

The Sourdeline of Manfredo Settala Part 2.

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In the first part of this article (Chanter, Summer 2015) I wrote about the discovery of a painting, dated 1640, attributed to Carlo Francesco Nuvolone. The painting depicts Manfredo Settala (1600-1680) with his “sourdeline”, a complex Italian bagpipe of the 17th century (fig. 1). This important painting reveals several facts about the personality of the ingenious scholar of Milan. In this second part we will look at the technical knowledge that we can gain about the sourdeline, and its place in the European family of wind instruments from the 17th and 18th centuries.



Fig. 1. Carlo Francesco Nuvolone (1608-1662), "Ritratto di Manfredo Settala fra alcuni strumenti scientifici e musicali e lavori al torno di sua invenzione", oil on canvas, ca 1640 (?), 86 x 116 cm, actual location unknown.ⁱ

The sourdeline, as depicted by Nuvolone, is bellows blown and covered in black velvet with gold facings. The bellows, which are lying on the table, have a flexible tongue attached with metal loops with lion heads. There is a leather or velvet belt for attaching them to the body. The bellows are round in shape with four or five folds, quite different from the "trapezoid bellows" used for the French musette at the same time. They seem to be covered with snake skin and there is also possibly a signature and a dateⁱⁱ.

Note the use of wearing the bellows under the right arm and the bag under the left arm. Marin Mersenneⁱⁱⁱ in his *Harmonie Universelle*, 1636 gives us the best technical description of the original sourdeline, which had three pipes, and is similar to the one in the painting by Nuvolone. Mersenne takes pains to describe this instrument carefully, and notes how it was before the change from three to four pipes, a development which he attributes to The Duke of Braschane. We must remember that Mersenne in his drawing has added a fourth pipe to the original instrument : but we could say that his description is very precise regarding the three-pipe sourdeline, before its evolution from three to four pipes.

"Now it has four Chalumeaux, because I have added the fourth, hkh, which the Duke of Braschane invented so that one can play all kinds of songs in four parts ; because there used to be only three pipes before this invention ... "^{iv}

Mersenne states that it can be played either right or left side :

"The bellows, M, are inflated by means of a leather duct, LKI, which is the blowpipe. NO is the thong, or attachment, into which is passed the left or right arm, according to which side the bellows are."^v

Comparison of the two sourdelines (Mersenne's and Nuvolone's), show two very similar bagpipes except for the shape of the bag, which Mersenne has changed, as he describes :

"I have made the skin similar to those of our "musettes", instead of a kid skin that is used by Italians, which is like a long cylinder."^{vi}

And of course the number of pipes is different in each representation, Mersenne having not only added a fourth pipe (which seems to take the role of a "taille de hautbois" in the group), but making the third pipe a real "bass" by making it longer, with more keys. This "four part" bagpipe was able to realize a "consort" of instruments by itself, by playing in the same time two "dessus", one "taille" and one "basse".

The sourdeline painted by Nuvolone has three melody chanter :

- A right hand pipe with six open holes, equipped with closed keys
- A left hand pipe with four open holes, equipped with closed keys
- A low pipe behind the two main pipes. This pipe is covered with keys, it has no open hole.

The left and right pipes are open at their end while the lower pipe is sealed with a rose-shaped stopper. This means that it will be silent when all holes are closed implying that the instrument will require a staccato technique and that every note will be produced by articulation of one of the keys.

The cylindrical bores of these pipes are without doubt equipped with double reeds, as shown in Mersenne's drawing (fig. 2 left - overleaf). The stock that supports the three pipes clearly has a fourth opening, obstructed by a rose of ivory ; this shows that a fourth pipe could be fitted, as mentioned in the catalogue of Tergazo and Scarabelli, about some other sourdelines of Settala (*see the text over*).

So we can see in this sourdeline of 1640 an instrument with three pipes, equipped with thirty or forty keys (fig. 2 right - overleaf).

Two major authors describe the sourdeline in France at the beginning of the 17th century. As well as Marin Mersenne, Pierre Trichet, an instrument collector living in Bordeaux, describes the instrument played by the famous François Langlois.

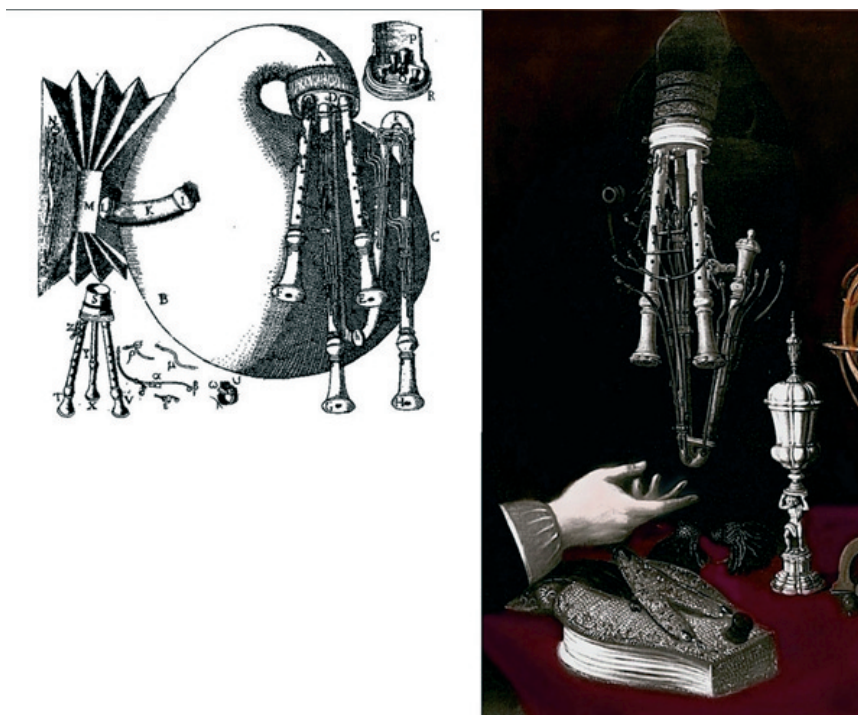


Fig 2. Left : Sourdeline and Sampogne in the *Harmonie Universelle* of Marin Mersenne (1636).
 Right : Detail of the sordellina in the painting by Nuvolone (1640).

Marin Mersenne : "Because we only made use of three pipes prior to this invention, so that the second DG did not end in G, but would rise on up to k, and had all the keys of the arm, hk. The other two chanter that are right and left, they have some of their holes open and the other closed by keys: the one on his right hand, namely F [left on engraving] has six open, and that on the left, E, four: but F has six keys for its six other holes, and E has only four, that is to say that F has twelve holes, and E nine ; from this is it easy to judge their range."^{vii}

Pierre Trichet : "It had three pipes or chanter made from ebony, with each one singing their part. The largest of which, used for low notes, was folded back. All three chanter were encased by one end in a ring or cylinder of wood and arranged in a triangle. In the end that was entering the cylinder, each pipe had a reed and the number of holes on each was quite different, since one of the chanter had only eight, four of which being along the pipe were open, and the other placed also following on it were closed with wedges or copper springs that were going up or down, and so easily opened and closed the holes. The other chanter had thirteen holes, six of which were open, and the others covered by keys joining the cylinder, except for one that was on the side. The third chanter, which was the bass, had only two open holes and fifteen other closed with keys each longer one than the other, nine of them were in rows between the other two pipes, then four of the one side and on the other."^{viii}

Following Mersenne and Trichet, we can understand the placing of the holes and keys on the chanter. In summary :

Pipe 1 (in Mersenne,"DF") : six open holes on the front. Six closed keys.

Pipe 2 ("DE") : four front open holes. Four closed keys.

Pipe 3 ("DG") : no open hole. Ten closed keys.

Pipe 4 ("DhkH") : no hole for fingers. Ten keys closed on the lower half of the vibrating column of air

Neither Mersenne or Trichet mention thumb holes, but Van der Meer^{ix} and Barry O'Neill^x suggest this possibility.



Fig 3. Zampogna player, Taormine, Sicily, photograph by Giovanni Crupi ca 1870.

The two lower chanter holes on Mersenne's engraving must be, in my view, tuning holes, as they cannot be reached by the player's fingers. Nuvolone does not show them. We can wonder about the technical possibilities of a right hand / left hand playing - allowing to close four holes on the top of each chanter and one hole on the back, with the thumb of each hand. Whilst the depictions by Mersenne and Nuvolone don't allow this possibility, the *Zampogne a paro* or *surduline* played today in Calabria or Sicily, there are five (one for the thumb) and four finger holes on left hand / right hand, while the pipes are drilled with seven holes (right) and four holes (left) (fig. 3).

It is possible that both Mersenne's and Nuvolone's *sourdulines* were made with thumb holes for the right hand but they are simply not visible in the engravings. They can, however be seen on the "multiple flutes" also made by Settala, one of these being kept in Bologna.^{xi} (fig. 4 overleaf).

Mersenne's *sourduline* was therefore equipped with thirty keys, distributed on four pipes. The increase in the number of keys is also on Settala's, although it is not known whether his instrument preceded or succeeded the publication of the *Harmonie Universelle* in 1636. Settala continued to develop his instrument because in the inventory of his museum by Tergazo and Scarabelli in 1666 it states :



Fig 4. Multiple flute by Manfredo Settala, kept in the Museo Civico of Bologna. View front and back, showing the thumbhole. Photos by Rainer Weber.

"Are placed before us four sourdelines with the pipes folded ivory, shot in rosettes, or let's say in the shape of pink, with forty key as the stems, and these covered with gilded silver, and each with a lion's head [...] To play these, we take under his right arm covered with a black velvet bag with gold scalloped, and under the left arm a small embroidered bellows so that one lifting and pressing the other arm, it sounded the pipes of these sourdelines and retouching with the fingertips, with their phalanges and with different parts of the palms at the same time many of these keys or silver rods, with a movement and such measures they render to the ear a singular harmony and a delicate concert uncommon until the upper quarte.

The sixth and final sourdeline is more than perfect ; it has four well-balanced pipes, equipped with fifty-six keys, the fourth of these pipes uttering the second octave ; this was especially invented by Mr. Manfredo who found there a way to add a "something else", an inexplicable harmony to this instrument, the sourdeline, which it seems cannot achieve greater perfection".^{xii}

Note the insistence of Tergazo and Scarabelli to attribute the invention of the fourth pipe to Manfredo Settala : maybe, after reading Mersenne and his allocation to the Duke of Braschane, they were keen to overturn this view.

The instrument went from thirty keys on four pipes (Mersenne 1636) to forty keys on three pipes and then to fifty-six keys on four pipes (1664/1666), probably becoming an extremely difficult instrument to play, except for its inventor...

Recreating the sourdeline

Over the last 30 years, several attempts have been made to interpret the information and to make a reconstruction of the baroque Italian sourdeline.

The first was devised by Van der Meer who based it on the manuscript of the *Libro per scriber l'intavolatura per sonare sopra le sordelline* (1600) of Giovanni Lorenzo Baldano (1576-1660). This document, written 36 years before Mersenne, also gives many musical examples for this instrument. It is probably the first manuscript devoted to bagpipes tunes in southern Europe. Whilst it is an important historical document, it gives little guidance on the organology of the instrument. The polyphonic nature of the instrument is confirmed, however, by the tablatures showing fingerings for both the left and right hand pipes, together with a few keys, as well as one or two drones. Giovanni Lorenzo Baldano (1576-1660), a Savona nobleman, had written his *Intavolatura per Sonare sopra Sordelline* for his own use. The work was written "on 24 June and 24 August 1600", as inscribed in hand at the beginning and end of the book. The collection of tunes for sordelline is like a checklist for the musician as the tablature and descriptive notation requires prior knowledge of the selected melodies.



Fig 5. Horst Grimm playing the sordellina he made.

A reconstruction of the instrument and tunes was made by Horst Grimm^{xiii} in 1999. His two chanter *sordellina* was very convincing, and he recorded a beautiful CD of the tunes collected by Baldano.^{xiv}

We must also observe the current practice of the *zampogna a paro* in southern Italy. The name itself *surdulina* is still in use for a polyphonic bagpipe working on the same basic principle as Settala's instrument : right hand and left hand playing two melody lines simultaneously. An evolution of these instruments has been carried out by various makers such as Pietro Ricci, Marco Iamele, or Marco Tomassi, using three or four melodic chanters equipped with keys. We can undoubtedly refer to

the small bagpipes designed by Mersenne to accompany his sordelline engraving (fig. 2), and that he probably calls under the terms of *organine* or *sampogne*.

This tradition is alive near Naples, Sicily and Calabria in particular. Whilst the bagpipes used today share some similarities to the baroque sordelines (double reeds, double parallel melody), there are also some differences : they are mouth-blown, a lower key, hidden under a *fontanelle*

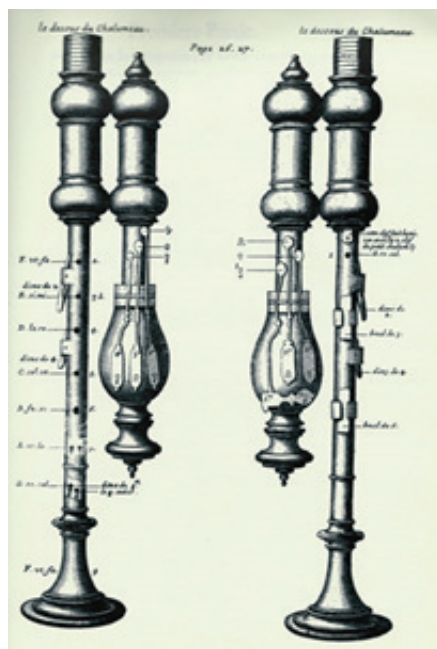
(barrel), as well as some missing elements of the Milanese instruments. It would be unwise to see in these "Zampogne a paro" and these "surduline" an archetype preceding the baroque instruments, as an evolutionary conception of popular music to art music. The history of social movements in Europe shows instead of a constant back and forth between social strata and cultural tastes, and this mobility, well studied in France, may have also been at work in the Italian peninsula. If some elements allow to consider the popular Neapolitan or Calabrian bagpipes today as affiliates instruments with the bagpipes of Settala, it would be without hierarchy, nor chronological or social evolutionary.

The Sourdeline and Court Musette in France : a revalued chronology

Remember the advice Mersenne gave to French bagpipe makers : in his introduction to *Proposition XXX*, he encourages the musette makers to be inspired by Italians *Sourdelines* for development of the musette :

"I omit an infinity of other inventions which can be added to the musette and to these drones and chanters, for fear of being too boring, and so to explain another type which is lately practiced in Italy and which can be found the invention of our makers of musettes, to add four parts of it and to make it sing all sorts of music with B-flat as well as C." xv

The design of the Royal musette, a bellows bagpipe equipped with double reeds and bearing two parallel melodic pipes, created by Martin Hotteterre near 1660, was probably suggested by the sourdeline and the memory of the virtuoso playing of François Langlois, quoted by many of his contemporaries. The evolution of the single chanter to two chanters on the French bagpipes in the 17th century is indebted to the ingenious Settala (fig. 6). If all the fingers of both hands are used on French baroque musette, one can also assume that the wrist and forearm of the musician were used to reach some remote keys of the third pipe of the sourdeline - as on the Uilleann Irish pipes developed in the 18th century : a relationship already suggested by Anthony Baines,^{xvi} and more precisely by Barry O'Neill.^{xvii} The regulators of Irish pipes, which allow one to play simultaneously a melody on the chanter



6. The double chanters of the french musette, as created by Martin Hotteterre near 1660. Engraving in *Traité de la musette* by Charles-Emmanuel Borjon de Scellery, Lyon, 1672.

and some chords by pressing keys on some pipes set on the drones-stock seems logically inspired by Italian sourdelines.^{xviii}

Eric MONTBEL

This article is dedicated to the memory of my great friend, old pal, Jean-Christophe Maillard, gone on the wings of music on a sad day of July, 2015.

i First publication by Alessandro MORANDOTTI, « Note brevi per Cerano animalista, Vermiglio pittore di figura e Carlo Francesco Nuvolone autore di ritratti », *Il Seicento lombardo : giornata di studi*, Mina Gregori (ed.), Turin, Artema Compagnia di belle arti, 1996, p. 68-69, fig. 107. I thank M. Morandotti for the use of his photograph of the painting. The colouring from the original photo (black and white) is of my own. *E.M.*

ii « *So A fatto da anno 16...* ».

iii Marin MERSENNE, *Harmonie universelle contenant la théorie et la pratique de la musique*, Paris, 1636 ; reprint, fac-sim., avec introduction de François Lesure : Paris, Éditions du CNRS, 1986. The « Sourdeline ou Musette d'Italie » is presented p. 293 et 294. The same study and the same drawing are in the Latin version, M. MERSENNE, *Harmonicorum libri instrumentorum IV*, Paris, 1636, p. 97-98. The drawing of the Latin version is of best quality, it is the one that we present here.

iv M. MERSENNE, *Harmonie Universelle, op. cit.* p. 293.

v *Ibid.*

vi *Ibid.*

vii *Ibid.*

viii Pierre TRICHET, *Traité des instruments de musique*, ca 1640, François Lesure (éd.), Neuilly-sur-Seine, Société des musiques d'autrefois, 1957 ; reprint, fac-sim. : Genève, Minkoff, 1978, p. 98.

ix John Henry VAN DER MEER, « La Sordelina : organologia e tecnica esecutiva », *Libro per scrivere l'intavolatura per sonare sopra le sordelline* de Giovanni Lorenzo Baldano (1576-1660) ; reprint, fac-sim. (manuscrit Savona, 1600) : Savona, Associazione Ligure per la Ricerca delle Fonti Musicali, 1995, p. 73-105.

x Barry O'NEILL, « The Sordellina, a possible origin of the Irish regulators », *Journal of the Sean Reid Society*, vol. 2.13, March 2002, p. 1-20.

xi This flute was restored in 1988 by Rainer Weber.

xii M. TERZAGO et P. F. SCARABELLI, *Museo, ò Galeria adunata dal sapere, e dallo studio del Sig. Canonico Manfredo Settala nobile Milanese...*, Tortona, per li figliuoli del E. Viola, 1666, 1677, p. 332. This sourdeline with four pipes was already presented in the version in latin by Terzago in 1664.

xiii Horst et Barbara GRIMM, *Il libro delle sordellina, Savona 1600*, booklet, CD 9903, Reichelsheim, Verlag des Spielleute, 1999.

xiv See the sordellina proposition with the same repertory by Goffredo Degli Esposti and *Lirum Li Tronc* on the CD *Sordellina, Colascione Buttafuoco in Renaissance Naples*, Stradivarius STR33741, 2009.

xv M. MERSENNE, *Harmonie universelle, op. cit.*, Proposition XXIX, p. 292.

xvi Anthony BAINES, *Bagpipes*, University of Oxford, Pitt- Rivers Museum, 1960, p. 101.

xvii Barry O'NEILL, « The Sordellina, a possible origin of the Irish regulators », *Journal of the Sean Reid Society*, vol. 2.13, March 2002, p. 1-20. One can see too : Ken MCLEOD, « From Hotteterre to the Union pipes », *Journal of the Sean Reid Society*, Vol. 1, 1999.

xviii The author has just published a larger article in French about the painting by Nuvolone and the sordellina of Manfredo Settala : Eric MONTBEL, « Le portrait de Manfredo Settala attribué à Carlo Francesco Nuvolone : un hommage au collectionneur et facteur de sourdelines », *Musique • Images • Instruments, Revue française d'organologie et d'iconographie musicale*, n°15, « Portraits, ballets, traités », CNRS éditions, juin 2015, p. 10-36.

Editor's Note: Many thanks to Eric Montbel for contributing this article for Chanter. It has involved considerable work to adapt a much more detailed article (note xviii) to fit the confines of this publication. He has not only been very patient with the editor in complying with her demands to compress his detailed research but he has also had to do this in a foreign language!