

NESCIENS
MATER

à 64

“10



UNIVERSITY OF
OXFORD

Candidate Number: 141913
MSt in Music (Composition)
Part 2

PREFACE

The process of writing this piece came at the end of four years as an Oxford choral scholar. This experience, and my background in the English Cathedral tradition, provided the compositional impetus to write a large-scale motet like the 40-part anthems of Tallis, Striggio and Bednall which had inspired me during my time at Oxford.¹ It was my ambition that half of my Masters portfolio should be comprised of a similar project. The deadline for submissions coincided with my mother's 64th birthday, and as such I decided to expand the 40-part model to 64 parts, and chose to set the antiphon *Nesciens Mater*, which honours the Mother of Jesus. This text choice carried significant musical weight; arguably the most famous setting is that by Jean Mouton, known for its complex and beautiful canonic structure. I wanted my work to acknowledge Mouton's without directly referencing it, and I decided to do this by creating my own web of canons. Much of my compositional work this year has involved canons and their permutations, but in this final work I wanted to bring all my study to a head by attempting a more rarefied form of canon referred to by Alan Gosman as 'stacked canon'.²

STACKED CANON

This Renaissance technique appears to have been attempted infrequently, with Gosman only identifying four surviving examples. He argues it was invented by Ockeghem c.1475, and the only other examples he mentions are pieces by Verdelot, Willaert and, significantly for me, Mouton.³ In this type of canon each entry transposes the material by the same interval distance. If the interval distance were a 5th, and the material began on a C, subsequent entries would be on G, then D, then A, then E, and so on. As another example, Mouton's *En Venant de Lyon* is built by 'stacking' 4ths, with each voice entering a perfect fourth higher than the other at the time interval of a minim: D – G – C – F. As Gosman explains, this means that each 'comes' or 'following melody' must also be a 'dux' or 'leading melody'.⁴ These pieces were seen as significant works, often presented at the start or end of anthologies by printers including Petrucci.⁵ In *Nesciens Mater*, I build my canons using the same stacks, starting out with the same D – G – C – F opening as a reference to Mouton.

PRIMARY CANON

Unlike Renaissance stacked canons, I expand my form beyond the four voices earlier composers limited themselves to.⁶ Instead of having one stacked canon within one choir, I project the stacked canon form onto multiple choirs. The work opens with an example of what I call the 'micro-canon', with each voice entering a fourth higher than the other, at a TI (time interval) of one bar.⁷ The canon starts at the bottom because this seems to have been the standard practice.⁸ Choir XV enters at bar 12, a fourth higher than the music of the first 11 bars. All the music that choir XV now sings is a fourth higher than before – choir XVI's entire canon has been transposed up by a fourth. Choir XIV then enters at bar 23, at the fourth (though a fifth lower), and choir XIII at bar 34, yet another fourth higher. This is the first example of what I call 'meso-canon', a stacked canon of four choirs, each choir containing a stack of four voices. As demonstrated by the entry of choir XIV, some entries are displaced by an octave, descending by a fifth instead of rising by a fourth. This is done to maintain the canonic rhetoric without making the music become too high too quickly, which is important for the third layer of the canonic structure: the 'macro-canon'. At this level, I create a stacked canon out of the four meso-canons, creating an overall triple-stacked canon. In other words, the canon consists of 4 stacks of 4 stacks of 4 stacked voices, making up the total $4 \times 4 \times 4 = 64$ voices. If the material kept ascending by fourths without octave displacement, the music would quickly become too high for the later-entering choirs to sing. Because each choir has a different pitch range, they aren't all SATB; I use different combinations of voices that best suit the pitches required by the canonic transpositions. To summarise, the Primary macro-canon is made up of 4 meso-canons (4 groups of choirs), each made up of 4 micro-canons (4 choirs), each made up of 4 voices. In general, each voice in a micro-canon enters a 4th higher than the last, each choir in a meso-canon enters a 4th higher than the last, and the same is true for the entrance of each group of choirs in the macro-canon.

A MICRO-CANON	A MESO-CANON (e.g XVI-XIII) Made up of four stacked micro-canons of four voices.	THE MACRO-CANON Made up of stacked meso-canons of four choirs.
Voice 1	Choir XIII	Choirs IV-I
Voice 2	Choir XIV	Choirs VIII-V
Voice 3	Choir XV	Choirs XII-IX
Voice 4	Choir XVI	Choirs XVI-XIII

Fig. 1 The three tiers of stacked canon. Each micro canon has four stacked voices to make up a choir. Each meso-canon takes the rules of stacked canon and applies it to a group of four micro-canons. The macro-canon applies the rules of stacked canon to each meso-canon, placing each meso-canon at the fourth.

The total subject material of the Primary canon can be seen in the bass part of choir XVI from bars 1-33. As the TI for the Primary micro-canon is one bar, this means that choir XVI's Primary canon material lasts until bar 36. The TI for the Primary meso-canon is 11 bars, and therefore the XVI-XIII meso-canon lasts 69 bars ($(3 \times 11) + 36$). The TI for the Primary macro-canon is 31 bars, and therefore the Primary macro-canon lasts 162 bars ($(3 \times 31) + 69$). The Primary canon sets the first two lines of text: 'Nesciens Mater virgo virum peperit sine dolore'.

SECONDARY CANON

A 64-part canon is not truly made up of 64 voices if only four choirs of four are singing at any one time. In order to fill my texture, and to give the piece more dynamic and textural variety, there is also a Secondary canon underneath the first. This operates exactly the same as the Primary canon, creating four stacked sets of four stacked choirs of four stacked voices. To increase contrapuntal complexity, I decided to employ the technique of prolation canon, by having the material of the Secondary canon the same as the Primary canon, yet in rhythmic augmentation. I use the same material as the opening, only a smaller portion of it with an adjusted ending and in double note values. This produces the prolation canon, with meso-canons of voices singing the Primary and Secondary canons on top of each other, presenting the material at full and half speed simultaneously (double note values = half speed). To further increase the contrapuntal complexity, I alter the TI of the meso-canon in the Secondary canon from 11 bars to 1 bar, the same TI as the Primary micro-canon. What this means, as can be seen in the first entry of the Secondary canon on page 5, is that the first of the meso-canon choirs (see choir XV) enters before the second voice of the micro-canon (see choir XVI). This multi-canon stretto helps build the tension that generates moments of climax at the beginnings of pages 6 and 7 and at letter G. The first entry of the Secondary canon comes at bar 69, at the end of the first Primary meso-canon. Each voice has material 30 bars long, and consequently the length of each micro-canon is $(3 \times 2) + 30 = 36$ bars. With a TI of 1, the length of each meso-canon is $(3 \times 1) + 36 = 39$ bars. The TI for the Secondary macro-canon is 31 bars, meaning the total length of the Secondary canon is $(3 \times 31) + 39 = 132$ bars. The Secondary canon sets the fourth and fifth lines of text: 'Ipsum regem angelorum sola virgo lactabat'.

DIMENSIONS

As illustrated above, there are a number of mathematical requirements embedded in the canonic structure, with TIs set to particular numbers. These numbers are not arbitrary, but essential to fulfil durational requirements. I wanted the total length to be similar to that of my 40-part models, which average around 9 minutes. Additionally, the maximum Masters portfolio length permitted by Oxford's Faculty of Music is 25 minutes, and I already had a 14.5-minute submission prepared. Consequently, I decided that *Nesciens Mater* needed to be no more than 10 minutes. The tempo that I envisaged for this piece is one similar to the speed at which Mouton's *Nesciens* is often performed, around 40bpm. 10 minutes of 40bpm is 400 minims, and so my setting had to be no more than 200 bars. However, fitting all of my material into 200 bars, when even the smallest dux was 30 bars (15% of the total) required significant amounts of overlap. Below is a timeline of the bars in the piece, highlighting each meso-canon entry and demonstrating how they fit together to form the overlapping macro-canons. From the entrance of the XII-IX meso-canon, meso-entrances are given a rehearsal mark in the score.

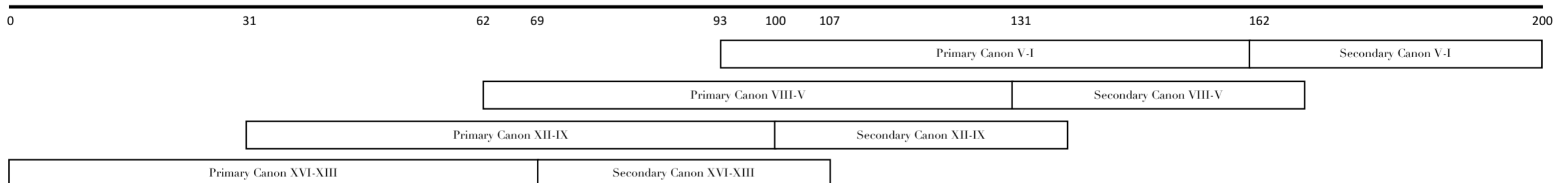


Fig. 2 The overlapping meso-canons that make up the Primary and Secondary macro-canons.

FREE PARTS

To generate melodic interest, and to add extra volume at climactic moments (such as when all 64 voices sing around rehearsal mark G), I create 'free parts'. These are short, intuitively written segments for the voices not currently carrying canonic material. They play an important aesthetic role, each having melodic contours that I know well from performing polyphonic music. An example is my setting of 'salvatorem saeculorum' which is based on my favourite line in the polyphony I have sung: the baritone part at 'qui locutus est per prophetas' in Lassus' *Missa Bell' Amfiritt' altera*. In all the free parts a kind of quasi-polyphony is used, in which melodic contours are generally stylistic but the harmony includes parallel fifths, Burgundian fourths, and unprepared and unresolved dissonances. This is designed to further the aesthetic narrative produced by the stacked canons. Unlike in most Renaissance music, where *ficta* would be applied, approximating a kind of tonality, I keep my stacked canonic lines modally locked. This means that every *translation* up a fourth does not necessarily mean a *transposition* in a tonal sense. With every stack the piece adopts more and more note-against-note clashes, without ever leaving its fundamental mode. The effect of this is a Schmittke-esque narrative, where what sounds like conventional polyphony at the opening gradually breaks down into a modal wall of sound. I foreshadow this at the opening, with the first two voices of choir XVI starting with an 'incorrect' and 'dissonant' perfect 4th. The free parts generally set the third and sixth lines of text: 'salvatorem saeculorum', and 'ubere de caelo pleno', aside from the end of page 5 where the free parts declaim 'Nesciens Mater' at the piece's first forte climax.

TECHNICAL CONSIDERATIONS

- This is an academic/conducting score, similar in size to Philip Brett's edition of *Spem in alium*.⁹ Performing editions would have reduced scores for two adjacent choirs with a reduction of the essential harmonic content of the other voices. Much like *Spem*, I generally have adjacent choirs singing similar material to assist singers in performance.
- Accents are marked indicating notes that should be projected, often to bring out 4-3 suspensions.
- Each line has its own dynamics, designed to bring out certain harmonies and frequently to coincide with where a singer would naturally/stylistically crescendo and diminuendo.
- The extent of the canons, despite octave displacements at some entries, means that there are notes that are virtuosically high or low. Where these occur, octave displacements have been written in small notes, and it is up to the performer to decide which they would prefer to sing. These extreme notes provide moments of high intensity, but are not fundamental to a performance.
- In general, hairpins indicate a rise or fall in dynamic by about one dynamic level. However, in some cases, such as the last page, these unspecified dynamic changes are intended to allow the performers to crescendo as much as they need to if they decide to sing the more extreme pitches. Where dynamics are specified, care has been taken to ensure the notes are generally performable at that volume. However, should a singer require a higher dynamic than marked, particularly for the extreme pitches, it is advised that they do so. If the required dynamic is too loud relative to the other voices, however, the provided alternative option may be preferable.
- As marked on the last page, the performance should highlight the 'fade out' effect produced by the end of the Secondary macro-canon by decreasing the general dynamic from mezzo-piano to piano.

¹ Tallis – *Spem in alium*, Striggio – *Ecce beatam lucem*, Bednall – *Lux orta est iusto*.

² Alan Gosman – 'Stacked Canon and Renaissance Compositional Procedure' in *Journal of Music Theory* Vol. 1, no. 2 (Autumn 1997) p. 289

³ Ibid. p. 290. Ockeghem – *Prenez sur moi vostre exemple*, Verdelot – *Dignare me laudare te*, Mouton – *En Venant de Lyon*, Willaert – *Si je ne voy m'amie*.

⁴ Ibid. p. 290

⁵ Ibid. p. 290

⁶ Ibid. p. 306

⁷ Jurjen L. van Geenen – 'On designing stacked canons with relative chord tones' in *Journal of Mathematics and Music*, Vol. 6, no. 3 (2012) p. 187

⁸ Gosman (1997) p. 305

⁹ Tallis – *Spem in alium* ed. Philip Brett (1966)

NESCIENS MATER

for my mother

$\text{♩} = 40$

8

16

I

Soprano

Soprano

Alto

Tenor

II

Soprano

Tenor

Baritone

III

Soprano

Alto

Tenor

IV

Soprano

Alto

Baritone

V

Soprano

Tenor

Bass

Alto

VI

Tenor

Bass

VII

Soprano

Alto

Baritone

VIII

Soprano

Alto

Tenor

Bass

IX

Baritone

Bass

X

Tenor

Tenor

Bass

Bass

XI

Soprano

Alto

Tenor

Bass

Alto

XII

Tenor

Bass

Bass

XIII

Soprano

Soprano

Alto

Baritone

XIV

Soprano

Alto

Tenor

Bass

XV

Soprano

Soprano

Alto

Tenor

XVI

Soprano

Alto

Tenor

Bass

Ne . . . sci . . ens Ma . . ter. Ma . . ter. ne . . sci . . ens Ma . . ter. ne . . sci . . ens Ma . . ter. vir . . go. vi . . rum. vir . . go. pe . . pe . . rit. si . . ne . . do . .

IX

sal - va - to - rum, sac - cu - lo - rum.

X

sal - va - to - rum, sac - cu - lo - rum.

XI

Ne - sci - ens Ma - ter, Ma - ter, ne - sci - ens Ma - ter, ne - sci - ens Ma - ter.

XII

Ne - sci - ens Ma - ter, Ma - ter, ne - sci - ens Ma - ter, ne - sci - ens Ma - ter, vir - go, vi - rum.

XIII

Ne - sci - ens Ma - ter, Ma - ter, ne - sci - ens Ma - ter, ne - sci - ens Ma - ter, vir - go, vi - rum.

XIV

Ne - sci - ens Ma - ter, Ma - ter, ne - sci - ens Ma - ter, ne - sci - ens Ma - ter, vir - go, vi - rum, vir - go, pe - pe - rit si - ne do - lo - re.

XV

ter, ne - sci - ens Ma - ter, vir - go, vi - rum, vir - go, pe - pe - rit si - ne do - lo - re, vir - go, vi - rum, pe - pe - rit si - ne do - lo - re.

XVI

do - lo - re, vir - go, vi - rum, pe - pe - rit si - ne do - lo - re, vir - go, vi - rum, pe - pe - rit si - ne do - lo - re.

This page of a musical score, likely for a Mass, contains 13 systems of music for voices II through XVI. Each system includes a vocal line with Latin lyrics and a piano accompaniment. The lyrics, which are in Latin, are: "No - sci - ens Ma - ter, Ma - ter, ne - sci - ens Ma - ter, ne - sci - ens Ma - ter, vir - go - vi - rum, vir - go - pe - pe - rit si - ne do - lo - re, vir - go - vi - rum, pe - pe - rit si - ne do - lo - re, I - n - ter - nae - ge - ni - tum, re - ge - num, ip - sum re - gem an - ge - lo - rum, so - la - vir - go - so - la - vir - go - lac - ta - bat, so - la - vir - go - so - la - vir - go - lac - ta - bat, so - la - vir - go - so - la - vir - go - lac - ta - bat, so - la - vir - go - so - la - vir - go - lac - ta - bat." The score features various dynamic markings such as *pp*, *f*, *p*, and *mp*. The piano part consists of a right-hand melody and a left-hand accompaniment. The vocal lines are written in treble clef. The page is numbered 96, 104, and 112 at the top, and the system numbers II through XVI are listed on the left margin.

I

II

III

IV

I
 II
 III
 IV

psu- re- gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

re- gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

psu- re- gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

re- gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

re- gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

re- gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

re- gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

gem an- ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

ge- lo- rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

rum, ip- sum re- gem an-ge- lo- rum so- la vir- go lac- ta- bat, u- be- re- de- cae- lo- ple- no-

* During this final page the 'fade-out' effect created by the canon should be accompanied by decreasing dynamics in all voices from a general *mp* to *p*. The extent of the marked hairpins is left to the performers, who may need to sing louder in order to produce the more extreme pitches, should they opt for them.