revenues under Napoleon I to 20% after 1875.

The Venues

During the 19th century, the Paris Opera was located in three main venues. The first one (from 1794 to 1820) was the Théâtre Montansier, built shortly before by the architect Louis, and located rue de Richelieu. The location was not ideal, in particular because of the risk of fire for the nearby National Library across the street. In February 1820 the king’s nephew was assassinated as he came out of the opera, and the government decided to raze the building. A temporary theater is erected rue Le Peletier in 1821, and it served for more than a half-century while various projects are considered for a permanent home. Work on what is now known as the Palais Garnier began in 1861 but was interrupted by the Franco-Prussian War. The destruction of the theater on the rue Le Peletier by a fire in 1873 brought new urgency to the construction of the opera house, inaugurated in 1875. It remained the home of the Paris Opera until 1989.
The three main venues were broadly similar in their lay-out, and significantly more capacious than the 18th c, homes of the Paris Opera. The Montansier theater was the first to have seating everywhere on the floor. All three theaters had four levels. Starting from the orchestra pit, the ground floor into three seating areas: the orchestra, the parterre and the amphitheater, furthest from the stage and on an inclined plane. The first three levels had front, side, and forestage boxes. The first level also had some seats (stalles), as did the second level for a brief period in the 1850s. The fourth level had boxes as well as benches called the amphitheater of the fourth level, as in the very back there was a fifth level of boxes.

*Tickets and Prices*

There were three main ways to have seats at the Opera.

First, there were subscriptions. Boxes could be rented for a whole year (between 150 and 156 performances), 6 months, or 3 months. From around 1850 it also became possible to rent boxes for one show per week (instead of three) for the same periods of 3, 6, or 12 months. Boxes contained from 4 to 12 seats depending on the category, the most common capacity being 6.

Single tickets in each category could be officially purchased in two ways, in advance from the *bureau de location* which gave the right to a specific seat in each category, or, at a discount, one hour before the performance. The last-minute tickets, called *à la porte*, were usually cheaper, but did not entitle to a specific seat: the usher assigned seats that were not rented in either of the two other ways. There was also a secondary market in tickets, and subscribers often sold single tickets, especially in the 1850s when subscription prices were at a substantial discount over box-office prices. After 1870 the per-ticket value of subscriptions was the same as for “location” tickets.

From 1884 the contract required the entrepreneur to hold 12 performances (increased to 24 in 1891) at reduced rates. The attempt at bringing opera to the masses was not successful. Not only did it prove very costly, but it was seen that the purchasers of tickets were not working class as expected, but

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6 There were two box-offices, one for the cheapest seats. Box seats could only be purchased in groups of two or more

7 The terminology used at the time can be confusing: the two types of tickets are sometimes called *au bureau* and *par location*, or *à la porte* and *au bureau*. Subscription tickets were always called *par abonnement*. 

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rather the same public as usual, and performances at regular prices suffered from it. The requirement was dropped in 1907.

There is evidence that the lower-priced tickets were below market in the 1890s. Single tickets went on sale at the bureau de location as soon as the performances were announced, five or six days ahead. Within two hours the cheapest tickets, below 10F, were bought by scalpers who sold them on the grey market. During the World Exhibition of 1889 tickets with a face value of 2.50F went as high as 15F. But, whether it directly managed or rented out, the government always retained control over prices. The entrepreneur was required to submit any price changes to the supervising authority for approval, although I have seen only one instance of refusal before World War I (in 1912).

Constructing a consistent price series is not easy. Not all categories of seats were available in the three ways, in particular cheaper seats were not available by subscription (although, until 1860, it was possible to buy a general right of entry to the main floor for 6 months or 12 months, the so-called entrée personnelle). The seats available for single rental (“location”) also varied over time. It is also necessary to know the exact number of seats in each category, and occasional changes to the lay-out (in 1821, 1852, 1861) modified capacity. I have used the theater’s capacity in 1798, 1808, 1820, 1826, 1855, 1862 and 1875 (after which date capacity remained fixed). Until around 1850 capacity was between 1915 and 1960 seats, then declined to 1780 after the benches on the main floor were replaced with seats. The new Palais Garnier had a capacity of 2200 seats.

The cheapest seats were always those on the 4th and 5th levels, the most expensive were the front-facing and forestage boxes on the first level. I used the 6-month leases to compute the price of a single ticket by subscription.

The three average prices are represented in Figure 12, along with the cheapest and the most expensive last-minute seat. Several things are notable. First, prices changes were relatively frequent; although the prices of specific categories could remain constant for long periods of time (for example the minimum and maximum) there were frequent adjustments in this or that category, and there were also slight changes in the number of seats available in each category. Second, there is a major shift over the course of time between

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8Monnier (2012, pp. 318–21) mentions a secondary market for tickets from the 1820s to the 1850s, but it seems to have been mostly supplied by recipients of free or complementary tickets.
subscription and box-office tickets, the former switching from a discount to a premium. The archival evidence suggests that this shift is a realignment toward market rates. Third, the move to the Palais Garnier was accompanied by a substantial increase in the price of all but the cheapest tickets. Surprisingly perhaps, the cheapest tickets become even cheaper in the 1880s, at the same time as the management was required to hold performances at reduced rates (see above).

Figure 13 shows the financial capacity of the theater: it is the average price multiplied by the number of seats. The effect of the change in venue in 1875 is stark, combining a 24% increase in seats with an increase of between 24% for advance box-office tickets to 44% for subscriptions.

Figure 14 shows two ratios: one is the ratio of ticket prices for subscription versus advance box-office tickets (shown in Figure 12), the other is the ratio of revenues from subscription versus ticket sales (both advance and last-minute). The ratio of revenues tends to rise over time, although this incorporates in
part the increase in prices. But the fact that the ratio of revenues went from 0.48 in 1875 to 1.37 at its peak in 1894 while the ratio of prices increased only 35% suggests that the relative rise in subscription prices did not deter demand. Only in the last decade before World War I do subscription revenues decline precipitously in relative terms, in the absence of any price change.

4 Budgets

I have collected data on the budgets from 1803 to 1914. Over such a long period of time there are inevitably gaps and inconsistencies in the budget items. The budget numbers are in annual form, a presentation that requires some adjustments for irregular years: the switch from the Republican to the Gregorian calendar in 1805, the change of the fiscal year to June 1 from 1831 to 1848, interruptions such as the period of the Franco-Prussian War and the Commune (September 1870 to July 1871). The figures for those years are annualized.
Figure 14: Ratio of prices of *abonnement* to *location*, and ratio of revenues from subscriptions to box office sales.

### 4.1 Revenues

The revenues side of the budgets was fairly straightforward. The main sources of income were ticket sales and the subsidies (the official government subsidy as well as, until 1831, the duty paid by smaller theaters). Minor sources of revenues included concessions within the theater, as well as income from concerts or masked balls.

Figure 15 plots the revenues of the Opéra along with those of the Opéra-Comique, which became the closest competitor to the Opéra.\(^9\) Also plotted are the revenues from all theaters in Paris, which show clear spikes in 1867, 1878, 1889, and 1900, years in which a World Fair was held in Paris. The Paris Opera profited substantially from visitors to Paris during these events. A sharp increase in the Opera’s revenues is visible in 1875, when two things

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9 Until 1878 the *Théâtre Italien* performed, as its name indicates, Italian opera, and the Opéra Comique specialized in opera buffa, operetta, Singspiel, that is, opera interrupted by spoken dialogue. From 1847 to 1872 the *Théâtre Lyrique* was a fourth competitor. With the disappearance of genre restrictions and the failure of the Théâtre Italien the Opéra-Comique remained the only competitor.
happened: capacity increased as the venue changed, and ticket prices increased substantially. Thereafter the revenues of the Opera were roughly constant while overall expenditures on theaters in Paris increased at an average 2% per year.

Figure 16 shows the share of the Paris Opera’s revenues in total revenues of Paris theaters over a longer period. In the early 19th century I have so far only found 5-year averages.\textsuperscript{10} Three phases can be distinguished: until 1830 the share of the Opera declined, the leasing regime brought a substantial increase in the share that fell until the mid-century, after which the share recovered and nearly doubled to the late 1870s, to decline again steadily until World War I.

\textsuperscript{10}I hope to find better data. All theaters in Paris were subject to a 10% tax on gross receipts, called the \textit{droit des pauvres} or \textit{droit des indigents}, the proceeds going to State-run charity. Taxes are always a good source of data.
4.2 Costs

The costs were broadly divided between personnel and material costs. The main items in personnel costs were the artists (broken down between singers, dancers, choir, ballet ensemble, orchestra) and others (management, personnel of the sets and costumes workshops, stage and theater personnel). The major material costs were sets, costumes, maintenance, lighting and heating, taxes, insurance and legal costs, office expenses.

One can broadly distinguish between fixed costs (all costs related to keeping the theater open throughout the year) and variable costs associated with performances: artists, sets and costumes, and copyright.

4.3 Copyright

Legislative history

It is important to distinguish two types of copyright in the case of opera. One is the exclusive right to publish, the other is the exclusive right to perform.
Each type of right has a distinct legislative history.

*Right to publish*

Before the Revolution, an order in council of 30 August 1777 had provided that no bookseller or editor could sell a new book without first obtaining a non-renewable charter, which had a minimum duration of ten years. If the author had obtained the charter, the exclusive right remained with him and his heirs. If he ceded his privilege, the duration was limited to his lifetime. After the expiration of the initial privilege, an editor or bookseller could ask for another permission to print the work, but it was not exclusive. This system, based on privileges, was implicitly abolished in August 1789 when all privileges were abolished. Copyright, regarding publication, was only implemented by a law of 19 July 1793, which protected not only books but also all manner of writings, compositions, and engravings.

A decree of February 5, 1810 (articles 39 and 40) extended the copyright to widows (if the marriage contract allowed it) and to his children for 20 years, and also allowed the author to dispose of that right. Another law of April 8,
1854 extended this right to the life of the widow and, for the children, to 30 years after the death of the author or his widow.

Right to perform

The first law concerning performance rights was passed on January 19, 1791. It first provided for complete freedom for anyone to open a theater and perform any kind of work, thus putting an end to the privilege of the Opera. The only requirement was to notify the local municipality. It also provided that no work could be performed without the written consent of the author, on pain of confiscation of the gross receipts to the author's benefit. The property right so defined extended for 5 years after the death of the author, after which any work became public domain, irrespective of any existing private contract. The law of 19 July 1793 extended the right to 10 years after the death of the author.

The decree of 1810 on publishing rights did not apply to performing rights (decision of the Council of State, August 23, 1811). It was only by a law of August 3, 1844 that the right to perform was extended in favor of widows and children of deceased authors for 20 years, on the same terms as the extension of 1810 for publishing rights. The extension of 1854 to the life of the widow and 30 years thereafter for the children also applied to performing rights.

The performing rights at the Paris Opera

Until 1871, the Paris Opera enjoyed a special regime. The payments it made to authors (both librettists and composers) for the right to perform works were set by decree and followed a model from the 18th century.

The first rule was laid in the regulation of 1713 and prescribed the same fee to the composer and the librettist, namely 100F for each of the first ten performances and 50F for each of the following twenty performances, as long as the performances were consecutive. The fees were modified in 1776 to 200F for the first twenty, 150F for the next ten, and 100F for the next ten, with a bonus of 500F at the forty-first performance. In addition, authors who had produced three sufficiently successful works were to be awarded a lifetime

\[11\text{A lower fee was specified for 1-act works.}\]
pension of 1,000F, respectively 1500F, 2000F, and 3000F for four, five or six successful works.

The regulation of 1798 changed the fee structure: it became 300F for each of the first twenty performances, 200F for each of the next ten, 150F for each of the next ten, a bonus of 500F at the 40th, and 100F for each performance after the 40th; the requirement that the performances be consecutive was dropped. The pensions for successful works were maintained, and a successful work was defined to be one that reached 40 performances: 1000F for two successes, and 500F for each additional success. This was altered to 1000F for the first 3 successes in 1811, and capped at a total of 3000F in 1814.\textsuperscript{12} Finally, the schedule of fees was changed in 1816 to 250F per author for each of the first forty performances and 100F thereafter.\textsuperscript{13} In 1830 the possibility of pensions for successful works was abolished for future works. By the 1840s the insufficiency of the fees were obvious, and composers often bargained for higher payments (as they had in the 18th century), although the direction of the Opera resisted as much as it could. In 1856 the total rights (for both librettist and composer) were maintained at 500F for the first 40 performances but raised to 300F afterwards, and pensions for successful works were brought back: 500F for two works performed more than 40 times, 1000F if performed more than 100 times, 500F for any additional work performed more than 40 times, the total capped at 3000F, and half of the pensions continued for the widows. In 1860 the rights were raised to a total of 500F for all performances; thus the age of a work made no difference anymore for the fee.

By this time, however, the schedule of fees at the Paris Opera was out of line with the practice in other theaters. Since the creation of copyright in 1791, authors had begun to organize themselves. An agency (the \textit{Bureau dramatique}) was founded in 1791 to collect performance rights on their behalf, and a rival agency (the \textit{Agence dramatique}) was founded in 1798. In 1829, the clients of both agencies founded the \textit{Société des Auteurs et Compositeurs Dramatiques} (SACD) which effectively merged the two agencies. The new society, however, was only a delegation of powers by the authors, and it soon found that, when it was negotiating with theaters, it could not enforce threats of boycotts because

\textsuperscript{12}A 5\% withholding on the pensions was instituted, to fund the retirement account of the Opera.

\textsuperscript{13}These fees were for full-length operas that filled an evening. Shorter works, ballets, translated works were assigned a lower schedule.
the authors were not obligated to each other. This led to a revision of the by-laws in 1837, which prohibited members from allowing their works to be performed in venues without agreements with the society, or from entering into special arrangements; penalties included fines and exclusion.

The SACD’s remit was staged works, whether sung or not, and therefore included operas and operettas. In 1851, another association was formed on the same model but focusing on performances of musical works, either instrumental or single songs and arias that were not part of a staged work: the Société des auteurs, compositeurs et éditeurs de musique (SACEM). The boundaries between the activities of the two associations were the object of several negotiations, in particular after the deregulation of theaters in 1864 which broke down the genre categories (Bayet, 1908).

By the 1850s authors were increasingly preoccupied with the competition of works in the public domain, and the SACD began to insert clauses in its conventions with individual theaters that required payment as a flat percentage of gross receipts independently of the copyright status of the works, indeed, whether or not the authors whose works were performed were members; this was intended to take away from theater directors the incentive to avoid new works. As reported in the general assembly of the SACD in January 1869, the purpose of the demand was

to check the marked preference of directors for works that cost them nothing. Not that composers wish to prevent in any way the performance of classical masterpieces. God forbid they be ascribed such an intent! More than others they know that the revival of the works of great masters, when done with a religious respect for the art, is one of the better ways to sustain the taste for beauty, for the great benefit of the public and of artists themselves. But what hurts living composers with no profit for art is the mercantile speculation that skillfully arranges mixed programs in which the inclusion of minor works in the public domain performed indifferently only results in reducing payments to authors without making the show any more attractive.

The SACD argued with the legislature that the point of subsidies was to encourage the premieres of new works, and argued that the Opéra Comique, which was failing its obligations, ought to have its subsidies reduced. The threat was sufficient to induce the Opéra Comique to accede to their demands.
in 1868.

By the late 1860s the only hold-outs were the Paris Opera and the Théâtre Français. The first convention with the Paris Opera was signed on November 1, 1871, for the duration of the Halanzier concession. The convention was thereafter renewed at every change in management. The basic principle of payments proportional to gross receipts was included in the *cahier des charges* of 1871 and remained a permanent feature of the conventions, although the rate varied. It was first set at 6% while the government subsidy was 600,000F (until May 1872) then raised to 6.5%. The following convention, of November 1879, was signed with Vaucorbeil, a former president of the SACD, and provided for a gradual increase to 7% in 1879–81, 7.5% in 1881–83, and 8% thereafter. It remained at the rate of 8% until the 1930s at least, much lower than that for other theaters (between 10 and 12%).

Figure 18 shows payments to authors relative to total expenses and to total ticket sales. Payments to authors was not a major item of expenditures, oscillating between 2 and 4% until the change in regime brought about by the agreement with the *Société* in 1871, at which point it rises to 6%. As a proportion of ticket sales it oscillates around 6%, the variability coming largely from the that of ticket sales. With the new regime, as one would expect, it becomes a smooth share of gross ticket revenues, climbing to 8% as stipulated by the contracts.

### 4.4 Artists

The costs of singers and dancers was a major preoccupation of the Opera throughout its history. The regulations of the early 1800s specified maximum wages for singers, but, as noted above, from 1831 when the opera was leased, there were no upper limits placed on the salaries of the talent.

The typical contract for singers and dancers specified an annual salary and a fee for each performance, called the *feu*. Singers could in addition negotiate *congés*, that is, periods of time every year during which they were not required to serve at the Opera, and which had to be bought out by management if it needed the singer during those times.

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14It ws 10% at the Théâtre Lyrique, 12% at the Opéra-Comique. The Thâtre Italien performed mostly foreign works and was not an important source of revenue for the *Société*. 
Figure 18: Payments to authors as proportion of total expenses and of total ticket sales.

The variable *feu* makes it harder to compare earnings of singers across singers and over time, but their importance seems to have declined over the century, both in size and in prevalence. In 1805 about half of the singers were entitled to *feux*, varying from 12 to 60F per performance, or about 60 to 90% of their fixed salary divided by 150 (the total number of performances in a year). The budgets do not parse out separately solo singers and dancers from choir and ballet until 1826. Before 1826, the feux represent about 20% of fixed payments to all singers and dancers; in 1830, they represent about 40% of fixed payments to solo singers and dancers. Thus the feux represented a substantial, and variable, component of their earnings. By the 1830s, however, contracts specified a fixed number of feux annually, so in practice they became part of the fixed wage, and disappear as a regular item in the budgets. Practically, then, singers are paid fixed wages on a monthly basis.

it is already apparent from Figure 17 that artists’ salaries were the major source of growth in expenses. Figure 19 shows that, until 1875 at least, most of that growth comes from the *sujets*,\(^\text{15}\) that is, the soloists, both singers

\(^{15}\)Soloists were ranked as *premiers sujets*, *remplacements*, and *doubles*. Male voices were
and dancers. Only after 1871 do we see wages rising for the rest (choristers, ensemble dancers, musicians) while the salaries of soloists stabilize.

Figure 20 shows the distribution of salaries for soloist singers as it evolved over time. The soloists are ranked from highest to lowest-paid. Two things are striking. The number of singers increases substantially, doubling over the course of the century. The distribution becomes extraordinarily unequal. The ratio of the highest-paid to the six lowest-paid goes from 3.5 to 35 between 1805 and 1895 (the similar ratio among choristers goes from 2.1 to 2.5 during the same period). The shape of the distribution, however, does not change: the distributions form a set of parallel lines. Within each distribution, the $N + 1$-th-best paid singer earns 10% less than the $N$-th best paid (the slope steepens significantly between 1830 and 1850 to 15%).

“For a long time, and everywhere, impresarios have only sought success by way of those artists called stars, that is reputedly extraordinary singers, categorized as basse taille, ténor and haute-contre, with the modern (Italian) terminology gradually taking over by 1850. Female voices were called by the type of rôle in the early 1800s (rôle tendre, rôle à baguette, princesse).
Figure 20: Distribution of salaries of soloist singers. Each distribution is normalized by the average of the six lowest-paid singers.

whose fame influences receipts. From the point of view of speculation it is no doubt an ingenious method that has so far worked well for impresarios; from an artistic point of view it produces the worst results. The public comes not for a work but for an artist, caring little for the overall interpretation as long as the fashionable singer is heard; the theater is at the mercy of this singer, and if an accident deprives it of his services it is deserted because it sacrificed everything to an idol and there is no ensemble, no repertoire, no personnel that can attract the public. ... Most of the budget is devoted to what is called the “tête de troupe”, the first roles, and such that there is no proportion between the earnings of the lead singers and those of the lesser roles.

4.5 Sets and Costumes

Figure 22 shows the materials cost, per act, for new works and revivals, both operas and ballets. Perhaps surprisingly, ballets were not particularly cheaper than operas. There is no obvious trend over time, but there is a sharp change
in 1875 (the vertical line) with the move to the Palais Garnier. That move shortly followed the destruction of the theater by fire in November 1873, in which all sets and costumes in current use disappeared.\textsuperscript{16} The State committed 2,400,000F to rebuild the most urgently needed sets, and this, coinciding with the move to the new theater, probably explains the period of high expense. It is known that, from 1884, the directors made a conscious effort to cut down on the costs of sets and costumes, reusing existing as much as possible.\textsuperscript{17}

5 Tentative Conclusion

The Paris Opéra was a “large firm in the service of a cultural institution” as one government official put it. After 1831 it was basically run for profit by a risk-averse entrepreneur with unlimited liability. There was a subsidy but

\textsuperscript{16} Two other fires destroyed sets, in 1862 and 1894, but in both cases it was the warehouse.

\textsuperscript{17} Contracts of the 1830s and 1840s severely restricted directors’ ability to cannibalize sets, but the practice became accepted over time, although a strict accounting was done, since the State was the owner of all sets and costumes at the end of the contract.
it was lump-sum. Bail-outs were possible but unlikely. Hence decisions were made on profit considerations.

The Opéra had a sizeable market and was more or less able to change prices. But the director had to decide every week on the works to perform, and keep his workforce of 1200 working for 150 to 200 performances per year. Most of his costs were fixed. This was clear for operations and maintenance, to a large extent also for artists. Sets and costumes were sizeable fixed costs incurred when a new work was staged.

Over the course of the 19th century, the main shift in costs is in wages of artists, and mostly the top talent rather than the workaday singers and musicians. The correspondence of the directors is replete with complaints about competition from London and St. Petersburg. to remain a premier opera house, the Opéra needs to attract the best singers, and the best singers became very expensive in the mid-19th century. Why? I suspect that the railroad is part of the answer, and generally improvements in transportation technology which unified the European and even the American markets.

Copyright may also be part of the story at the European level, but in the
case of the Paris Opéra copyright law was roughly constant in that period, and the only significant change in the method of payment for the Paris Opéra occurred late, in 1871, and in fact made the director indifferent between old and new works since he paid the same, even for public domain works.

Besides, I reiterate my point that the shift in operatic performances occurs everywhere in Europe, and place-specific explanations need to be tested in other places.
Appendix A: Data Sources

The two main archival sources are the Archives nationales, Paris (AN), and the Bibliothèque de l’Opéra, Paris (BO). Given the history of the Opera’s history as a supervised theater, one can distinguish two producers of archives: the supervisor and the supervisee. The documents generated within the Opera administration are in the AJ/13 series. Those generated by the supervising authority are either in the O/2, O/3 or O/5 series (royal or imperial household) or the F/21 series (ministry of the interior).

O/3  O/3/1636, 1698–1709, 1712, 1716, 2847
O/5  O/3/1704–06
F/21  953 1052–54, 1067, 1069, 1071, 1075–76, 4634, 4655, 4657, 4667, 4669
BO  series Arch, PA, CO, PE

Appendix B: Management of the Paris Opera

Supervising authority

18 Oct 1794  National Convention, Committee on public instruction
1 Jul 1796  Ministry of the Interior
10 Jan 1803  Gouverneur du Palais (Maréchal du Palais), préfet
29 Jul 1807  Imperial Household, First Chamberlain
28 May 1814  Royal Household, Deputy Master of the Revels
29 Jan 1831  Ministry of the Interior
17 Mar 1831  Ministry of Commerce, Oversight Commission
4 Apr 1834  Ministry of the Interior
31 Aug 1835  Ministry of the Interior, Commission for Royal Theaters
14 Feb 1853  Ministry of State and of the Imperial Household
30 Jun 1854  Ministry of State and of the Imperial Household, High Commission for the Opera
8 Dec 1860  Ministry of State, Superintendence of Imperial Theaters
1 Jul 1863  Ministry of the Imperial Household and Fine Arts, General Superintendence of Theaters
2 Jan 1870 Ministry of Fine Arts
5 Sep 1870 Ministry of Public Instruction, directorate of Fine Arts

Directors of the Paris Opera

12 Sep 1799 Devismes (directeur), Joseph Bonet de Treiches (–1828) (commissaire du gouvernement)
28 Dec 1800 Bonet (directeur)
22 Dec 1801 Jacques Cellerier (directeur)
26 Nov 1802 Étienne Morel de Chédeville (directeur), Bonet (administrateur)
10 Jan 1803 Bonet (Administrateur comptable, directeur from 9 Sep 1803)
8 Nov 1807 Louis-Benoît Picard (1769–1828), writer, theater director
19 Jan 1816 Alexandre-Étienne Choron (régisseur)
30 Mar 1817 Louis-Luc Loiseau de Persuis (1769–1819), violinist and conductor (directeur), Courtin (administrateur)
30 Oct 1819 Giovanni Battista Viotti (1754–1824), violinist (directeur), Persuis (administrateur)
1 Nov 1821 François Habeneck (1781–1849), violinist and conductor (directeur)
26 Nov 1824 Raphaël de Frédot Duplantys (1776–1854), businessman (administrateur)
12 Jul 1827 Timothée Lubbert (1794–1859), composer (directeur)
1 Jun 1831 Louis Véron (1798–1867), medical doctor, journalist
15 Aug 1835 Henri Duponchel (1794–1868), architect, stage director (from 1839: with Édouard Monnais (1798–1868), journalist
1 Jun 1840 Léon Pillet (1803–68), journalist (with Duponchel as director of material until May 31 1842)
1 Aug 1847 Nestor Roqueplan (1805–70), journalist, diretcor of the Variétés 1840–47 (with Duponchel until 21 Nov 1849)
12 Nov 1854 François-Louis Crosnier (1792–1867), director of the Opéra-Comique 1834–45
1 Jul 1856 Alphone Royer (1803–75), librettist, journalist, director of the Odéon
30 Dec 1862 Émile Perrin (1814–85), painter, stage decorator, director of the Opéra-Comique 1848–57 (resigned September 1870)
12 Jul 1871–79 Olivier Halanzier-Dufresnoy (1819–96), theater director (administrateur provisoire, 12 Jul to 1 Nov 1871)
1 Nov 1879 Auguste-Emmanuel Vaucorbeil (1821–84), composer
1 Dec 1884 Eugène Ritt (1817–98) and Pierre Gailhard (1848–1918), singer
1 Jan 1892 Eugène Bertrand (1834–1900), actor and theater director
1 Apr 1893 Eugène Bertrand (to 1900) and Pierre Gailhard
1 Jan 1908 André Messager (1853–1929), composer, et Leimistin Brousson (1858–1958); resign 11 Jul 1914
1 Jan 1915 Jacques Rouché (1862–1957), businessman
Bibliography
