

# Development of the administrative-accounting system of the *Conservatorio S. M. degli Angiolini* in Florence from 1785 to 1859: Institutional changes and isomorphic pressures

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## Abstract

*S. Maria degli Angiolini* in Florence, founded as a monastery in 1507, became a *conservatorio* (a special type of girls' school) in 1785 and thereafter carried out the education of young females. Between 1785 and 1859, it underwent various changes due to political, social, cultural, religious and economic events. These events, the result of the liberal enlightenment age, influenced the institution's configuration, its formal organisation structure, teaching activity (pedagogic approach, methods, criteria and contents of the training offered), as well as its accounting system (system of book-keeping and method of registration). This article presents the analysis of rare documents, laws, regulations and account books to identify, in light of new institutionalism, the principal agents of transformation, in particular in accounting systems, within *conservatori*, with focus on *S. Maria degli Angiolini*.

## Keywords

accounting system, *conservatori*, female education, Grand Duchy of Tuscany, new institutionalism

## Introduction

In eighteenth-century Europe, a philosophical movement, now known as the Enlightenment, was developing. Among other things, this movement paid attention to the lives of ordinary citizens, keeping them informed of intellectual and civil progress within their own nation and among other peoples (Contini, 1999: 3–7; Guerci, 2006; Valsecchi, 1959). One area where this philosophy exercised a strong influence was education (Rodrigues et al., 2004: 55–57), and there are certainly examples of this in an Italian context.

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In 1766, the government of the Grand Duchy of Tuscany was entrusted to Pietro Leopoldo, a ruler open to considering different ways of thinking that enabled a constructive connection between the new Enlightenment culture and the population's desire for sociocultural change (Diaz et al., 1997; Maran et al., 2014; Wandruszka, 1968). Pietro Leopoldo was an active reformer in the field of education (Calogero, 2010; Paoli, 1999; Rosa, 1999: 110–113), particularly for girls, encouraging moral reform that promoted the emancipation of women, removing them from the influence of the Church and making way for their cultural and social development under the aegis of the State (Balani and Roggero, 1976; Calogero, 1989; Fantappiè, 1995: 39–45; Macchietti, 1998b; Pieroni Francini, 1991: 8–10). Another feature of the 'reforming culture' was the gradual innovations introduced to administrative procedures in government accounting and those of associated bodies (Anselmi et al., 2012; Di Cimbrini, 2012; Rigobon, 1892).

Our study looks at the *conservatori*, the girls' schools founded by Pietro Leopoldo in 1785. It aims to provide an overview of the various changes to the institutional configuration, formal organisation structure, teaching activity and accounting system of Tuscan *conservatori* within the period studied (Andreucci, 1866; Rocca, 1995).

Our case study was *S. Maria degli Angiolini* in Florence (hereafter SMA), an institution providing basic education for girls in Florence, examined from its foundation as *conservatorio* (1785) to the end of Habsburg-Lorraine rule in Tuscany (1859). We look at not only the accounting system but also the institutional and organisational frameworks, which all showed clear changes in the time frame considered. As yet, SMA has not been the subject of business studies and is part of an educational sector that up until now has had little attention in historical-accounting literature (Edwards, 2011: 37).

Like other studies (e.g. Carmona and Donoso, 2004; Carmona et al., 1998; Sargiacomo, 2008), ours identifies and understands the events that generated the dynamics of change in order to understand whether the theoretical framework of neo-institutionalism is applicable (DiMaggio and Powell, 1983; Meyer and Rowan, 1977; Scott, 1987; Zucker, 1977). Our analysis, chiefly based on archival sources, aims to throw light on some of the sources of institutional pressure.

Positing that striving for legitimacy may have been one of the key reasons for the multi-faceted evolution of *conservatori*, we investigate whether SMA adopted innovative behaviours with particular regard to accounting practices or borrowed several converging behaviours from organisations that were active in the same sector. We also explore whether the changes we noticed improved SMA's ability to respond to internal and external information requirements, supporting decision-making by staff and facilitating a system of internal and external control. The results are discussed in light of the neo-institutionalism theoretical framework and of the evolution of accounting theory, as seen in theory and practice.

This article concludes with some considerations regarding the impact on *conservatori*, and on SMA in particular, of the institutional changes and isomorphic pressures identified. These reflections are a useful contribution to historiographical debates considering the social, political, cultural, religious and educational dimensions of the eighteenth and nineteenth centuries (Carmona, 2004: 9 and 12; Coronella et al., 2017: 214). We also consider their consequences in terms of the organisation, management and accounting (Burchell et al., 1980; Gaffikin, 2011; Parker, 1999).

## Theoretical framework

A key feature of the theory of neo-institutionalism is the strong pressure brought to bear by the institutional environment upon organisations, which are then heavily conditioned by the need to 'adapt to the values, to the rules, to the organisational "myths" found in their particular institutional context and to incorporate the practices and procedures defined by prevailing rationalized concepts of organizational work and institutionalised in society' (Meyer and Rowan, 1977: 340). This means that 'the institutional environment exerts strong pressures on organisations in order that the key-decisions have the appearance of being infused with rationality' (Sargiacomo, 2008: 221).

According to Scott (1987: 498), this phenomenon occurs because companies, in conforming to institutional pressures, align themselves with each other in order to obtain greater legitimacy, resources and capacity for survival. By discouraging diversity in a particular sector, organisations are driven to adopt convergent or isomorphic patterns of behaviour. Organisations are likely to model themselves on other similar structures operating in their field that seem to have more legitimacy or success (DiMaggio and Powell, 1983: 152). Indeed, according to neo-institutionalism, choices made in the past by successful businesses are considered legitimate (Suchman, 1995: 574) and are therefore included among those generally accepted by other businesses. This entails such decisions being considered ‘culturally supported and conceptually correct’ (Carmona et al., 1998: 117) and subsequently being put into action. Differences among choices or decisions made by organisations tend to be reduced.

This process of homogenisation is best captured by the concept of isomorphism. DiMaggio and Powell (1983), building on the thinking of Hawley, consider isomorphism as ‘a constraining process that forces one unit in a population to resemble other units that face the same set of environmental conditions’ (p. 149) and they identify in this process, three isomorphic mechanisms: coercive, mimetic and normative (pp. 150–154). Isomorphism involves various forces coercing or encouraging organisations to adopt convergent behaviours. From a theoretical point of view, this leads to companies adopting similar organisation models (Catturi and Riccaboni, 2001: 138–139). As a result, they seem to adopt a formal organisational structure based on myth and ceremony, representing a form of symbolic window dressing (Carruthers, 1995: 315).

Legitimacy is obtained by adopting not only a certain formal structure but also by using appropriate accounting systems (Ball and Craig, 2010: 284; Carmona and Macías, 2001; Gomes et al., 2008). In this respect, it has been observed that the figures registered in accounts can only transmit indications, not certainties, because they are subject to different interpretations (Latour, 1987; Mussari et al., 2010: 641). In other words, numbers do not reflect reality. The feelings of solidity and precision connected with their use as a tool for synthesising the quantity and quality of a given activity combine with subjective interpretations, which in their turn are conditioned by factors deriving from the social, cultural and political environment. The same concept is found in Vollmer (2007), who makes the distinction between the moment of the production of accounting information – creation of data – and that of its consumption, or interpretation. It has been pointed out, and our research confirms this, that accounting is both passive and active, that is, it influences and is influenced by its institutional environment (Burchell et al., 1980; Chapman et al., 2009; Hopwood, 1983, 1987; Miller et al., 1991).

The above concepts of neo-institutionalism are a useful concept for analysing the behaviours of SMA managers. Our examination of primary sources provided interesting reflections regarding the pressures SMA managers experienced from the institutional environment between 1785 and 1859, when they were encouraged or obliged to adopt a specific institutional framework, a certain formal organisation structure or, little by little, different educational standards and accounting systems. In addition to investigating these changes, we judged it useful to examine their consequences. Using a neo-institutionalism historical approach, we examined the sources of these changes and their impact on systems of decision-making and internal and external control.

## Methodology

The work has adopted an interpretational view ‘to evaluate relationships and provide interpretations in the manner of a social science’ (Previts et al., 1990: 2). Our research examined, in the light of current scholarship, political-legislative and sociocultural contexts between 1785 and 1859 (Kragh, 1990: 90, Servalli, 2007: 69) in order to understand the institutional changes, especially the accounting changes in the *conservatorio*. This is one of the themes identified as a needed research area in the field of accounting history (Carnegie and Napier, 1996: 18).

**Table 1.** Sources.

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1785: HASMA
<ul style="list-style-type: none"> <li>• Cash book</li> <li>• General journal</li> <li>• General ledger</li> <li>• Alphabetical register of pupils</li> <li>• Chronicles of Manuscripts in the Archive of the Monastery of Santa Maria degli Angiolini in Via Laura</li> <li>• Chronological Index of the Archive of the Royal <i>Conservatorio</i> of Santa Maria degli Angiolini in Florence</li> <li>• Alphabetical Index of the Archive of the Royal <i>Conservatorio</i> of Santa Maria degli Angiolini in Florence</li> <li>• Daily annotations</li> <li>• Memoranda and related bundles of documents</li> </ul>
1848–1859: HASMA
<ul style="list-style-type: none"> <li>• Income and expense book</li> <li>• General journal</li> <li>• General ledger</li> <li>• Register of expenses</li> <li>• Register of pupils</li> <li>• Book of pupils containing information about the account of fees</li> <li>• Book of the current accounts of the pupils</li> <li>• Chronicles of Manuscripts in the Archive of the Monastery of Santa Maria degli Angiolini in Via Laura</li> <li>• Chronological Index of the Archive of the Royal <i>Conservatorio</i> of Santa Maria degli Angiolini in Florence</li> <li>• Alphabetical Index of the Archive of the Royal <i>Conservatorio</i> of Santa Maria degli Angiolini in Florence</li> <li>• Daily annotations</li> <li>• Memoranda and related bundles of documents</li> </ul>
Balances and Statements: ASF, ASPt and HASMA
<ul style="list-style-type: none"> <li>• Summary of Assets and Liabilities (1785)</li> <li>• Inspection carried out between 1807 and 1808 by the Commissioner appointed by the French government to suppress the institute</li> <li>• Balance up to April for years 1818–1858</li> <li>• Asset and liability statement up to 30 April with comparison against previous year and documentary evidence for the presentation of accounts (1818–1858)</li> <li>• Memoranda relating to approbations and recommendations of the government with replies from the <i>Operaio</i></li> </ul>

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ASF: State Archive of Florence; ASPt: State Archive of Pistoia; HASMA: Historical Archive of SMA.

The ‘single-unit of analysis’ (Yin, 2003: 40) of this study is the SMA, an institution that, since 1785, progressively developed and consolidated its social aim of education and training. But we could not formulate our research plan concerning the type of investigation and sources of data without including a historical review on the evolution of pedagogy and educational standards, the related sociological and political choices in the field of education and government decisions on the roles assigned to lay and religious educational institutions (Cambi, 1998; Ciuffoletti, 1998; Franchini, 1993; Macchietti, 1998c). Nor could we ignore accounting theory regarding book-keeping methods and systems or the impact upon them, first, of legislation at central level and at the level of single *conservatorio*; second, of economic and business doctrine; and, third, of business practice.

Our research began by identifying the sources of information, almost all primary (Table 1). The main sources were documents conserved in the Historical Archive of SMA (hereafter HASMA). Also essential were documents in the State Archives of Tuscany (Appendix 1).

The *conservatorio* – our ‘longitudinal case’ (Yin, 2003: 42) – was studied in the year of its foundation (1785) and in the last decade of Habsburg-Lorraine rule (1848–1859). This required us to locate numerous legislative (Table 2) and bibliographical sources. It was also necessary to make a comparative study of the documentation that would enable us, first, to identify the key

**Table 2.** Relevant legislation.

## On education

*Motu Proprio* of Grand Duke, 21 March 1785General Regulation for New *Conservatori*, 6 September 1785

Survey of Schools (1787)

General Scheme for School Reform (1789)

Law (10 June 1852)

## On administration and accounting

*Motu Proprio* of Grand Duke, 21 March 1785General Regulation for New *Conservatori*, 6 September 1785

Law (5 January 1818)

Law (23 March 1853, no. 1483)

sociological, cultural, political and economic factors influencing the *conservatorio*'s strategic decisions and, second, to discern their impact on the institutional set-up and consequently on its organisation and management, and accounting systems (Hopwood, 1983, 1990; Riccaboni et al., 2006: 41–45; Scapens, 1991).

Documents concerning teaching activities provided information on changes made to curricula, and teaching methods and criteria, consistent with the mission and the objectives pursued by the institute.

Accounting and non-accounting information, closely interlinked, favours a broad vision of the scope of observation and analysis of the former, reveals the changes in accounting methods and practices adopted over time to assist with didactic and financial requirements and throws light on the consequences of the evolution in accounting (Carnegie and Napier, 1996: 11). It therefore became imperative to study that part of the literature covering questions of accounting, public accounting, business administration and history of accounting, none of which specifically dealt with the *conservatori*.

The historical period studied was marked by important events that brought about a process of widespread change. One of our research aims was to offer an account of the history of SMA, since none currently exist, and to interpret (Previts et al., 1990: 2) the 'agents of change' that stimulated or obstructed the development of this process. According to Previts et al., 'History may not reveal the cause of an event as a certainty, but it can indicate probable factors affecting the event' (Previts et al., 1990: 9).

## Case study

### *Institutional framework, organisation structure, activities of education and instruction*

The *conservatorio* studied is of ancient origin. In 1507, six 'good Florentine women albeit of low descent' (HASMA, Chronicles, sheet 5) came together to devote themselves to prayer and spiritual reflection and to carry out charitable activities. At the request of these pious women, in 1509, with the permission of the Pope (HASMA, Alphabetical Index under 'Fondazione'; Richa, 1755: 279), a monastery of the Dominican order was founded and named S. Maria degli Angiolini. After the plague of 1527, the monastic family increased in size, joined by many young Florentine noblewomen called to the religious vocation, some as cloistered nuns, and it continued in this way almost to the end of the eighteenth century (Calafati, 2006; Lapucci, 2006).

As happened elsewhere in the eighteenth century (Madonna et al., 2014), in Tuscany, political events influenced educational reforms from primary to university level (Bigoni et al., 2018). A

*motu proprio* of Grand Duke Pietro Leopoldo on 21 March 1785 transformed SMA along with other 82 religious institutions (Fantozzi Micali and Roselli, 1980: 21 e ss.) into a *conservatorio* (HASMA, Chronicles, 1785, sheet. 249, no. 4). The new *conservatori* made primary education more widely available, to combat illiteracy, and were obliged where circumstances allowed, to provide a free school for the poor Girls of the Nation, making use of the new figure of the oblate – positioned in an intermediate state, between lay and religious – or external lay teachers to be utilised (ASF, Proclamations and Orders, XII, C, 21 March 1785, XVI).

In carrying out its educational mission, SMA encountered various difficulties connected with changes in governance of the Grand Duchy between 1785 and 1859 and modified its institutional framework as a result (Table 3). The Bourbons allowed the *conservatori* to renounce their lay status and become religious institutions again (ASF, Laws and Proclamations, 1801–1803, LXXXVI). When the Grand Duchy of Tuscany was annexed by Napoleon, religious bodies and *conservatori* were suppressed (Ciuffoletti, 1998: 24–30). The Habsburg-Lorraine restoration reinstated both the *conservatori* and Pietro Leopoldo's 'Regulation' (ASF, 1765–1808, General Regulation for New *Conservatori* – 6 September 1785; Parri, 1986: 131–132). All these changes were the consequence of external forces.

From a legal and administrative viewpoint, the *conservatorio*, while maintaining its religious roots, in 1785, became a lay institution managed by oblate Dominican nuns, under the name of the Royal *Conservatorio* of Santa Maria degli Angiolini. Like other *conservatori*, it was obliged to adopt the formal organisation structure laid down in the 'Regulation' with an *Operaio* or manager of the *azienda economica* (economic affairs). Below him came the *Procuratore*, who coordinated administration and accounts, and the *Priora*, responsible for education. SMA covered all the positions prescribed by the 'Regulation' from its foundation until the Unification of Italy in 1861 and respected all the 'Regulation's' dispositions regarding functions (Table 4).

Under Pietro Leopoldo, the *Operaio* was Marquis Francesco Bourbon del Monte (HASMA, Bundle XXIII, no. 3) and the *Procuratore* was Cavaliere Stefano Sferra (HASMA, Bundle XXIII, ins. 4). The *Priora* was Sister Maria Pulcheria Fantoni, replaced in 1789 by Sister Teresa Margherita Fedini (HASMA, Chronological Index, sheet 160, no. 2). In the final decade of Habsburg-Lorraine rule, the *Operaio* was Cavaliere Vincenzo Capponi, replaced in 1854 by Cavaliere Lorenzo Strozzi Alamanni. Important administrative functions were also carried out by the *Camarlinga* (household manager) who in 1785 was Sister Maddalena Eletta Vinci, replaced in 1789 by Sister Maria Angelica Mori (HASMA, Payables and Receivables Book, 1785–1800, sheet 80 and sheet 120). From 1848 to 1859, the *Camarlinga* was Sister Luisa Mazzei (HASMA, Payables and Receivables Book, 1831–1856, sheet 256).

Similar external pressures were also experienced concerning the teaching curricula, influenced by debates on female education in France and in Germany (Fantappiè, 1995: 52). Initially, the subjects taught were as follows: 'Christian doctrine and other Religious Knowledge, reading,

**Table 3.** Changes in governance of the Grand Duchy of Tuscany and of SMA's institutional set-up.

Period	Governance of the Grand Duchy of Tuscany	Institutional set-up of SMA
1785–1801	Habsburg-Lorraine rule (Pietro Leopoldo – Ferdinando III)	Royal <i>Conservatorio</i> – Lay Institute
1801–1807	Bourbon rule	Religious Institute
1807–1814	Napoleonic rule	Suppressed from 1809 to 1810
1814–1859	Habsburg-Lorraine Government (Ferdinando III – Leopoldo II)	Royal <i>Conservatorio</i> – Lay Institute



**Table 4.** Staff roles prescribed in the Regulation.

Position	Tasks
<i>Operaio</i>	Responsible for managing the <i>azienda economica</i> (the economic aspect). Supervised by the central bodies of the Grand Duchy, he had to make sure that his staff carried out their duties properly, and that the standards laid down in regulations and circulars were respected. He also had to report to the Grand Duke through the <i>Segreteria del Regio Diritto</i> . Moreover, it was his job to establish the number of oblate and converse nuns (the latter, lay sisters who carried out daily and manual tasks in the <i>conservatorio</i> ), as well as fixing the monthly fees for the pupils, widows and married women
<i>Procuratore</i>	Assisted the <i>Operaio</i> in financial management, collected money due and issued payment orders
Book-keeper	Kept the accounts
Factor	Responsible for provisioning and running the kitchen garden and farms
Priora	Supervised the good order of the <i>conservatorio</i> and respect of the 'Regulation'
<i>Sotto-Priora</i>	In charge of the wardrobe, clothing, pantry, cellar, grain store and fires
<i>Camarlinga</i>	Kept the general cash and inspected the kitchen, the pantry and the refectory
Priest	Appointed by the bishop as spiritual guide; sometimes assisted by the Sacristan
Nurse	Gave primary medical and surgical assistance

writing and abacus, and women's skills, that are necessary for a wise, prudent wife and mother' (ASF, 1765–1808, Regulation, art. XXII). The same clause specified that, as was customary at the time, optional lessons in French, music and drawing should be organised, given by private teachers chosen by the *Operaio* and paid for by parents. Later, the Law of 30 June 1852 (Title III, art. 14) increased the number of subjects to be studied.

The 'Regulation' required the oblate nuns to 'know the disposition and inclinations of each pupil so they can better direct her bearing and her education' (ASF, 1765–1808, Regulation, art. XXIII). That SMA managers and teachers held the pupils' psychological wellbeing to be important (Franchini, 1993: 122–ss.) can be discerned from their practice of entrusting two or three girls to an oblate nun who, by getting to know the girls' characters and abilities, could promote their education. The *conservatori* were also required by the 'Regulation' and by Circulars of 22 and 23 June 1787 (ASF, Auditor of Ecclesiastical Benefices, then *Segreteria del Regio Diritto*, hereafter ABE, no. 5057, sheet 204 – et seq.) to carry out an important social function: they were obliged to admit four pupils from poor families, for a fee of under 36 *scudi*. Later, a quota of free posts was introduced in all institutions, following the example of the *École Saint-Denis* in France (Stanghellini Bernardini, 1991: 30–31). As SMA accepted girls from all classes (Sani, 2001: 225), their social commitment led to the development of different curricula depending on the pupil's origins and future role in society: broader and more academic for girls from noble families, basic and focused on manual skills for poor girls (HASMA, Bundle XXIX, no. 35).

External 'Enlightened' influences were felt not only from the importance given to psychological and social aspects but also from certain teaching experiences (normal schools, schools for poor girls, 'Sunday' schools) (Macchietti, 1998a; Serafini, 1998) and from innovative educational practices. Examples of these were the marks given using a numerical grading system and the awarding of prizes, following periodical examinations, in further recognition of the best pupils. Historical studies (Hoskin and Macve, 2000) have shown that these educational solutions – the use of 'three little educational practices: writing, examining and grading' (Hoskin, 1993: 281) – were first introduced by universities, then filtered down to the lower schools. In other words, 'the technique, around 1800, becomes written and adopts mathematical grading (Hoskin, 1979)' (Hoskin and Macve, 1986: 107).

SMA's success as an educational establishment is demonstrated by the increase in numbers of teachers and of pupils. In 1785, there were four teachers, all oblate nuns (ASF, ABE, no. 5926),

rising to between 13 and 17 nuns after 1830 (HASMA, Bundle XXIX, no. 86). These were augmented by external teachers and teachers of optional subjects, introduced to align SMA's offer with that of institutes judged as successful. The teachers (oblate nuns included) were initially chosen by the *Operatio* who vetted their qualifications; subsequently, the Law of 1852 (Title VII, art. 47–48) required applicants to possess a teaching diploma, awarded by the Municipality following an examination. The average number of pupils was 27, with a total of 2,027 pupils between 1785 and 1858, the annual number varying but almost always more than 20. Given that the *conservatorio* could accommodate between 26 and 30 girls, pupil numbers show that it was regularly and successfully carrying out its new mission under Habsburg-Lorraine rule.

As has been documented, *conservatori* were obliged or encouraged by their institutional environment to make numerous changes. The managers of SMA, like those of other institutes, experienced very strong coercive pressures from government authorities who, judging some *conservatori* to be better than others, held them up as models to be imitated, in effect activating a process of mimetic isomorphism (see reports of Pietro Leopoldo in Salvestrini, 1969: 233–234 and legislation: Resolution on the Appointment of the *Operai* by the Segreteria del Regio Diritto (hereafter SRD) in Sani, 2001: 223).

There were evidently strong forces conditioning the management of the *conservatori*, many of whom faced difficulties from the very time of foundation. In summer 1788, 'twenty-seven [of them] had positive financial results, four broke even, forty-nine were in the red' (ASF, ABE, no. 5076). To avoid being suppressed, the *conservatori*, that had operated all throughout the Habsburg-Lorraine monarchy, conformed to external pressures, tending to become more similar to each other in order to secure legitimisation, and the resources needed for survival (Scott, 1987: 498).

### *Administrative-accounting system*

In SMA, religious life had always been combined with various pre-existing activities, including administering considerable assets comprising cash amounts, moveable goods, town properties and farms, offering hospitality to ladies and teaching girls; the latter activity gradually becoming increasingly important (HASMA, Chronicles, 1457–1835; HASMA, Chronological Index, 1457–1874). A complex organisational unit was thus created that required careful administration. An accounting and non-accounting system was therefore required, capable of providing information on the various operations and facilitating internal and external control (Barnabè and Ruggiero, 2006; Di Pietra and Magliacani, 2015; Hopwood, 1983, 1990; Macintosh and Scapens, 1991).

The 'Regulation' (art. II-III-IV-XII-XIII) governed the administrative tasks and established which accounts should be kept, without providing indications on methodology. It, however, specified their content and timing to control contracts and the cash situation, as well as administration of agricultural assets, both moveable and immovable (HASMA, Assets and Liabilities Book).

The shortcomings of the 'Regulation' were partly made good by a law passed on 5 January 1818 on the 'Formation of the Annual Balance Sheets and Accounts Returns of the Monasteries of Cloistered Nuns of the Grand Duchy of Tuscany' and extended to *conservatori* later that year (ASPt, Laws and Proclamations, Civic Community of Pistoia no. 69, Laws of the Grand Duchy of Tuscany 1818, Accompanying Letter 25 November 1818).

During the period under investigation, the administrative-accounting system of our *conservatorio* changed significantly. In order to observe the entity and the quality of this evolution, the longitudinal case has been studied for 1785, the year of the institute's establishment, and for 1848–1859, the last decade of Habsburg-Lorraine government in Tuscany.



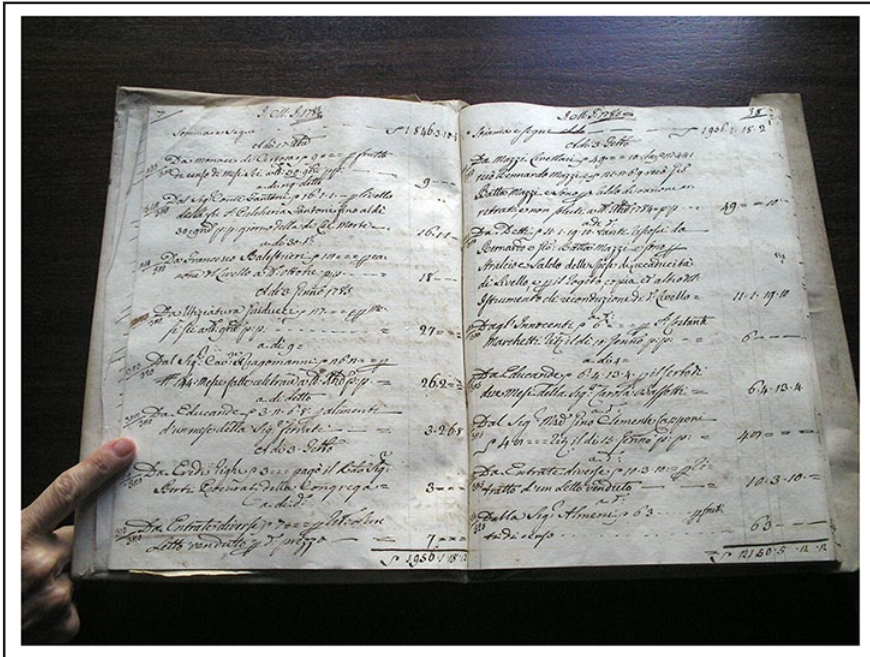


Figure 1. Cash book record.

### Account books and principal partial registers in 1785

In 1785, the key accounting records were the cash book, general journal and general ledger, whose compilation offered a constant overview of how the assets were being managed and administered. The cash book had three parts: in chronological order, in the first part, cash received was recorded; in the second, expenditure; and in the third, the same expenditure separated by category. The accounting record of every piece of business consisted of an entry in the two relevant parts (credit/debit). We might consider, for example, a payment received (Figure 1): on the left were the numbers of the accounts, in the centre the description and, on the right, the amount expressed in *scudi* (Galeotti, 1971: 379–384).

On 30 April and 30 October, the cash book was balanced. The third part of the cash book contained amounts paid out, separated by category (e.g. expenses for medicines, linen, catering, Church, fires). This made it possible to identify variations in expenses over time and to trace back the reasons for such expenses. It was, in effect, an internal control tool for measuring the effectiveness and efficiency of management – and for doing so fairly promptly, given that the data were provided twice a year.

In the general journal, the accounts were registered only for the year-end on 30 April. Each entry indicated in the first and second columns the account numbers, in the third one, the description, in the fourth, the partial amount and, in the last one, the total. On 30 April, first were registered the *conservatorio*'s accounts payable and receivable towards third parties (tenants of property and farmland, etc.) entering the total under the account, 'general revenues'. Next, under the account 'administration of our assets in the country' was an analysis of income and expenses regarding provisions, livestock, crops and other entries returned by the estate factors. Its balance was transcribed under 'general revenues'. A separate overview was prepared of ordinary expenses under

the account 'expenses for maintenance of the *conservatorio*' and this balance, too, was entered under 'general revenues'.

It is important to note that the general journal contained neither the balance of the 'cash' account nor of the 'general revenues' account. This journal, therefore, only partially closed the accounts, without balancing them. Both the above-mentioned values ('cash' and 'general revenues') were instead found in the general ledger, entered under the accounts 'ready cash held by the *Camarlinga*' and 'surplus or deficit of our *Conservatorio*'.

The general ledger has always been essential to the use of accounting methodology (for double-entry and also partial double-record accounting). It divided the account headings into opposite sections (debits on the left, credits on the right). Both sections had the same numbering, which was that of the account. Consequently, when both sides of a page were full up, they continued '*avanti in qst . . .*' on another page, whose number became the new number for the account. A chart of accounts was provided with this ledger. In the general ledger, the accounts receivable by the *conservatorio* from certain subjects were posted under debits and then, once collected, under credits, vice versa for accounts payable (Yamey, 2005: 78).

There were numerous points of connection between the three books. In each of them, the same number was given to a specific account. The balances of accounts open, both income and expenses – all deducible from amounts found in the general ledger – went into the Demonstration of the Annual Income and Expenses of the *Conservatorio* (Rigobon, 1892: 264), a document prepared from the accounts, showing positive or negative cash flow at the end of the period. On 1 November 1785, the general journal and general ledger contained inventories of the 'goods' and 'properties' of the *conservatorio* – in both, the lists tallied perfectly. Crosschecking the records made in these three books constituted verification that the accounts tallied, as well as being an opportunity to control the monetary, financial and asset situation, the latter limited to certain elements only.

The SMA Archive also contains some partial registers, including the general state of the *livellari* (tenants) with valuable information on their contracts, the accounts for catering and for the butcher. Of particular interest is the alphabetical register of pupils, giving the names, surnames and home address of the schoolgirls, as well as the date they entered and left the *conservatorio*. It contained a separate account for each pupil, kept in a similar way to the accounts of the general ledger. It gave the exact number of pupils and information useful in analysing the profitability of teaching. Expenses incurred for each pupil (board, accommodation, basic teaching, additional classes) were set against income received from each girl, and these data were indispensable for internal control. This information tallied with the entries in the cash book, proving how account books can confirm facts reported in different documents and how they are a valid key for understanding historical events (Capocchi, 2003: 247).

### *Account books and principal partial registers, 1848–1859*

By 1834, the income and expense book was more analytical than it had been in 1785. As well as the account number, it also contained the consecutive number of the record and, in two separate columns, the amounts of the expenses and income. On 30 April, the income and the expense columns were totalled up, and the balance was then added, negative or positive, to the values of the next period of administration.

The general journal had also changed its content. On 30/04/n, as always, the accounts payable were closed first, then the receivables; the contra account (two-step) was always 'general revenue'. But unlike previously, some items of expense, revenue and any balances from certain accounts functioning as 'financial results' were grouped together: 'expenses for maintenance of our *conservatorio*', 'income and expenses for administering our assets in the country' and 'income and expenses for our *conservatorio*'s kitchen garden'. The allocation of values to these accounts was

**Figure 2.** Register of pupils.

an intermediate step towards reaching a partial result called ‘net surplus or deficit’, which was later transferred to the ‘general revenue’ account. The latter gathered – directly or indirectly on 30 April – almost all the values originating from the financial year. The last entry of each administrative period was the ‘surplus or deficit of our account’, which was the balance of ‘general revenue’. This value was also highlighted on page 1 (HASMA, various years, no ref.) of the ‘asset and liability statement [. . .] and documentary evidence for the presentation of accounts’, indicating the increase or the decrease in the balance sheet.

The introduction of financial accounts represented an interesting development because it allowed financial management (payables and receivables for rentals – *livelli* and *censi*, etc.) to be separated from that of current expenses and assets. Highlighting the partial results of these separate areas enabled closer internal control and an understanding of how each area contributed towards forming the overall result.

The structure of the general ledger did not change over time, but its contents changed following an extension to the chart of accounts. It continued to be important as a source of information and for its role in cross-referencing the income and expense book and the general journal.

The most significant of the ‘partial’ registers were those for expenses and pupils. The expense register was, in practice, a general ledger of expenses, more analytical than that of 1785. One page, in separate sections and opposing columns, was given over to each expense. It gave detailed descriptions – not found in the general ledger – of the expenses, whose balance was charged to accounts in the ledger that served as ‘cost centres’. This new feature of the accounting system shows considerable attention towards internal control, aimed at identifying the reasons behind the expenses incurred.

As far as the teaching activity was concerned, the register of pupils continued to be compiled in the same way as in 1785 (Figure 2). After 1816, other registers were also used, for example, the book of pupils with account of fees or the book of current accounts of the pupils. In both of these were indicated for each girl, in addition to the fees, all personal expenses incurred in advance by

1 <sup>st</sup> Dec 1848 - Costo di Alunno e istituto	
di tutto	356.11.10
di Spese di Alunno	34.10.8
di Alloggio	483.4.5

**Figure 3.** Cost of a pupil in 1848.

the *conservatorio* (medicines, books, school supplies, clothing, etc.) and, against these, the payments made. These records made it possible to control both the financial dealings between each pupil and SMA and the carrying out of teaching activity as a whole, as well as to evaluate its profitability by analysing direct and indirect costs incurred annually for each pupil (Figure 3) and overall (HASMA, Bundle XXIX, no. 28).

As documented above, the accounting system, whose contents changed over time, became more effective in providing information to assist with decision-making and internal control.

### Balance sheets and statements

Of considerable importance were the statements prepared at the end of the financial year. The *Operaio* of SMA always devoted particular care to their preparation. In 1785, he had provided the *SRD* with a summary of assets and liabilities, containing a few brief categories of revenues and the names of the *conservatorio*'s staff (ASF, ABE, sheet 5926). More detailed information about SMA's assets and staff can be obtained from inspections carried out between 1807 and 1808 by the Commissioner appointed by the French government to suppress the institute (ASF, Religious corporations suppressed by the French government, sheet 104, single bundle). After the restoration of the Habsburg-Lorraines, SMA went back to preparing an assets and liabilities statement for the *SRD*.

Later, the Law of 5 January 1818 made it obligatory to provide two documents: the 'balance up to April *n*' and the 'asset and liability statement on April 30<sup>th</sup> *n* with comparison of what it was on April 30<sup>th</sup> *n-1* and documentary evidence for the presentation of accounts'. The first was a statement of accounts limited to monetary and financial accounts only. The second document indicated, in addition to the values contained in the first, the values of some tangible assets. This document thus offered a comprehensive view of the financial situation and information on some elements of the balance sheet. It ignored, however, the economic aspect, with some exceptions (depreciation and surplus or deficits of special operations). On page 1 was the assets and liabilities, their total and the increase or the decrease in the balance sheet. In the following pages, there was a detailed description of each item of assets and liabilities, sometimes supplemented by comments. As these documents contained data from the previous year alongside that of the current year, they ensured that comparison of results was possible over time, improving the information system and encouraging internal control.

The same documents were subject to formal and substantial external control. For example, when the 'Assets and Liabilities Statement at 30<sup>th</sup> April 1848' was submitted, the following recommendations were made: (1) greater economy of expenses, especially for catering and the church and (2) collection of arrears from debtors (HASMA, Bundle XXIX, no. 34).

The balance sheet and assets and liabilities statements of SMA, available from 1818 to 1858, corresponded perfectly with the requirements of the law (ASF, ABE, sheet 4847). They were prepared as the result of the combined action of various environmental pressures deriving from legislation, from common practice and from the competence and professionalism of SMA's management.



The chief aim of our research was to investigate the accounting system of an educational establishment and to then interpret its development in the light of neo-institutionalism. In this present section, we have described the accounting systems used by SMA, explaining their role and noting modifications, in the awareness that ‘accounting changes in both content and form over time’ (Miller and Napier, 1993: 631) and over space, being a local phenomenon (Carnegie and Napier, 1996: 7). An interpretative analysis is given in the following section.

## Results and discussion

Our research suggests that the decisions of the *conservatori* regarding their institutional and organisational framework tended to be uniform because they upheld the Grand Duke’s laws and regulations. This legislation was an instrument used by the government to dictate a model of formal organisational structure that guided the *conservatori* in defining their internal regulations and their subsequent actions. However, much of these were adapted to the needs of the single institute, the organisational structure – at least in appearance – appeared similar. This ‘reducing the variability of behaviour and in turn, increasing its predictability’ (Flamholtz, 1983: 158) led the *conservatori*, in complying with the Grand Duke’s requirements and mimicking the most legitimate organisations, to assume frequently homogeneous behaviours (Carruthers, 1995: 315).

Their decisions, too, regarding pedagogical approaches, methods, criteria and the content of teaching, and the social class to which it was offered, experienced pressure from psychological, sociological, cultural and environmental forces. SMA continued, like other *conservatori*, to carry out an important social function in enabling many girls, including the poorest, to obtain a basic education. As far as teaching and pedagogy were concerned, the teachers (oblates nuns and external teachers) had to respect the curricula imposed by law, adopting traditional methods and/or innovative solutions in accordance with the educational requirements of their pupils. They were also encouraged to consider psychological aspects in order to teach more effectively. The attention given by SMA managers to education is shown in the changes in dimension and composition of the workforce, by their use of external teachers (HASMA, ‘Assets and Liabilities Statements’), by the greater range of subjects taught (HASMA, Bundle XXIX, no. 86) and by the increase in the number of pupils (HASMA, Register of pupils). These elements assisted in the decision-making process and control of management. The *conservatori* was in constant evolution but tended to homogeneity – a sign of similar responses to environmental pressures.

Analogous results emerged also from our research into the book-keeping and accounting systems that, between 1785 and 1859, underwent modifications that were often similar. It should be noted that the Grand Duchy of Tuscany, bound by the absolute authority exercised by the Austro-Hungarian Empire, adopted that empire’s administrative procedures for the accounting of government and associated bodies (De Brun, 1911: 99–100, 113–114; Mussari et al., 2010: 646). These procedures were based on the cameral method, consisting of a form of single entries that recorded only movements of cash or of stock (Gulluscio, 2011; Ponzo, 2006). It was a method of compilation of complex non-balancing and partial book-keeping (Mussari, 2008). In keeping with this method, from 1758, the Grand Duchy’s accounts were recorded in the income and expense book, the general ledger and the general journal, considered fundamental for the cameral method. In addition, an inventory, statement and balance sheet were kept, as communication tools (Coronella, 2007: 214–215; Mari and Bartocci, 2003).

The accounting system of the *conservatori* was of necessity, the same as that used by the public administration (Poddighe and Coronella, 2010). SMA, too, used the cameral method from 1785 to the end of the century, although it was a modified version. Single entry was abandoned and *partial double entry* was used in the three principal books (Rigobon, 1891): *partial* because only monetary

and financial values, those of some assets but not economic values were recorded; *double entry* because income and expenses were matched to accounts payable and receivable. One innovation in the general ledger was the introduction of an income statement, intended to act as a summary (in SMA, the 'general revenues' account was used).

From 1814 to 1824, Tuscany was governed by Ferdinand III of Habsburg-Lorraine (Ceccuti, 1998). He promoted the Law of 1818, which led to modifications in accounting systems.

It is significant that the form and content of SMA's 1817 statement already preceded those of the 1818 Law. It is possible that SMA's procedures may even have inspired the drawing up of the subsequent legislation. It appears that SMA did not merely passively carry out regulations, but played a proactive part, exemplifying the interplay of internal and external institutions (De Araujo et al., 2011: 112). Other *conservatori* that had not implemented the mandatory dispositions of the Law of 1818 by 1837 were judged as unsatisfactory and later would be suppressed.

At the end of the period investigated, in SMA, the most significant accounting changes were as follows:

- Enlargement of the chart of accounts and, in particular, accounts payable;
- Use of cost centres to which many of these expenses were charged;
- Introduction of three financial accounts and the corresponding surplus or deficit accounts;
- Preparation of the financial statement and the asset and liability statement, in which, to the values of the payables and receivables and of revenues and expenses, data regarding assets were added, giving a more detailed analysis of the situation.

SMA always maintained a respectful, obedient attitude towards the Grand Duke's dispositions, but did not hesitate to communicate with the authorities on some questions. For example, the Regulation and the Law of 1818 established the end of the financial year as 31 December, but SMA received authorisation from the SRD to maintain it at 30 April to guarantee 'contemporaneity between the farming accounts and the balance sheets so they are in harmony' (HASMA, Bundle XXVII, no. 13).

On another occasion, the government's request to increase the number of pupils paying lower fees encountered a negative assessment of feasibility from SMA, which considered the cost resulting from greater 'social' foundation was too high, given its current financial situation (HASMA, Bundle XXIX, no. 56). SMA management was concerned that they would be unable to achieve a favourable balance between income and expenses and were anxious if fees were reduced, they might risk offering education of inferior quality and level. The SRD accepted the *conservatorio's* point of view, being aware of SMA's current economic situation as they exercised active control over SMA's finances.

The SRD was replaced in 1848 by the Ministry of Ecclesiastical Affairs at the central level and by the Prefecture at the local level. The *conservatorio* continued to correspond with the Prefecture on important questions (see notes of the *Operaio* of 1856 and 1857 and replies of the Prefect, HASMA, Bundle XXXI). The report of 19 February 1856 underlined a serious reduction in the *conservatorio's* assets between 1800 and 1855, particularly severe (£ 22537.14.4) in 1845–1855. Two main reasons were given: the low agricultural revenues and insufficient fees received from pupils. The *Operaio* asked for the number of entirely free places to be reduced and the Prefect agreed, granting a suspension of three of the five free places for a period of five years. The Prefect also asked SMA to reduce the wages and salaries paid to lay employees and teachers, to which the *Operaio* objected. Their pay had been the same since 1785 and reducing the number of lay employees or teaching hours would have repercussions on the running of the *conservatorio* and on the quality of education. This suggests that the government exercised constant, hands-on control and that, on examining the institute's management, on various occasions agreed with the *Operaio's* opinions.



In short, by the end of Habsburg-Lorraine rule, accounting and balance sheets had become better tools for meeting the requirements for information and for internal (of managers and teachers) and external (government bodies) control. Our study highlights the special role played by accounting procedures in supporting internal control and external legitimacy (Hopwood, 1983: 289). According to Miller and Napier (1993), 'we focus on the outcomes of the past, rather than looking for the origins of the present' (p. 632). The accounting system had become more efficient and useful in decision-making and control, although it used partial double entries referring to specific administrative facts (Barnabè, 2005; Di Pietra and Di Toro, 2000; Montrone and Chirieleison, 2008), thereby sacrificing an overall view of assets and management.

The subject of our research was an accounting system and we have emphasised the changes it underwent in method and contents. These changes often happened as implementation of government legislation, but sometimes on the initiative of the *conservatorio*'s administration to satisfy a need for information or to conform to practices in other institutes held to be legitimated (Burns and Scapens, 2000; Carmona and Donoso, 2004; Scott, 1987). All of this is confirmed by the choices made by SMA, which always complied with the legislation in force. However, SMA also aligned itself with the behaviour of other *conservatori*, and sometimes was even ahead of them, proposing itself as an 'innovator', as we saw for the balance sheet procedures (Law of 1818). We further suggest that SMA was an institution that needed to modernise gradually, given that it was subject to various pressures due to changes in civil society (Abernethy and Chua, 1996; Burchell et al., 1980).

Our research has shown the ability of the main tenets of neo-institutionalism to interpret the dynamics of development of SMA that, striving to maintain and increase its legitimation, aligned its institutional set-up, formal organisation structure, methods, criteria and contents of education and its administrative-accounting system to that imposed by government and used by sister organisations that were reputed to be successful. All this did not, however, prevent the *conservatorio* in certain circumstances from suggesting innovative or opposing solutions.

## Conclusion

The spread of the Enlightenment and the affirmation of liberal thinking influenced political, social, cultural and religious aspects of the environment in the late eighteenth and mid nineteenth century, bringing about change. This is the context for our research which, by using a neo-institutionalism perspective, has shown that organisations operating in the educational sector adopted similar responses in the face of changes in their competitive environment.

In the period under consideration, by analysing rare documents, laws, regulations and account books, it was found that the institutional environment exercised strong pressure on the managers and teachers of the *conservatori*. The *conservatori* tended to make convergent decisions, as witnessed by similar responses in the educational sphere and by shared administrative-accounting procedures. Coercive isomorphism was the major influence on the decisions of the managers and teachers of the *conservatori*; here, an important source of pressure was found to be the various legislative measures. Based on current legislation, the *conservatori* were established and their institutional set-up and formal organisation structure were defined; legislation underpinned the aims, methods and contents of SMA's educational activity and provided indications regarding their accounting and non-accounting systems.

There was also a high rate of mimetic and normative isomorphism, as various *conservatori* felt encouraged to model their behaviours on those organisations perceived to be of high quality and open to new pedagogical solutions. The innovations deriving from sociological concepts and from avant-garde pedagogical theories, as well as from practices and procedures adopted by institutions deemed successful, resulted in similar answers from different entities.

It has been observed that various kinds of institutional pressure are often interconnected and that it is difficult to isolate and distinguish them clearly (Sargiacomo, 2008). In SMA, we can see processes of closely interrelated coercive, mimetic and normative isomorphism.

The *conservatorio* changed its procedures several times, reacting promptly to the legislation in force – and sometimes preceded it – aligning itself with common practice regarding organisational structure, management and accounting, inspired by ‘innovative’ ideas and ‘successful’ experiences in the field of education to achieve greater legitimacy.

While some modestly endowed institutions had little success in making important changes and many were suppressed, SMA, having adequate resources and staff who were attentive towards the competitive environment, decided to model itself on similar organisations considered ‘culturally supported and conceptually correct’ (Carmona et al., 1998: 117). Overall, our research supports the tenets of neo-institutionalism. SMA and the other *conservatori* did change their objectives and develop new strategies; over time, their organisational direction conformed to that suggested by their environment, making them become more similar to each other.

In the period under consideration, the modified conditions of the institutional environment gradually affected SMA’s institutional set-up, formal organisation structure, educational activity and its accounting and non-accounting systems. Regarding the latter, the various pressures met with a positive, innovative attitude on the part of SMA managers, who enhanced the information system to make the *conservatori* more effective for decision-making and internal and external control.

Thanks to the professional skill and decision-making flexibility of the *Operai* as well as the commitment and dedication of the teachers, SMA maintains today a remarkable position in the competitive context of the education of young people.

Our research could have been more detailed if all the accounting books relating to the period under investigation had been available; unfortunately, some are lost or heavily damaged. The level of analysis would also have been more precise if the connections between *conservatori* – which had always existed – had been more fully described in the chronicles conserved in the archives. This aspect could be the subject of future research focused on those *conservatori* who had relationships of various kinds with the SMA (religious, financial, educational).

By extending the field of observation, one might reasonably hypothesise that the results we found were not limited to SMA, but at the same time or subsequently affected other entities in the education and education sector (normal schools, schools for poor girls, ‘Sunday’ schools, women’s religious institutes), hitherto little explored in accounting history studies.

It might be interesting to carry out further research to demonstrate the soundness of these conclusions with reference to other institutions, to identify the principal agents of change that were playing an active role and to interpret the consequences.

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## Appendix I

### Archives

The main sources were documents conserved in the Historical Archive of SMA (HASMA). These include Alphabetical Index, Assets and Liabilities Book, Assets and Liabilities Statements, Bundles, Chronicles, Chronological Index, Payables and Receivables Book and Register of pupils.

Also essential were documents in the State Archives of Tuscany.

In the State Archive of Florence (ASF), we examined documents of these archival funds: Auditor of Ecclesiastical Benefices; Segreteria del Regio Diritto; Laws and Proclamations, 1801–1803; Proclamations and Orders, XII, C, 21 March 1785; 1765–1808, Regulation; Religious corporations suppressed by the French government.

In the State Archive of Pistoia (ASPt), we examined the archival fund of Laws and Proclamations, Civic Community of Pistoia no. 69, Laws of the Grand Duchy of Tuscany 1818 and Accompanying Letter 25 November 1818.