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SYNTAGMA MUSICUM II DE ORGANOGRAFIA

Parts I and II

MICHAEL PRAETORIUS



Translated and edited by David Z. Crookes

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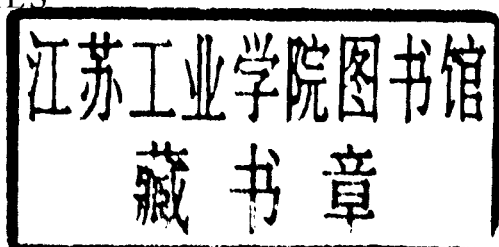
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PREFACE

MICHAEL PRAETORIUS was born in Kreuzberg, Thuringia, in or around 1571. His education began in the famous *Lateinschule* in Torgau, where he manifested a strong interest in music; then, in 1583, we find him at the university of Frankfurt an der Oder, *nonjuratus* on account of his age. About two years later he took up the study of philosophy and theology, and after another two years he became university organist. Probably during the winter of 1589–90 he entered the service of the Duke of Brunswick and Lüneburg. In 1603 he married, and in the following year was appointed *Kapellmeister* of the ducal court. In 1605 appeared the *Musae Sioniae*, first of his many compositions. Over the next eight years Praetorius published a vast amount of music; and this, together with his direction of the duke's *Kapelle*, established his reputation as the leading musician in Protestant Germany. He also made himself, by ceaseless enquiry and research, the greatest musical academic of his day. Between 1614 and 1620 he published the *Syntagma musicum* (music encyclopedia). He died in 1621.

We may well believe that Praetorius was regarded in his lifetime as something of a superman. He was hugely erudite in languages and literature, a first-rate organist, a bold and inspiring *Kapellmeister*, a composer of the first order, and a prodigious authority on music in all its aspects. But he was more. He was also one of those rare, diligent *literati* who can express their art in lexicon or encyclopedia. He belonged to the line of polymaths, or universal geniuses, which began with Solomon and ended with Goethe.

If Praetorius were to return to Europe today, he would find much to amaze him. He would be astonished that the world had not yet come to an end. He would be horrified by the liberal and ecumenical nature of modern Christendom. He would have unkind things to say about democracies, and he would be grieved by their essential godlessness. But not everything would sadden him. He would laugh in disbelief at the science of ethnomusicology. He would rejoice to discover a greater son of Leipzig than any he had known. And he would be surprised at first, for he was a modest man, to find himself remembered. He would see himself acknowledged in histories of music as a most important and prolific German composer. He would also notice a facsimile of his *Syntagma musicum* in the library of nearly every university in Europe, and would find references to it in hundreds of textbooks. When he grew accustomed to our technical miracles he would soon tire

of empty, frivolous television, but never of radio—and especially not of music broadcasts. Before long Praetorius would chance to hear some of his own music on the air.

That he would find this possible is an indication of how much our musical landscape has changed over the last decade or so. During the 1960s, when I was growing up, there was still only one god—the symphony orchestra—and the piano was its prophet. But now the old diarchy has been swept away with the advent of an early music revival whose converts have established themselves in the musical ‘church’ and forced it to become broader in scope than ever seemed possible. It is not my business here to account for the revival, nor to say why it has concerned itself with instrumental rather than vocal music. Suffice it to say that it has happened, and that Praetorius’s *De organographia* has been the newly-discovered ‘scroll of the law’ on which it has been based. Praetorius’s drawings have become as well known as the standard portraits of Bach and Schubert. They can be found as framed sets on the walls of libraries and private homes up and down the land. It is a measure of their appeal that they have even been printed on sweatshirts.

Praetorius’s work has always been an important tool of musical scholarship, and it has been reprinted twice in the present century. But the early music revival has created a new and much more popular demand both for *De organographia* and for a satisfactory translation. Praetorius wrote his book in German mainly because ‘makers and players . . . are for the most part not conversant with the Latin language.’ Most makers and players in the English-speaking world are not conversant with baroque German, and it is to them that I address this translation. If in executing it I have been able to employ such little learning as I possess in the performance of a service to my brother ‘makers and players’, then I express myself humbly grateful for the opportunity to have been of use.

In the present work I include Parts I and II of *De organographia* and all Praetorius’s illustrations, but not Parts III and IV, which deal exclusively with the organ. I omit the index of the original, but given the detail of Praetorius’s table of contents the reader should not find this omission a serious disadvantage.

Nearly twelve centuries ago the Chinese poet Po Chü-i composed a lament on the passing of an earlier music, ‘Silk and cassia’. This poem might have served until recently as epitaph to be placed above the early instruments in our European museums. I render below six of its twelve lines.

Silk and cassia form a lute
Wherein old lays are placed.
(Old lays, vigourless and mute,
Unglad to modern taste) . . .
. . . What effaced its fine repute?
Ch’in zither, Ch’iang flute.

But now both the old lutes and the old lays are being enthusiastically exhumed. Objects that once were the concern only of antiquaries have become everyone's musical business. And in company with many other long-forgotten composers, Praetorius is beginning to appear at concerts, in broadcasts, and on records. In time, he will be accorded his deserved station in the history of music.

Even after this comes to pass, however, he will be seen by many—on the basis above all of *De organographia*—as a cornerstone of that early music revival during which his own music, and that of so many others, first came to light.

D.Z.C.

ACKNOWLEDGEMENTS

Hwæþere ic fāra feng fēore gedigde,
sīþes wērig.

(*Beowulf*, 578–9)

Now that my task is at an end, it is a real pleasure to thank those who have assisted me in its expedition. My first and chief debt I have recorded on a separate page. My next is to Mrs Margaret Barr, who typed the work. To Professor David Greer I am grateful both for advice relating to the project, and for first arousing my interest in early musical instruments. Professor David Wells gave me the benefit of his linguistic expertise when the work was at an early stage, and I thank him sincerely.

Behind these creditors there stands a multitude of people who have helped me in various ways: patient librarians, unearthing arcane and ancient lore; fellow instrument-makers, sharing their insights in letter and in conversation; and pioneer scholars, whose works have enlightened or provoked my own thinking. I cannot name them all, but I am deeply grateful to every one of them.

Finally, I record two debts of long standing. Dr Brian Scott first directed my eyes towards the scholarship of the Latin Middle Ages. I am unable to thank him sufficiently for his enthusiastic tuition. Mr Allan Macauley first kindled in me a love of the German language and a hunger for polymathy. I trust that the finest of all those who ever, in Caliban's words, 'taught me language' may think well of 'my profit on't'. I declare my debt to him gladly, but words are inadequate to describe it.

D.Z.C.

INTRODUCTION

1. Summary

The *Syntagma musicum* (music encyclopedia) is in three volumes, of which *De organographia* is the second. Volume I (*Musicae artis analecta*, i: Wolfenbüttel, 1614; ii: Wittenberg, 1615) is an immensely erudite treatise, written mostly in Latin, on ecclesiastical and ancient secular music. It is the sort of monumental opus we would expect from a scholar who had devoted a long life of study to the production of one book; yet the *Analecta* is only a part of the learned writings of Praetorius, who spent most of his fifty years as a busy practical musician, performing and composing. Nowhere is the astonishing depth of his scholarship better exhibited than in this work. The reader will find its pages *difficilia intellectu* on two counts at least: he must be equally at home in Latin, Greek, Hebrew, and German; and he must be able to cope with the extraordinary range of Praetorius's learned references.

Analecta is written in Latin for scholars. By contrast, the other two volumes of the *Syntagma* are written in German. Volume III (*Termini musici*, Wolfenbüttel, 1618 and 1619) deals with musical form, theory, and the management of *Kapelle*, and affords a deep insight into the compositional forms and performance practices of the period. Unlike much of the *Analecta*, it could have been written only by an expert musical practitioner.

This is even more true of Volume II of the *Syntagma*—*De organographia*. It is in two main sections, the first dealing with all the musical instruments known to Praetorius, and the second with the organ, ancient and modern. At the rear of the book is the celebrated *Sciagraphia*, a *cahier* of plates depicting to scale most of the instruments treated in the text. *De organographia* was published in Wolfenbüttel in 1618 and 1619, and the *Sciagraphia* in 1620. The 1618 issue begins with an apologia addressed to musicians and instrument-makers, the 1619 one with a long dedication to the Leipzig town council. Both are included in the present translation.

The work divides as follows:

*Pp. i-x**

A dedicatory address to the Leipzig town council. Praetorius gives a survey of

* Page references in the Introduction apply to Praetorius's original; thereafter, all references are to pages of this book, unless otherwise stated.

biblical instruments, beginning with the trumpets of Moses in Num. 10. He moves on to look at the instruments mentioned in ancient classical authors, but these are only a peg upon which he wants to hang a two-page display of humanist learning. The modern reader will stagger, bewildered, under the blows of the four elements, the seven planets, and the Pythagorean τετρακτυς oath. Praetorius proceeds to deride the music of Islam, and speaks moderately of Mahomet's 'tyrannical régime, fiendish religion, and degraded, inhuman barbarism'; he then tells us, mock-seriously and in great detail, of the pomp and circumstance of Turkish circumcision rites. He goes on to give an outline of the contents of *De organographia*, and closes by paying tribute to a number of eminent Leipzig musician-scholars.

At the very end, he signs the date—19th June 1619—but he takes over a hundred words to do so. Constantine, the Flood, Arius, the Exodus, the founding of Rome, and 318 bishops appear in procession so as to leave us in no doubt of the year.

Pp. xi–xiii

An apologia addressed to musicians and instrument-makers, but really intended for those critics of Praetorius who had taken him to task for letting the humanist side down (by writing in the vernacular, and so opening up the mysteries of knowledge to the vulgar). In a paragraph of almost impenetrable obscurity Praetorius ridicules his critics, and then gives his reasons for writing in German: to write in Latin would require a host of specially invented technical terms; and in any case most makers and players of instruments cannot read Latin. He proceeds to define his aims in writing *De organographia*.

He then returns to the serious business of attacking the 'semi-literate wiseacres' who have criticized him. He implies that their criticisms spring from jealousy and spite, and challenges them to produce a better book.

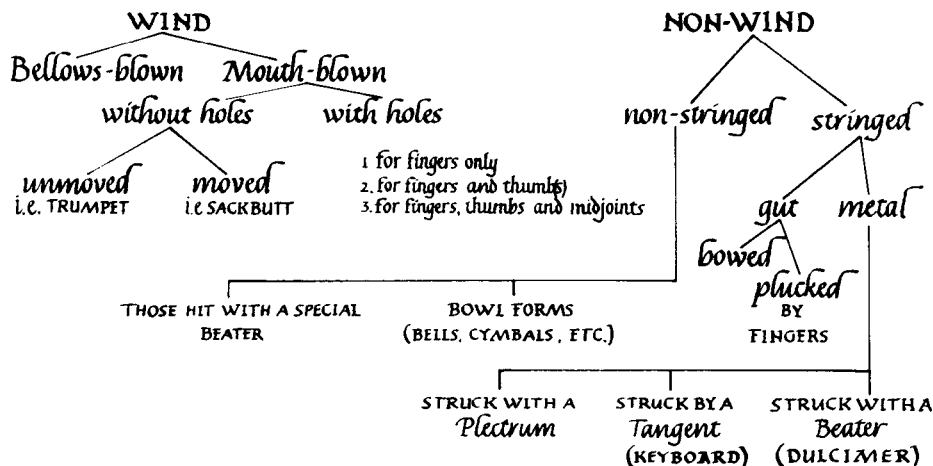
Pp. xiv–xxvi

This portion comprises the list of contents and two diatribes—one against the disgracefully low pay of German organists, and the other against uncooperative organists. Praetorius follows this with a list of his own compositions, a final commendation of himself to the reader, and a fervent, inspired prayer which looks forward to the music of heaven. Finally, Praetorius prints the address of his admission to the Quedlinburg Musicians' Guild, in obedience to the principle *Laudet te alienus et non os tuum*. This consists of fourteen elegiac couplets written in praise of Praetorius and his *Syntagma*.

THE TEXT

The text runs from p. 1 to p. 160. There is a calculated symmetry about its two main sections: pp. 1–80 treat musical instruments, and pp. 81–160 the organ. Pp. 1–80 are in two parts, as follows:

pp. 1–8 (Part I): Two classifications, of which the first (pp. 1–5) is as below.



(On p. 10 the winds are divided into *mouthpiece* and *reed* types.)

The division of pp. 6–7 is executed according to the three dimensional parameters, which are given the following denotations:

length = pitch constancy

breadth = how many parts or voices can be played at once by any instrument

depth = falsett capacity

What we have here is more a Renaissance dabbling in semantics than a serious contribution to organology.

Finally (p. 8) Praetorius tells us that he means from now on to treat instruments as either *wind* or *stringed*. (Percussion instruments, in which he has no interest, are quietly dropped.)

Pp. 9–80 (Part II)

Praetorius begins by defining a number of instrumental terms like 'consort'. On p. 13 he gives a table of wind consort establishment numbers, and then goes on to discuss standards of pitch. In the series of charts which follow (pp. 20–30) Praetorius tabulates the pitch ranges of all the wind instruments, and the tunings of most of the stringed ones.

Pp. 31–80

This is the most important part of the text, in which each instrument is individually described. There is no uniformity of treatment; the amount of coverage usually depends on the degree of Praetorius's knowledge or enthusiasm. Sometimes he will say very little about a particularly well-known instrument, e.g. the violin. On the other hand, he is not afraid to write a paragraph about an instrument—the doppione—that he has neither seen nor heard. At his worst, he forgets to tell us what he really does know. (In the chapter on the symphony, for example, we are not told what the instrument *is*, but only what we must not call it!) Overall, however, the treatment is scholarly and informative.

In the closing pages of Part II Praetorius quotes descriptions from Virdung of the redoubtable 'Instruments of Jerome', and—for the sake of polymathic completeness—lists the folk instruments which he promised to treat on the title-page. At the end of this motley company Praetorius places the mythical anvil of Pythagoras. Finally (p. 80), as an *avant-courier* of what is to come, he describes a tiny positive organ.

2. The Importance of *De organographia*

Those of us who study musical instruments of the Renaissance and early baroque are doubly blessed in comparison with researchers of earlier ages. First, we have in the world's museums and private collections a far greater number of period instruments (many still playable) than we could have hoped for, particularly in view of the many destructive wars and revolutions we have suffered over the last four centuries. Secondly, we have a number of treatises on musical instruments from the period, and it is this legacy that we must survey if we are to assess the importance of *De organographia* in its own field. (There is much else for us to learn, both from other written sources—ranging from Shakespeare's *Romeo and Juliet* to the wages accounts of royal households—and from the visual arts, but these are not germane to our present purpose.)

Several didactic writers of the period, whose main purpose was something other than the description of musical instruments, are useful to the organologist because of incidental bits and pieces. Glareanus, for example, in a work principally concerned with the modes—*Dodecachordon*—gives us a long account of the marine trumpet. But if we are to consider *De organographia* in relation to works of the same class—illustrated systematic treatises on instruments—then we will find only three writers who deserve to be named in the same breath as Praetorius: Virdung, Agricola, and Mersenne.

The *Musica getutscht* (Basle, 1511) of Sebastian Virdung is the oldest printed book on musical instruments, and it also has some of the clearest illustrations for

its period. It is in two parts: the first is a description of the different families of instruments; the second an explanation of the notation they employ. Virdung attempted a systematic classification of instruments, but this can be criticized on the grounds of inconsistency: strings (including keyboards) are classified by structure, whereas winds and percussion are classified by sound production and then playing technique. The German text is in the form of a dialogue. This was a popular didactic approach in the Renaissance, but the modern reader may find it rather wearing.

Martin Agricola's *Musica instrumentalis deudsch* (Wittenberg, 1529; final edition 1545) is a work of much less originality than Virdung's. Agricola draws so heavily on Virdung for his subject matter that we would not be far wrong in seeing the later work, to a certain extent, as a popular or school edition of Virdung. In fairness to Agricola, there is a great deal of information in his pages that we would look for in vain elsewhere; but we can only wonder what sort of book he would have written in the absence of *Musica getutscht*. He is even more pedagogic in approach than was his predecessor: while Virdung's text is written as a dialogue, Agricola's is written, for mnemonic purposes, in rhyming couplets. These are at best less than an assistance to the modern reader, although they will wake in him a new respect for the technique of William MacGonagall.

It is remarkable that of the four general treatises on musical instruments that appeared between 1511 and 1636, the first three were written by Germans. The last one, however, came from the pen of a Frenchman. Martin Mersenne's *Harmonie universelle* (Paris, 1636) has as its final section a detailed treatise on musical instruments of all types. Mersenne describes the instruments in much more detail than Praetorius, sometimes giving fingering charts. His approach is very scientific—Mersenne was above all a mathematician—but he rarely gives precise measurements. The great weakness of his treatise is the variable quality of its illustrations (at least three artists seem to have been involved). Some of the plates are excellent, some are indifferent, and others are incredibly crude in execution.

Where does *De organographia* stand in comparison with the three works at which we have looked briefly? The answer is that it is immeasurably superior to all of them. No other book exhibits the range, the clarity of information, and above all the scaled drawings of Praetorius's treatise. The text has its share of faults and mistakes; the plates contain a few cases of confused or mistaken identity; but the overall quality of the work is tremendously high. Perhaps its best feature is the *Sciagraphia*, in which the illustrations are most carefully drawn, and also, incredibly, the first to be provided with a scale in any work before the twentieth century (the dimensions are shown in Brunswick inches: 1" = 23.78 mm). It is

this scale which has made possible precise reconstructions of some instruments which have failed to survive.

In short, Praetorius tells us so much, and with such precision, that without *De organographia* it is impossible to conceive of the early music revival as we have known it.

3. The Quality of Praetorius's Language, and the Nature of the Translation

Someone who undertakes the translation from German into English of a modern technical manual has a clear course to follow: he should render unadorned German prose as unadorned English prose. The only literary part of his task should be the avoidance of avoidable infelicity. In thus defining the course, we are really stating something about modern technical writing. It is unadorned. Its writers are concerned with the efficient communication of ideas, and there is no more place for literary artifice in their works than there is for ribbons on safety helmets.

Non sic Renaissance writers, however, and for several reasons. First, the gulf that now exists between the humanities and the sciences was unknown in an age when it was still possible for one man to know everything. Secondly, writing was much more a business of form and artifice than it is now. Thirdly, it was part of showing one's scholarly credentials to perfuse a work on nearly any subject with biblical and classical allusions. The manner of a man's saying, in the community of learning, was often as important as what he had to say.

Latin was the language of scholarship. It is easy for us moderns to misconstrue the use of Latin during the period as something totally exclusive, a sort of *parietem maceriae* erected against the common people. There is certainly some truth in the notion: many writers in the Renaissance would have agreed with the Pharisees' words in John 7:49, 'This people, who knoweth not the law, are cursed.' We are talking about an age when kings reigned, and princes decreed justice—when considerations of 'public opinion' or 'the spirit of the age' were of no account. Many a nobleman might find his library 'dukedom large enough', but there were no public libraries. The community of learning sat apart from plebeian vernaculars, and its language was Latin.

Now dwellers in a democratic age (who tend to assume that theirs is the rightful order of things) can become so taken with the exclusiveness of writing in Latin that they fail to see that it was also an inclusive practice. Whatever his nationality, if a scholar wrote in Latin he was immediately in touch with every other scholar in the world. Thus Praetorius used Latin for the first volume of his *Syntagma*, a learned work of history and description.

When he came to write a technical work for technicians, however—*De organographia*—there were two reasons why he had to use the vernacular, as we have seen. First, very few of his intended readers were familiar with Latin. Secondly, his subject would have required a multitude of specially invented words, and then a glossary to explain them. *Organographia* itself is a made-up word, although its meaning is plain; but what does even a genuine word like *cithara* tell us, unless we know in advance that Praetorius means cittern?

So Praetorius wrote in German, although to write in Latin was second nature to him.

Naturam expellas furca, tamen usque recurrit . . .

Not surprisingly, Latin 'recurs' in titles, headings, phrases, and entire sentences. Odd words of Greek appear as well, and there are even two words of Hebrew. In fairness to Praetorius it should be said, however, that his writing is not remarkable for the period. The florid baroque forms and style, the layout, the long asides, the use of acrostics and word-puzzles—all are exactly what we find in most scholarly German works of the same vintage. Much of the book will have a familiar ring to those who have read a lot of contemporaneous learned writing.

Now it is part of translation to preserve literary forms, ranging from word-puzzles to layout; to render poetry as poetry wherever it occurs; to render gravity and levity according as they are found in the original. But how is the translator of Praetorius to preserve baroque floridity? In my opinion he should not even make the attempt. He should rather try to translate good 17th-century German into good 20th-century English. This will involve the liberal use of a pruning-knife, on two counts: first, the original is written in long, baroque periods; secondly, the German of this period rarely says something once if it can say it twice or more (contemporaneous English is similar, as in 'without let or hindrance' for 'without hindrance'). Thus, even on the title-page, Praetorius speaks of 'precise drawings and exact illustrations'. In language, $AB + AB = AB$, not $2AB$ as in mathematics. The translator must on the one hand split up Praetorius's periodic sentences into shorter units, and on the other reduce linguistic building-blocks in $2AB$ or $3AB$ form to their single significances.

To render *De organographia* word for word, in the manner of a crib, would be absurd. The translation would sound quaint and pedantic, and—for such is our habit of patronizing the past—would encourage us in the belief that people of the early 17th century were quaint and pedantic, delightful creatures (with codpieces) who spent their guilders in Ye Olde Shoppe. They certainly were not—they were simply different from us. Perhaps if some of them were resurrected they in their turn would find 20th-century books, notions, and people very quaint indeed.

Praetorius's wordhoard is dangerous ground for the amateur, and even an experienced linguist will howl, like Odin, as he tries to grasp the rune-staves of the *Syntagma*. Many writers on musical instruments have included in their works their own translations of odd paragraphs from *De organographia*; most of those that I have read are clumsy beyond belief, quaint to the point of absurdity, and riddled with elementary errors.

My own feelings in offering this present translation are best expressed by the words of Moses in the book of Hebrews: 'I exceedingly fear and quake'. It is a humbling experience to translate the work of a polymath. In giving this version out for other eyes to see, I would make use of Praetorius's own words: 'If everything has not been well done, it has all been sincerely meant for the best'.

*

In this translation German and Latin are rendered straight into English; where Praetorius gives a translation of his own Latin, however, English and Latin will be found together. Whenever I bring the name of an instrument into English, I treat it as an English word and therefore do not italicize it. Greek I have left as it is, as a delight for the literate, but when Praetorius does not provide a German translation of his own Greek, I have given an English one in a footnote. Latin and Greek verses are rendered as English verses in the classical metre, and word-puzzles in German or Latin as puzzles in English. Finally, wherever it matters in the text I have expressed Praetorius's Brunswick inches as imperial inches.

MUSIC ENCYCLOPEDIA

BY

MICHAEL PRAETORIUS
OF KREUZBURG

VOLUME TWO:

MUSICAL INSTRUMENTS

containing

the names, playing techniques, and individual properties of all ancient and modern musical instruments—little-known foreign and folk instruments, as well as the familiar instruments used in European art music—together with scale drawings:

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