The compositional processes of Arvo pärt: a survey and comparison of two musical styles

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Volume 1

Stephen Gregory John Penton

Master of Arts

1998

ABSTRACT

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Stephen Gregory John Penton

Arvo Pärt's output can be divided into two categories: serial (pre-1970) and what is termed tintinnabuli (post-1970), the term used in this thesis for his own way of using tonality. This is explained in the thesis.

The thesis examines three serial works, a work that is described as a 'halfway house' the third symphony, which uses tonality but not yet the tintinnabuli style, and four tintinnabuli works. Despite the great differences in terms of sound between the serial and tintinnabuli works, this thesis concludes that there is common ground between them, in terms of systems, instrumentation and timbre amongst other aspects. The influence of early music on Pärt is considered, as is the similarity in style of two contemporary composers, Gorecki and Tavener.

The Compositional Processes of Arvo Pärt: A Survey and Comparison of Two Musical Styles

Two Volumes

Volume 1

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Master of Arts

University of Durham

Department of Music

1997

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Introduction: Biography and Purpose of the Thesis

Biography

Arvo Pärt was born on September 11th, 1935, in Paide, Estonia.. He studied Tallinn State Conservatoire, where he studied composition with Heino Eller, Estonia's leading composition teacher of the time. After this he worked for ten years (from 1957-1967) as a sound director for Estonian radio, and wrote film music. He also wrote music for children (for example a cantata called 'Our Garden'). There are other works which are said to show the influences of Prokofiev and Shostakovitch, and which he has now disowned. Even at this time Pärt was recognised as an outstanding composer, winning the most prestigious award of the All-Union Young Composers' Competition.

Early during this period he heard recordings of music from the Western avant-garde, which were sparingly (and illegally) available in the Eastern bloc at that time. There was also discussion between composers of the Soviet Union regarding the new departures in music which were then becoming known there. All this influenced him and caused him to write, at the outset, 'Nekrolog' (1960), Estonia's first serially composed work. Such works as 'Perpetuum Mobile' (1963) and the first symphony (1964), both striking, serially composed works followed, and then the second symphony (1966), 'cello concerto (1966) and 'Credo' (1968), with which he openly defied the authorities because of his choice of a religious text. These works show a new element (although they retain serialism) which is the quotation of other composers' music, for dramatic or other effect.

In the late 1960s Pärt studied medieval and renaissance music, and the most immediate effect of that can be seen in the third symphony (1971), with its use of tonality and modality, and many other features.

There followed five years of no compositions, and then in 1976 works started appearing which showed a more considered, developed response to the work done on early music. He calls this his 'tintinnabuli style'. It is difficult to describe the effect of this music without quickly becoming untechnical and subjective, but it perhaps can be said that the music retains an aura of devotion which can be found in medieval and renaissance religious music. It does this by using very homogenous textures and carefully controlled compositional devices which do not draw attention to themselves. A frequent use of voices in works also obviously contibutes to this impression. It is the religion which, as subsequent works have shown, is one of the abiding interests of Pärt.

The next important event in the life of Pärt followed a visit to London in 1979 when he became aware of the restrictions that hampered the life of an Eastern bloc composer of avant-garde and religious music, as compared to a Western one. Defection followed a year later to Germany. With the help of his publishers Universal Edition he settled in West Berlin and took Austrian citizenship.

Since then his popularity has grown, helped by such events as the television performances of 'Passio' and the 'Miserere' from Durham Cathedral, and the third symphony from a Promenade concert. He composes constantly, often for the Hilliard Ensemble (for whom the 'Miserere was composed), whose conductor until recently, Paul Hillier, has recently produced a book about the composer, 'Arvo Pärt'. Despite

the defection Estonian groups are still performing Pärt's music; witness a recording of the 'Te Deum' and other works by the Estonian Philharmonic Chamber Choir and the Tallinn Chamber Orchestra, and a recording of 'Litany' by the same forces with the Hilliard Ensemble.

Purpose of the Thesis

This thesis will examine representative works from the start of the serial period in the 1960s through to the tintinnabuli works written in the 1980s and 1990s, and seek to draw out similarities in the way they have been composed. Although the works in question are very different in conception and in their soundworld, they are the work of a single composer, albeit as part of an evolving style. The existence of links across this sometimes quite marked transition is shown by the similarity of 'Solfeggio' (1964), which is an unaccompanied choral piece, to the unaccompanied choral works of the tintinnabuli period. Heard on a recording of Pärt's choral music where the rest of the music dates from the 1970s onwards, it is not easy to distinguish it as an early piece. The kind of intervals involved, such as major or minor seconds, sevenths and ninths (ie discordant) are often those which arise as a result of the tintinnabuli method of composition (described later).

The works to be examined in detail are, in part 1 (the non-tintinnabuli works) 'Perpetuum Mobile' and the three symphonies. In part 2 is examined the 'Cantus in memoriam Benjamin Britten' (as part of the explanation of the tintinnabuli style), the 'Stabat Mater', the 'Passio' and the 'Miserere'. In part 3 the findings are discussed. Other relevant works are referred to from time to time. Musical examples are copious (although some are used to illustrate more than one aspect) because scores of Pärt's

music are not always widely available, and are in a separate volume for ease of reference.

Part 1

The Pre-tintinnabuli Works

Perpetuum Mobile op.10

'Perpetuum Mobile' was written in 1963. With the first symphony (written in the same year), it shows a continuation of Pärt's use of serialism from 'Necrologue' written three years earlier, no other works apparently having been completed in the intervening years (according to the list of works compiled by Hillier[1]). 'Perpetuum Mobile' is scored for a large orchestra, and shows Pärt's interest in using novel compositional procedures to create characteristic textures, apparent in much of his music dating from the 1960s. Of the serial works discussed in this thesis, it is the only one to use to such a great extent the systematic approach which became one of the most important characteristics of the tintinnabuli period. The dynamics, articulation of form (by different textures and instrumentation), and note values are all systematically determined.

In this piece instruments play single repeated notes for a certain number of beats at different speeds (achieved by subdividing note values in different ways eg quintuplets and triplets). The result is a web of sound, resulting from the cross-rhythms produced by the combination of different subdivisions of the beat. This approach is possibly not uninfluenced by pointillism, which makes appearances in the first two symphonies. The number of instruments playing at any one time varies, and so do their dynamics, so that a wide variety of textures is possible. The dynamics vary from barely audible (at the beginning and end) to extremely loud (a *ffff* gong stroke at the climax). Example 1 shows the texture in a place where it is fairly dense. The novel

[1] Paul Hillier. Arvo Pärt (Oxford, Oxford University Press, 1997), p. 208

notation will be noticed; similarly novel notation is found occasionally in the first two symphonies.

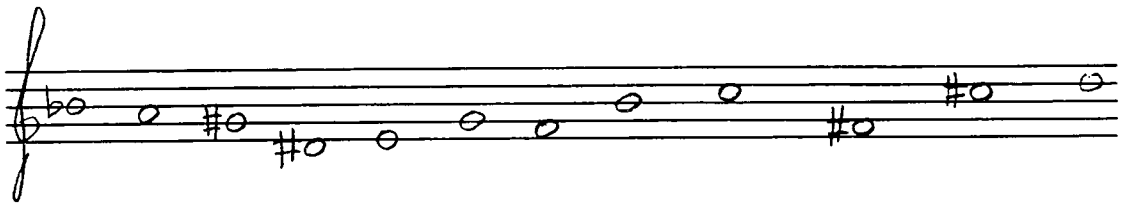
The work is constructed in six sections each of twelve bars, with an additional seven bars at the end, and with a climax occurring at the end of the fifth section. The music builds from nothing to this climax, and then dies away to inaudibility again. The purpose of the extra seven bars at the end is to allow the number of instruments playing to decrease with no further entries occurring, leaving just a gong being played *ppp* in a manner described in the score as a 'sizzle'[2]. The separate sections are articulated by clear changes of tessitura and instrumentation, and therefore by the overall texture. Example 2 shows the pitches of all the entries. The rehearsal numbers are given, which delineate the sections. The notes of the entries of the first section are in the treble stave, and those of the second in the bass stave. The tessituras of the third and fourth sections are respectively similar as for the first and second, though somewhat more wide-ranging (especially for the fourth). Also in the fourth section, instruments are doubled for the first time at different octaves so that the texture thickens as the climax approaches. The fifth and sixth sections have high tessituras; the differentiation between the fifth, as the climax approaches, and the sixth, where the music begins to wind down to inaudibility, is made by doublings in the fifth as opposed to single note entries in the sixth. The tessituras for these sections are high so that the climax does not become obscured and over-thickened with loud low notes, and so that the music can die away to inaudibility effectively.

The divisions between the changes of tessitura are not clear-cut, because every instrument generally plays for a certain number of bars before stopping. This means,

for example, that some entries made towards the end of the first section (in the treble stave) will still be playing near the beginning of the second (based in the bass stave). The result is a gradual more from the texture and tessitura of one section to the next. The number of bars each instrument plays for is shown below. As the climax approaches in the middle of the piece between figures 4 and 6, this pattern is occasionally not adhered to if an instrument is required to make another entry because of the doublings that are occurring. The instrument will play fewer bars than the table states as the norm.

Figure	1-2	2-3	3-4	4-5	5-6	6-7
No. of bars	6	9	12	15	9	6

The note row used for this piece is the same as that for the first symphony (it will be remembered that they were composed in the same year), and is given below.



The exact ordering of the pitch material is not a critically important part of the piece (but is discussed in the analysis of the first symphony) since any note row could be applied to the systems in play without necessarily changing the effect of the piece.

The use of serialism is extended in this piece to include the organisation of durations. There are two series in all, shown below: the first series is numbers 1 to 12, and the second numbers 2 to 13, with durations getting shorter so that the density of the texture can vary. '2 groups' for element 10 means that there are two groups of quaver quintuplets per bar (ie 10 in all).

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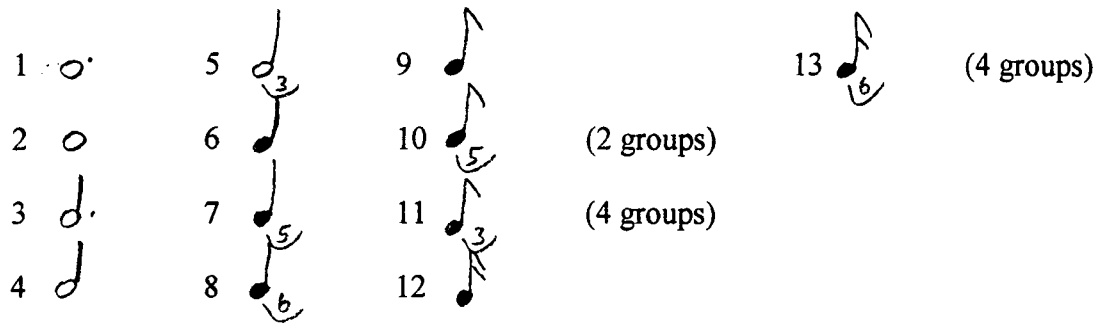
[2] Arvo Pärt. Perpetuum Mobile, op.10 (Vienna, Universal Edition, 1968), p. 14



The use of the permutations of the rhythmic series and the note row is as follows:

Figure	Rhythmic Series	Permutation of row
1	1	P
2	1	R
3	2	I
4	2	RI
5	2(R)	I
6	1(R)	R

The instrumental textures of each section are shown in the table below. It should be remembered that entries from previous sections may still be playing if the gradual movement from one texture and tessitura has not been completed. Sometimes two layers of sounds may be differentiated by the use of different note values for each layer. This happens in the first two sections: the rhythmic series are organised in the first such that the strings have long note values and the wind have short note values; in the second section this is reversed. Just before the climax at figure 6, some trumpets and trombones have very loud entries in long notes, giving the climax a solid foundation of sound.

Rehearsal Figure	Instrumentation and Durations
1	High strings, upper woodwind
2	Low woodwind, horn, low strings
3	High strings, high woodwind, trumpet
4	Low woodwind, brass, strings, some high instruments playing low (violin, Eb clarinet)
5	Build up to *tutti*
6	Woodwind and strings, playing fairly high

The articulation of the separate sections of the piece is partly discernible by looking at the tessituras and textures of the entries in each section shown in the preceding tables. However, the building towards and dying away from the climax can only be achieved by the careful control of the systems that are responsible for the organisation of the dynamics, the length of time for which instruments play and the number of instruments that are playing.

The instrumentation tends to be determined by the tessitura and the necessity to control an increase or decrease of the number of instruments playing, but there is not an exact system controlling this. This is where Pärt's belief that one should not become over-reliant on systems comes into play: '...with systems – they shouldn't be too complex. It's better when they're under control.'[3] In the third section trumpet is added to the upper strings and woodwind of the first section, and in the fourth low brass and other instruments playing low notes are added to the low strings, woodwind and horn of the second section.

[3] Jamie McCarthy. An interview with Arvo Pärt Musical Times 130 March 1989 p. 130-134

Each entry begins and ends at the same dynamic, but during the entry builds to a dynamic level two steps above the initial dynamic. The dynamic steps are *pp*, *p*, *mp*, *mf*, *f*, *ff*, and *fff*. Thus a typical arrangement for an entry might be: *mp cresc. f dim. mp*. In the sections between figures 5 and 6, the entries do not get louder. To achieve the climax at figure 6, the starting dynamic for each entry is increased by one step in each section, as follows (the very first entry, not shown, is *ppp*):

Figure:	1-2	2-3	3-4	4-5	5-6
Dynamic:	*pp*	*p*	*mp*	*mf*	*ff*; trumpets, trombones: *fff*

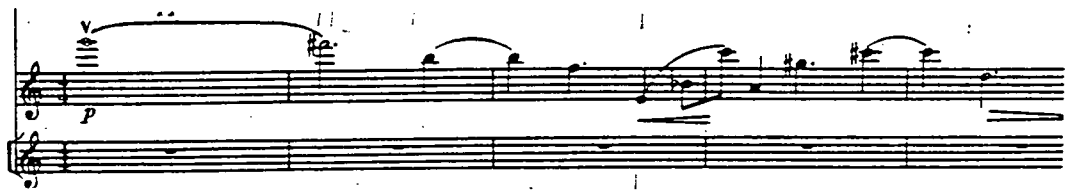
In the last section (figures 6 to 7), the entries are at *ff* and *dim.*, and then *mf cresc. ff dim. p*, the system being changed to allow the music to die to inaudibility.

This work is the only one of the serial works examined here that uses systems to an extent that nearly every aspect of the work is controlled by them (dynamics, structure, articulation of form etc.). Whilst it will be seen that the music of the symphonies is extremely logically thought out, there is nothing like the numerical exactitude of the equal sections of 'Perpetuum Mobile', although it will be found that there are certain parts of the symphonies that use systems strictly. In the final section of the first movement of the first symphony, the pitches are arranged symmetrically with only one deviation. In the final section of the second movement of the same work, tone clusters are arranged according to two systems described later, and other systems are in play also; however, such organisation is found locally only.

Symphony no. 1

The first symphony was written in 1963, and is dedicated to Heino Eller, Pärt's composition teacher at the Tallinn Conservatoire. It is a short (just over a quarter of an hour), but highly concentrated work, characterised by its energy and intense rhythmic drive, and the canonic and other contrapuntal processes. It is his first substantial serial work. The note row (below) has as its main characteristic many chromatically adjacent notes.

Since the notes are not limited to a particular register in any one statement of the row, major sevenths, major and minor ninths and other dissonant intervals are often heard (most notably at the beginning of the second movement (below) and in the fugue subject of the same movement).



The emphasis is on dissonant intervals. However, every interval of the twelve note scale can be derived from the row, which makes it a particularly flexible one in terms of its manipulation (particularly with the freedom allowed over the register of notes). The only interval that occurs more than once is the tritone (there are two), another dissonant interval, which makes this another characteristic sound in the work, particularly since it can never change. It remains the same if its notes are inverted.

The work is constructed with careful control of textures (just as much as in

the tintinnabuli music, as will be seen) and other aspects, to make a unified, coherent piece of music. The details of the design of the music are often very carefully wrought to achieve a certain effect, as will be seen in the following analysis.

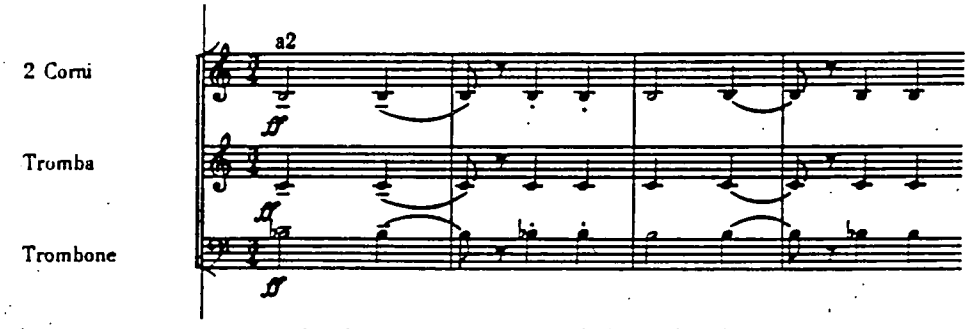
The first movement is entitled 'Canons'. It is in a ternary form, which is articulated by a change from the prevailing contrapuntal textures of much of the movement (described in the following paragraphs), to a largely homophonic and much more static, less rhythmic texture in the middle of the movement (between figures 11 and 13). The brevity of the homophonic section highlights the momentum of the rest of the movement, which is so strong that it cannot be abandoned for long.

The outer parts of the movement consist of shorter sections; these are unified principally by the use of canons (hence the title of the movement), and other recurring textures that make up transitional sections. The canons are constructed in different ways (to be described), but also by the use of *Klangfarbenmelodie*, the opening rhythm of the movement, and the rhythmic nature of the outer sections. The canons (and other textures generally) get progressively more complicated as the movement progresses. Those in the first part of the movement largely use just one note value each: quavers in the first canon and crotchets (with very occasional quavers) in the second (example 3) In the third part of the movement, retrograde and inverted voices are introduced, and there is a mensural canon. The canons use a greater variety of rhythms here; this is described later. These developments ultimately lead to the complicated texture of the climax (at figure 20) where the key elements of the movement are all brought together (tone clusters, canons, rhythm).

Care is taken to link the shorter sections smoothly by transitional passages. For

example, the brief passage indicated in example 4 begins on the last note of the preceding section (G), and ends on the note which begins the most prominent line (C in the first violin). These notes may be emphasised by being pre-empted in the texture, as at the end of this section. Alternatively, a smooth transition may be achieved by dovetailing, as at figure 9, where the new section beginning at that point is pre-empted by a statement of the note row by the trumpet (example 5). This starts eight bars before the previous section has actually finished, and finishing in the next section with the last two notes of this row being repeated.

The purpose of the introduction is to establish the rhythmic character of the work, and to provide an initial articulation of the note row. The former is achieved by using three different meters, two of which are sometimes superimposed on each other. Initially a triple meter at half the speed suggested by the time signature is established with rhythm A:

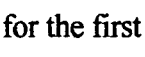


This has a strong presence in the movement), and then simultaneously with this the proper triple meter is outlined by the timpani note played on the first beat of every bar (example 6).

The pitch material for the notes of the three brass instruments playing rhythm A at the beginning is three adjacent semitones, which are the first three elements of the note row. This becomes a characteristic, unifying sound in the work, being heard subsequently at the climax (figure 20) and after the climax of the second movement.

The statements of the note row which follow (shown in example 6) are 'introduced' by two cells of four notes played first, twice each (page 4 line 2), using rhythm A. A feeling of expectation is created by having every note of the second cell higher than the first, and the second cell ends with a rising interval whilst the first ends with a falling one. The notes are not chosen at random; they are the first four notes of an inversional (I-8, first cell) and a retrograde (R-4, second cell) form of the row.

The note-row is then stated in its entirety, beginning with a repetition of the first four notes before the rest of the row follows. This is also shown in example 6. Duple meter, replacing the slower triple meter, is suddenly superimposed on triple meter (outlined by the timpani) by the rhythm of these repetitions; the first pair of notes (C and D flat, rising) form one beat and the second pair (D and G, falling) the second. The falling of the second pair answers the rising of the first, accentuating the duple meter. The feeling of expectation mentioned above is satisfied by having these notes higher again than those of the second cell, and by it being exactly an octave higher than the first of the cells described above. The row is played two notes at a time by the three brass instruments in turn; this is the first use of *Klangfarbenmelodie*. In the second statement of the row, the second of each pair of crotchets is lengthened, creating some semitone clashes, one of the features of the note row and the work in general. Lengthening of notes usually indicates the imminent conclusion of a section in this movement, as in this case.

There follows the opening rhythm (figure 1), played twice on brass, alternating with string clusters. It is with these string clusters that the proper triple meter is heard clearly for the first time (), and Pärt ingeniously bases this on the opening rhythm, adding a crotchet after the two minims. Most of the rest of the movement is in

duple meter, although triple meter returns in transitional sections of the first part of the movement, and for the concluding section.

The first part of the first movement (figures 2 to 11) is constructed using four techniques:

(i) *klangfarbenmelodie* passages;

(ii) non-rhythmic canons using largely just one note value;

(iii) a recurring two-part texture, one part in quavers and the other moving more slowly and usually using *Klangfarbenmelodie*; and

(iv) a technique of alternately stating successions of notes from two note-rows.

There is also an impression of rondo form since the opening rhythm of the movement recurs in alternate sections (the transition sections).

The first section (figure 2 onwards) uses *Klangfarbenmelodie*, within the woodwind section, and then from figure 3 in the brass and strings also (example 8). The woodwind are each using different forms of the note-row, in groups of five notes:

Flute	prime
Oboe	retrograde inversion
Clarinet	inversion
Bassoon	retrograde.

Every fifth group of five quavers has its last note lengthened, structuring the music into phrases. At figure 3, where the accompaniment changes, the longer notes occur more frequently, at the end of the flute and bassoon contributions to the texture. As before the longer notes, resulting in shorter phrases, signal the imminent conclusion of the section.

At figure 3 the accompaniment changes from a white noise texture played by the strings (caused by bowing 'over three strings between the bridge and stringholder'[1]) to a single *klangfarbenmelodie* line largely in crotchets which doubles alternate notes from the woodwind. This texture is the third of the devices listed above. The arrangement of the instruments is cyclic, like the woodwind but with more instruments. The following ordering is used three times:

Xylophone 'Cello/bass Trumpet Trombone Violin 1 Timpani Horn 1 Horn 2

The line is written in a rhythmic mirror image, with held notes occurring in the same places before and after the centre point. There are a few minor deviations. One is a 'cello D at the centre point, perhaps intended to emphasise that point, and the other is a D at the end, intending to emphasise the smooth link to the next section, which begins with a D.

The next section (figure 4) is a transition section. It uses the second, third and fourth devices listed above. The fourth device of alternating elements of two forms of the row makes up the first (in viola) and third (wind and strings) parts of this section. In the first part it works as follows:

I-10	P-10	I-10	P-10	I-10
1 2 3 4	1 2 3 4 5 6 7	5 6	8 9 10 11 12	7 8 9 10 11 12

This is played twice. The second part of this section is two short canons, using just quavers. There is a drop in register at the end of this section to enable a typically smooth transition to the next section, which starts low and then rises in pitch.

The next section (example 4 shows part of this) consists of canons played by the strings mainly in crotchets. To stop this sounding rhythmically directionless, as a succession of nothing but crotchets might, the seventh note of each statement of the

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[1] Arvo Pärt. Symphony no. 1 (1961) p. 7

rows is played as two quavers, and the fourth and fifth notes are joined by a slur. These features act as signposts to indicate the progress of the canons. To make the counterpoint clearer some voices play *pizzicato*. Direction is also provided by having the pitch of the rows rise gradually, usually by a tone. When the pitch has stopped rising, the woodwind start to double selected notes of the row, resulting in a rising chromatic scale (D#, E, F, F#), seen in example 5. It will be remembered that semitones are an important feature of the note row and the work. The next stage is that these notes are lengthened, blurring the texture, and again signalling the end of the section.

The next section (figure 10 onwards) is another transition section; like the previous transition section the opening rhythm appears, and the technique of stating notes from two note rows alternately is used. This leads to the top note of the first of the succession of chords which foreshadow the central large section.

This next section (figure 12 onwards), the central part of the ternary form, has been described as homophonic, but it is framed by two passages of two-part counterpoint. In both of these the two instruments use the same note row between them, with each element only used once and being sustained, creating a feeling of blurred *Klangfarbenmelodie*.

The homophonic writing (starting on page 20) between the passages of two part counterpoint is for strings alone. There is an element of counterpoint even here, since the second violins (divided into four parts) have an independent line (starting three beats later: example 8) from the first violins, also in four parts, and the violas and 'cellos (in two parts each).

The chords are dodecaphonic; the pitch elements of the row are arranged as

shown below:

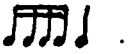
Violin 1	1st	5	Violin 2	1st	11
	2nd	6		2nd	10
	3rd	7		3rd	8
	4th	9		4th	12
Viola	1st	2	'Cellos	1st	4
	2nd	3		2nd	1

The elements of the note row are arranged in a characteristically orderly way to make the intervallic content of each group of instruments the same: two perfect fifths or their inversion, and a major seventh or its inversion. The end of the homophonic section is linked by a descending statement of elements 12 to 8 of RI-9 played by oboe and clarinet, followed by a balancing ascending statement of the rest of the row played by violins. Element no. 8 (D), at the end of the descending passage, is held as the link to the next passage (also D). The violins play over his, ending on a C sharp, as a reminder of the importance of the semitone in the work and the note row.

After the passage of two-part counterpoint (flute and clarinet), this part of the movement is dovetailed into the next by means of a clarinet trill gradually increasing in speed, taken from the last two notes of the two part counterpoint preceding.

The polyphonic textures of the third part of the movement tend to be more complicated than those of the first, particularly in the canons. There is also increased forward momentum before the climax, with less emphasis on transitional passages (although links are still smooth), and more on the three sections leading to the climax. The momentum is caused by different aspects in each section: rhythm in the first, the string ostinato in the second, and the cyclic material of the third. The momentum

culminates in the climax (beginning at figure 20).

The canons of the first of these sections (figure 14 onwards) are more involved than those before because they are more rhythmic, and use retrograde and inversion within the same canon. A rhythm which is to recur later in the work (rhythm B) is first heard at this point:  . Also, the mensural nature that becomes apparent from figure 15 is a new feature (example 9). This is in the wind, where each of the three voices use different note values: the flute plays notes of three beats, the bassoon minims, and the horn crotchets. This happens simultaneously with the rhythmic string canons, which use shorter note values, and this texture may very well be based on the two part texture from the first part of the movement which recurs several times, with one fast and one slow moving voice.

The second section (figure 16 onwards) also has this feature, with a *moto perpetuo* line in quavers played by the strings, and the note row stated in slower, overlapping note values by the wind (example 11), creating again the feeling of blurred *Klangfarbenmelodie*.

At figure 18, whilst the *moto perpetuo* line continues, the note row is played in canon in the trumpet and trombone (example 10). This is the dovetail to the third section (figure 19), which uses pitches from the note row, organised contrapuntally around the orchestra in a particular way. This is repeated six times as a cycle. The xylophone and hi-hat play their contributions every second cycle, whilst the horn simply plays the note row twice in alternate minims and crotchets, and is not related to the cyclic repetition. The texture of part of this section is shown in example 12. There are only eight parts at this point, because there is a lot of doubling to stop the texture from becoming too dense. There are two possible purposes of this section: one is to

introduce the sound of the whole orchestra playing together for the first time, so that this does not happen suddenly at the climax. The other is to create a feeling of stability through unchanging material, after the various different types of material in the preceding sections, and before the very complicated texture of the climax.

After this section the three adjacent notes of the introduction return (page 32), leading to the next section (figure 20). This is the climax in terms of volume, extent of instrumentation, different layers of activity (melody, rhythm and tone clusters) and the use of various materials and techniques (cyclic writing, tone clusters and counterpoint) that have been used in the movement. Example 13 shows part of this section. The layers of activity are arranged as follows:

Woodwind: Tone rows; cyclic; canonic

Brass: Rhythm A (in augmentation towards the end of the section) with consecutive chromatic pitches as at beginning

Percussion: Rhythm B; tone row in xylophone

Strings: Increasingly dense tone clusters (4, 8 and 12 notes) with rhythm B

The woodwind play different tone rows, which are related by having two start on F (oboe and bassoon) and two on A (flute and clarinet). The rhythms are cyclic in all instruments, with only the cycles of the oboe and clarinet coinciding. All the woodwind use different note values, to create a web of cross-rhythms:

Flute	triplet quavers	Clarinet	quavers
Oboe	triplet crotchets	Bassoon	crotchets

The climax has its impetus gradually removed by having the contributions of the woodwind instruments become more fragmentary (from figure 22), the piccolo drops out, and the note values are augmented (for example from crotchets to triplet minims

for the bassoon). All this causes the contrapuntal texture to reduce. Furthermore, the strings from two bars before figure 22 play 'white noise' (caused by playing 'behind the bridge'[2]), abandoning rhythm B and any impetus it may have given to the music. This section is allowed to die away by fading out the 'white noise' of the strings (only the basses play this until the end of the section). This sound is replaced by a pointillistic texture (from figure 23), played *pizzicato* by the strings, intended to make the texture thinner, so that the section can die away to almost nothing. This is not written to fit exactly with the meter; the notation is such to allow more freedom to the composer, and some interesting cross-rhythms result (example 14). This is another example of interesting notation.

The final section of the movement (figure 24) is the antithesis to the climax. Whilst the climax involved many heterogenous elements and a complicated texture, the final section is much more homogenous, though still polyphonic, starting with one line but increasing to most of the orchestra (with some doublings). The homogeneity comes from repeated rhythmic motifs (which are different in every part – example 15). The pitch material is symmetrical, with the axis being at the fifth and eighth bars after figure 28. The sixth and seventh bars after figure 28 do not quite fit the pattern: to do so the second and third beats of the seventh bar need to be reversed. They possibly have not been to create a smooth melodic line. This section fulfils the same function as the cyclic section immediately before the climax: repose through the use of the same or similar material for the whole section.

The second movement is entitled 'Prelude and Fugue' and is also in ternary form, but the middle part is the most conspicuous, unlike the first symphony. The function of the first part is indeed preparatory ('Prelude'). The final part (figure 53

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[2] Pärt. op. cit p. 36

onwards) uses the same material throughout, quite clearly unlike the final part of the first movement, and is intended as a 'coda' to the work.

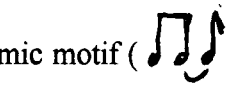
The title suggests that like the first movement there is going to be some emphasis on contrapuntal writing. This is somewhat misleading though, because much of the movement is homophonic, or in the case of the opening, monophonic. After the opening there follows the fugal passage, which is somewhat brief (25 bars), and then an ostinato section, which is clearly homophonic in its use of a gradually increasing tone cluster. There is a linear element in that the woodwind follow the note row in sustained notes as it is used to build the tone cluster gradually between figures 43 and 49, but this is just a single line. Between figures 49 and 52 brass instruments play the fugue subject, though the most pervasive feature at this point is still the ostinato. There are times when there are different layers of activity: the final section, though these layers are mainly rhythmic (described below), and the music at figure 37, but these are not contrapuntal in the accepted sense of the term (several concurrently running melodic voices).

The unifying features of the movement are rhythmic. Rhythm C, which is used at the beginning of the movement is also used for the last section (shown in example 20), and the unifying nature of the rhythm of the ostinato is obvious, and is derived from the rhythm of the fugue subject. This movement has the same energy and rhythmic drive as the first movement, in other places as well as these (between figures 37 and 39 for example), and also shares other elements: *Klangfarbenmelodie*, rhythm B, and the opening pitches.

The first part of the movement is the 'Prelude', and can well be described as preparatory to the large second part. This preparation is in the form of developing

from monophony to homophony and later polyphony, and also from very free rhythmic writing, ignoring the constraints of the time signature, gradually to much tighter rhythmic writing at figure 38.

The effect of the first section is an opening out from one line culminating in the homophony of the second section. The initial single line is played by just a solo violin, shown at the beginning of this chapter, but the opening out begins after the second phrase, where all the first violins play. These lines are very angular, with much emphasis on the discordant intervals which are a feature of the note row (minor seconds and ninths, tritones, major sevenths). It continues from this with an interjection shortly after figure 34 by flute and clarinet, in *Klangfarbenmelodie*, and then there is a second interjection of isolated woodwind chords (figure 35). The end of the section grows from similar chords, reaching a wider compass by means of large intervals moving in contrary motion in the woodwind (example16). The large intervals of the opening melody may be the basis for this.

The next section (figure 37), based on a rhythmic motif (), serves the purpose of raising the pitch of the music, and thus creates a feeling of expectation which is satisfied by the establishing of the speed of the movement for the first time at figure 38. As one has come to expect from this work, there are several levels of activity (example 16). There is melodic activity in the lowest layer (bassoons and 'cellos), stating two transpositions of the note row, which underpins the homophonic activity of the rest of the strings. The build to the arrival point at figure 38 is aided by adding the remaining woodwind instruments gradually to the texture, who play higher with each new entry and emphasise discordant intervals (minor 2nds, major sevenths, and in the bar before figure 38, three adjacent semitones: F, F# and E). The

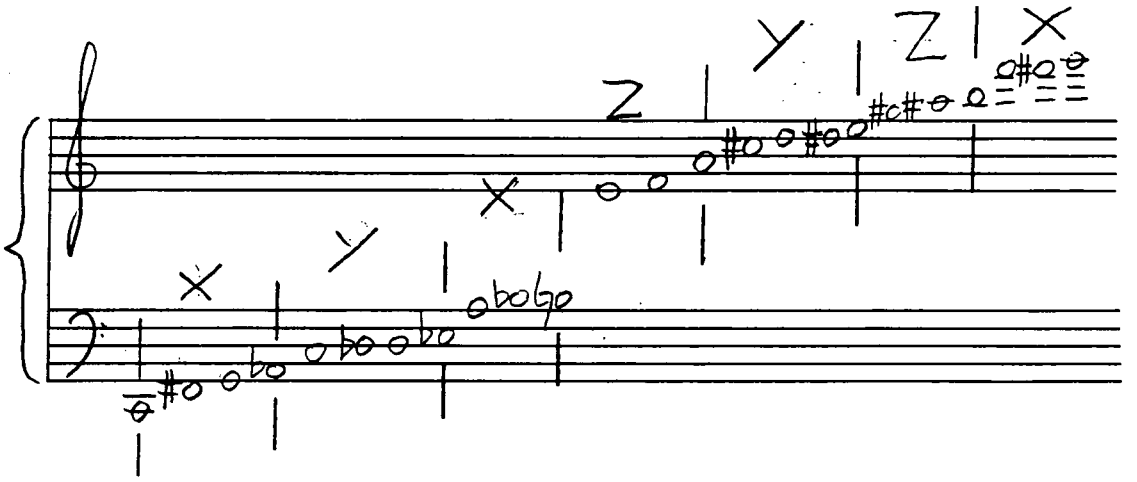
momentum is given by the syncopated nature of the strings; the stresses are always on the off-beats. There is another element of progressing from the first section here in that the rhythm is very free in the first section, not falling within the constraints of the 4/4 time signature, and then becomes much stricter, working to the confines of the time signature, albeit disguised by syncopation. The fact that the stresses are on off-beats obviously means that the presence of down beats is now being implicitly acknowledged, even if they are not explicitly played!

The time signature is no longer disguised from figure 38, since the 'cellos and basses start a regular crotchet movement to underpin the strings' music, which is still syncopated.

Now that the time signature has been established, the preparatory nature of the first part of the movement is finished, and here with the fugue the second part of the movement begins (figure 39 onwards). The principal material for this is the fugue subject. It continues the characteristics of the movement by having an angular melody and being very rhythmic. The crotchet movement of the 'cellos and basses continues as a framework for the rhythm, which dominates this part of the movement (example 17).

The fugue is briefly developed between figures 41 and 42, using the rhythmic cells of the fugue subject throughout the orchestra (ordered randomly, not as in the subject) and *Klangfarbenmelodie* (an uninterrupted flow of semiquavers shared between the instruments). After this the music descends to the note on which the next section begins (figure 43): a gradually building tone cluster played to the rhythm of the fugue subject. Every other entry starts a quaver later than the other entries so that the rhythm is not played in complete synchronisation. The woodwind follows in sustained

notes each new note in the cluster. These additions follow the order of R-0 and then R-1, but the ascending order of the notes in the cluster is also related. There are two cells of intervals used though there are also two cells with variable patterns of intervals, caused because of the constraints of the note row. This is shown below.



X: tritone, 2 semitones

Y: major 3rd, 3 semitones

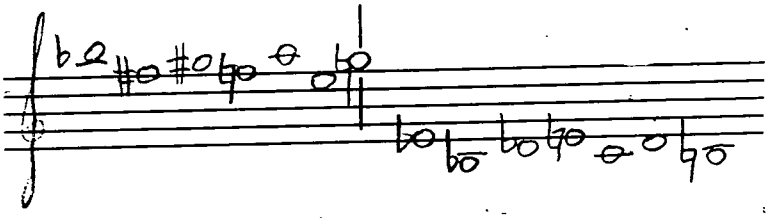
Z: variable

When all 24 notes have been added to the cluster, at figure 49, further layers are added to the texture (example 18). The woodwind play an ostinato of eight quavers each, whilst the brass play the fugue subject in augmentation, twice in its entirety, and then using just the last eight pitch classes. The climax of the movement is at figure 52; the brass augment the last four elements of the row again to make it particularly effective.

The final section (from figure 53) is a clear, uncomplicated end to the work. Example 19 shows part of this section. The note row is stated completely and clearly; the texture is a simple homophonic one; and elements from the rest of the work are used: tone clusters and various rhythms (rhythm A from the first movement) and rhythm C from the beginning of the second. This rhythm here begins one note value

later with every repetition (shown in example 20) to avoid monotony.

The strings play note clusters, outlining the melody of the note rows in parallel motion. Initially the cluster is constructed by having notes arranged either side of an axis note (the G indicated) such that the interval between those notes increases by two semitones as the notes are further from the axis. From two beats before figure 56 it is constructed according to a row of notes (not related to the note row of the work). Each half of the note row is related intervallically, such that the intervals between notes correlate consistently by reading each half of the row inwards as shown below.



maj. 3rd	maj 2nd	min. 3rd	maj 3rd	perf. 4th	min. 3rd
min. 3rd	maj. 2nd	maj. 3rd	min. 3rd	min. 3rd	perf. 4th

The top row refers to the first half of the row (ie B flat to F sharp is the major 3rd). The bottom row refers to the second half of the row, but reading it backwards (ie the first interval is that between D abd B: a minor 3rd). Initially a major 3rd correlates to a minor 3rd, but for the last two intervals in each row, a minor 3rd correlates to a perfect 4th.

Rhythm A is periodically heard in the brass, triangle and timpani. The interjection of each instrument occurs at particular points in the rhythm played by the strings (the brass and the timpani swap positions in the fourth statement of the row. The frequency of these interjections gradually increases (see example 20), which gives a cumulative feeling to the music, leading to the climax of this section at figure 58. Here there is the most activity in brass and percussion, and all the woodwind play

together for the first time in the section, where they have been following the top line of the strings' note cluster.

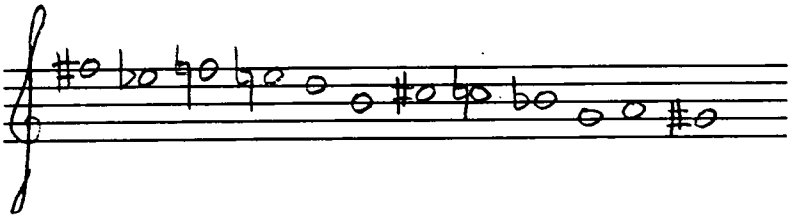
The work ends with a written out *ritardando*, repeating the last four pitches of the row twice and augmenting them by a factor of two for the second time. The last pitch is held for twenty beats, which then stops leaving a quiet string chord.

This symphony is a very successful example of a first symphony. It uses serialism in a most musical way to produce striking musical ideas which fit together and make a pleasing whole, but also use varying textures and other techniques (for example *Klangfarbenmelodie* and canon). The clear and logical structure is the shape of things to come in those tintinnabuli works where this aspect is not planned using an exact system; the precursor for those which do is 'Perpetuum Mobile'.

Symphony no. 2

The second symphony was written in 1966. Like the other symphonies it is in three movements, and like the first symphony it is quite short (just under a quarter of an hour). It shares certain characteristics with the first symphony: it too is serial, and uses to a much greater extent the tone clusters and also novel metrical processes, both of which appear in the earlier work. Also, the contour of melodies is very often acute in both works. As in the first symphony, manipulation of different textures is an important aspect of the work, in terms of parallels with the tintinnabuli music.

The note row has as its chief feature cells of four notes with the same intervallic content (minor third, tone, semitone).



The third and fourth notes (semitone) always fit inside the minor third of the first two notes, so that each cell contains four chromatically adjacent notes. This feature is exploited to a large extent in the last movement

In the first two movements the general principle of construction is very clear: it is one of stating the note row using contrasting textures both for the row and for accompaniment. Some of the textures are often of a particularly experimental nature. The final part of the second movement consists of the row being stated using the whole orchestra, which could perhaps be regarded as the climax of the first two movements. The purpose of the last movement is to exploit the intervallic properties of the cell rather than its function as a row. The movement also provides the climax of

the whole work, and the dramatic event of a Tchaikovsky song emerging from the climax.

The first movement has three sections. The first section of the first movement is constructed of four elements, which appear in a particular order that is repeated in sub-sections four times. These elements are extended with each sub-section, with the exception of the last, which omits the first two elements.

The first element is one of the novel metrical processes mentioned earlier, and indeed this is one of the main features of the first of the three sections of this movement. The performance direction in the score best describes it:

> 'Each musician plays according to the indication of dynamics (1 note-f, 31-pp, 1-f, 31-pp etc) at their own speed. The first note of every repetition of this subsequent to the first are not sounded at the same time. Only with a new, specifically marked group entrance (eg figure 2, page 5) should the strings be placed together by the conductor. Then they begin to repeat the sequence of dynamics at their own speed.'[1]

The musicians follow this process on one pitch only, specified at the beginning of the passage. Once again The note row as such is not involved in this texture, although the second violins, divided into twelve, do play all twelve pitches, between D` and C#`. This texture is exclusive to the strings throughout the work, and the texture thickens with every sub-section. In the second the violas (in eight parts) and 'cellos (in four parts) are added; in the third the first violins (in 12 parts) are added; and halfway through the fourth (figure 9) the basses are added (in eight parts).

Another feature of this work is the use of sound sources that would not normally be considered as musical instruments, or instruments played in unusual ways. This is the second element of the sub-sections. The first has a squeaky toy

[1] Arvo Pärt. Symphony no. 2 (Score) (1971), p. 3

('spielzeug'[2]). This is introduced whilst the second violins' material is continuing. The second has a piece of cellophane, and in the third the pianist is instructed to hit the wood of the piano with two sticks.

The third element of the section is the note row. Only three elements of this are heard initially (12, 11 and 10 of R-10), but in the second sub-section pitches 12 to 6 of P-0 are heard, in the third pitches 1 to 8 of I-8, and in the fourth the whole of RI-5. With a characteristic sense of balance Pärt has employed every permutation of the row in each of these sub-sections. Trombone, trumpet and horn are used in the final statement of the note row to achieve the extremely acute melodic contour over a wide tessitura; the timbres are sufficiently alike so as not to give the impression of *Klangfarbenmelodie*. This is not the intention here – the intention is for the row to sound as though it is being played by one instrument.

The final element of the sub-sections (except for the final one where it is not included) is a pointillistic texture played by an increasing and varied number of wind instruments (example 21). Unlike the pointillistic texture of the strings (which is also present in these passages) this is organised in strict rhythmic patterns for each individual instrument. For example, in example 7 the first oboe a rhythmic pattern is repeated with every six notes. The first two cycles of this are apparent, with the first note of the third at the end of the page. Their lengths are not comparable between parts so that the texture is ever-changing. As well as increasing the instrumentation (as shown below), these passages get longer with every occurrence, continuing the idea from the gradually longer statements of the note row of extending material. The register of this material also gets lower with every occurrence.

[2] Pärt. op. cit p. 4

Sub-section	Instrumentation
1	3 flutes
2	2 oboes, cor anglais, E flat, B flat and bass clarinets
3	2 bassoons, contra-bassoon, 6 horns-

The pitch material is determined by the final note of the note rows stated prior to these passages:

Sub-section	Final note of note row	Notes in passage
1	E flat	D sharp (=E flat), E
2	D flat	D flat, C
3	B flat	A sharp (=B flat), B

In the first and third sub-section the final note of the note row becomes the lower of two notes separated by a semitone (almost a 'leading note'). The reason for the semitone is perhaps the importance of this interval in the note row. The different spelling (eg D sharp instead of E flat) is simply to avoid excessive use of accidentals. In the second passage the final note of the row becomes the higher of the two notes (still separated by a semitone). This is a good example of a pattern being slightly varied without completely losing sight of all of the system at work (compare the ritornelli of the 'Stabat Mater', where the second and third use a different system of construction but use similar pitch material).

The second section of the first movement begins at figure 11, heralded by an upward *glissando* played by the harp (adding another element of tone colour to the *pizzicato* and pointillistic wind texture, novel sound sources and monophonic lines already heard). Example 22 shows an excerpt from the passage. Initially it consists of successions of chords or tone clusters each played by the woodwind, brass and strings. The woodwind are omnipresent, and are outlining the note row (with the vibraphone doubling the top line to make this stand out) whilst the strings and woodwind alternate their contributions, and the clusters in each instrumental family are constructed in different ways. The result is a soundscape consisting of blocks of three different types of sound, which sums up Pärt's approach to sound in music particularly in his earlier, and perhaps also his later works.

The woodwind are playing chords of the major tonic triad, which outline the first seven notes of the note row. The horns, trumpets and trombones each play diminished seventh chords (four notes each) which interlock as shown, and the result is clusters which involve all twelve pitch classes. The strings' clusters also use all the pitch classes. They are constructed as twelve adjacent pitch classes, sometimes stretched in blocks over different registers in various different ways. The top notes of both the brass and string clusters are, in pairs, a semitone apart (for the strings E flat, F flat; C flat, C; G, A flat). The importance of semitones has already been observed.

At figure 12 the nature of the texture of this section subtly begins to change, heralding the third section. This is dovetailed as in some instances in the first symphony. The woodwind continue to outline the row, but individually in sustained, trilled notes, with overlapping entries (so that more than one pitch from the row is

sounding simultaneously), and this creates a very distinctive texture, shown in example 23. This begins before the tone clusters of the rest of the orchestra have concluded. The durations of the notes differ according to which instrument is playing them:

Instrument	**Duration in Beats**	**Instrument**	**Duration in Beats**	**Instrument**	**Duration in Beats**
Piccolo	10	Oboe 1	5	E flat clarinet	7
Flute 1	9	Oboe 2	4	Clarinet 1	6
Flute 2	8	Cor anglais	3	Clarinet 2	2
				Bass clarinet	1

The instruments have been listed above in family order, but it will be seen that the durations decrease as the register of the instrument decreases (eg the E flat clarinet – 7 beats - plays lower than the second flute – 8 beats – but higher than clarinet 1 – 6 beats). The vibraphone continues to double the row so that its progress is still audible. The brass and string clusters cease once the new woodwind texture has established itself. At figure 13 the strings gradually enter, two notes at a time. They play the notes C, D, F sharp and A as these notes are sounded by the woodwind as they play them in the row, and sustain them until the end of the movement. Why these notes are chosen is an interesting question. The notes are found together in two pairs in the row in this order, and they are sounded together in those pairs, so the woodwind texture must have been carefully organised so that they would be playing those notes together. It is

possibly because the notes make up a familiar, tonal chord: that of the dominant seventh - tonality becomes an important presence at the end of the work. These are the only notes in order in the row which can make up such a familiar chord (because of all the semitones in the row).

The second movement begins with a six-note cluster played by brass in quavers. There then follows, played by the horns, one of the novel metrical processes mentioned earlier, where by the musicians play pairs of notes, which must be irregularly spaced: 'Irregular rhythmic section. No quavers!'[3] Again this results in a pointillistic texture. The novel way of notating this will be seen in example 24. The pitches are also heard six at a time within each beat here. The row is RI-2, and with three beats in a bar, six pitch classes are heard, then the other six, and then the original six again, in a symmetrical pattern. The importance of symmetry has already been observed. Initially it is the last six and then the first six pitches that are heard together (the pitches further towards the beginning of the row are those at the top of the clusters), but to achieve variety in the voicing of the clusters this arrangement is varied as follows:

Bar number of second movement	**Elements of row used on first and third beats**	**Elements of row used on second beat**
2	7, 8, 9, 10, 11, 12	1, 2, 3, 4, 5, 6
3	2, 3, 4, 5, 6, 7	8, 9, 10, 11, 12, 1
4	9, 10, 11, 12, 1, 2	3, 4, 5, 6, 7, 8
5	4, 5, 6, 7, 8, 9	10, 11, 2, 1, 2, 3

[3] Pärt. op. cit p. 27

Initially, the second half of the row is used on the first and third beats, and the first half on the second beat. In the next bar, this is reversed, so that the first half of the row is used on the first and third beats. It is not reversed precisely, however, since the first pitch is missing; pitch seven is heard instead at the bottom of the cluster so that there are still six pitches. The first pitch is found at the bottom of the cluster on the second beat. A system has come into play that carries pitches forward to the end of the row (and the bottom of the next cluster). In the next bar the system is continued, except that elements from the second half of the row start the cluster on the first and third beats. Two pitches are now carried forward onto the bottom of this cluster (9, 10, 11, 12, 1, 2).

From figure 14 this material is continued, accompanying the note row which is heard in isolated notes of differing length (example 25). The instrumentation of both varies:

Figure	**Instrumentation of note row**	**Instrumentation of accompaniment**
14	Strings	Woodwind
15	Strings	Trumpets, trombones
16*	Strings	Woodwind
17	Strings, woodwind	Trumpets, trombones
18	Strings, woodwind	Horns
19*	Strings, woodwind	Trumpets, trombones

*At figures 16 and 19, for one bar on each occasion, the material from the first bar of the movement is heard again (six repeated notes). In this case the notes are *not* those from the first bar, so that now all twelve pitches have been heard in this guise.

The note row is heard using the instrument families shown above, with the instruments using the *Klangfarbenmelodie* technique. The strings are heard in pairs of sections (except for one note played as a harmonic by the first violins alone, perhaps for intonation reasons), at varying pitches: 'cellos and basses; first and second violins; second violins and violas; violas and 'cellos etc. The *tessitura* of the passage is wide – the tendency to have very angular melodic lines has already been commented on. From figure 17 the woodwind (singly except for the very last note of the section) double the string notes.

The second section of this movement consists of statements of four versions of the note row (P-2, I-2, R-2 and RI-10) played in rotation five times, in a pointillistic texture using the entire orchestra (example 26 shows the beginnning of this section.. The strings are still often playing in pairs of sections. Two bars after figure 21 two trombones start playing another version of the note row (RI-9), whilst the other activity continues. At this point a percussive element becomes apparent with the pianist playing clusters 'with the flat of the hand in high/low register' (another novel playing technique). This fits well with the poinitillism, but obviously has no significance in terms of pitch. Untuned percussion is also gradually added from just before figure 23.

The durations of this section are governed by two systems, one of which is for instruments using triplets and the other for instruments using duple note values. There is no completely regular sequence in either (compare, in particular, the ritornelli of the 'Stabat Mater'); instead certain patterns emerge. These are shown on the diagrams between pages 42 and 43.

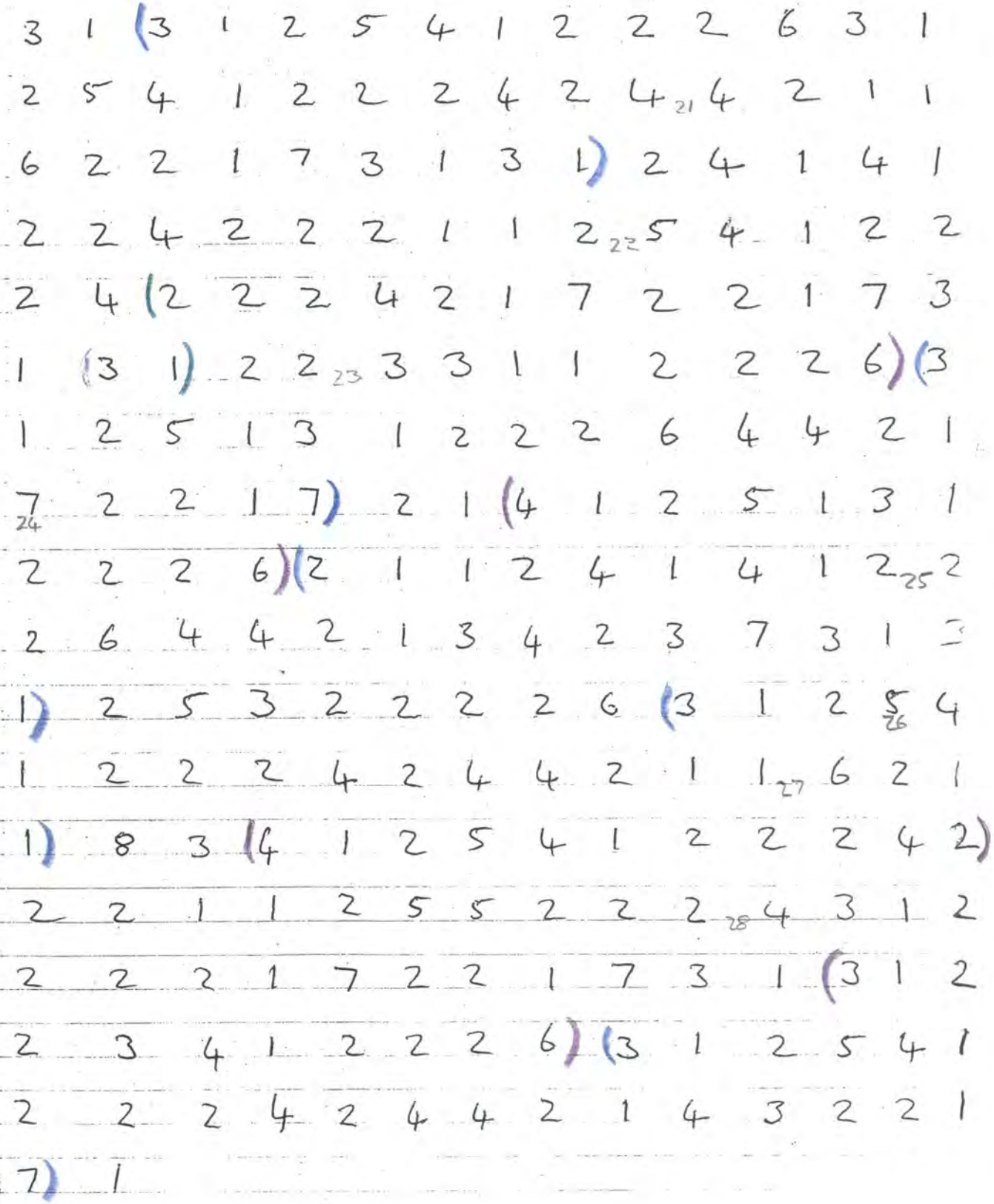
In the instruments that use duple note values, the durations have been expressed in semiquavers, as this is the shortest unit used. It will be seen that there is a sequence (bracketed in blue) which is also heard in two separate constituents (bracketed in green and purple, and in one instance overlapping), *but it is important to note that* durations sometimes have to be added together for the sequences to map. For example, in the third of the blue brackets the first few elements are 2, 1, 1, 2, 4, 1 rather than the 3, 1, 2, 5 of the first blue bracket. The first and second, and third and fourth durations of the former have been added.

In addition to this it can be discerned that there are successions of four durations which recur (eg 3, 1, 3, 1). These are shown on the third diagram. This in particular relates to the system used in the ritornelli of the 'Stabat Mater'.

In the system relating to the instruments playing triplets, there are two sequences that recur. Most ingeniously, the sequences often overlap at this point. It is sometimes necessary to add durations here also for the different occurrences of the sequences to map. There are very few durations not included in one or other of the sequences. On these two occasions, it is a long note preceded by a short (2, 8 and 1, 9), which again shows a characteristic sense of balance.

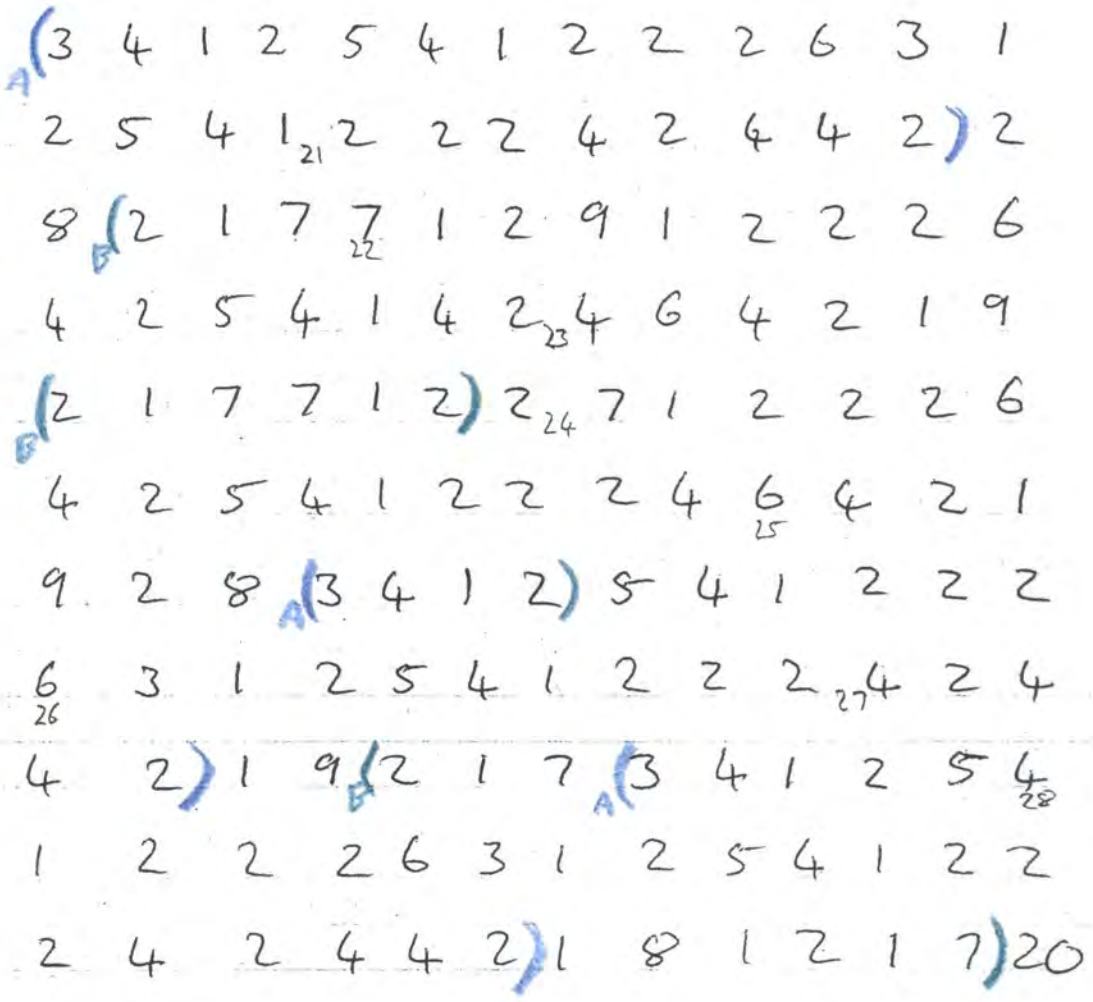
In this passage one would expect there to be a regular system governing at which point in the music every instrument plays. An exhaustive attempt at uncovering one was unsuccessful. Attempts were made to recognise systems which might involve particular successions of instruments (which might be a similar system to the one governing durations), or govern the frequency with which individual instruments are used. In the opinion of this writer therefore it seems quite possible that the ordering

Instruments using duplets



Blue: complete sequence
Purple: first part of sequence
Green: second part of sequence

Instruments using triplets



NB that durations have been <u>doubled</u>, so that one triplet quaver in the score is equal to one crotchet here, as if the music were in 6/4.

(3 1 3 1) 2 5 4 1 (2 2 2 6) (3 1
2 5) 4 1 (2 2 2 4) 2 4 4 2 1 1
6 2 2 1 7 (3 1 3 1) [2 4 1 4 1
2 2 4 2 2 (2 1 1 2) 5 4 1 (2 2
2 4) (2] 2 2 4) (2 1 7 2) 2 1 7 (3
1 (3 1) 2 2) 3 3 1 1 (2 2 2 6) (3
1 2 5) 1 (3 1 (2 2) 2 6) 4 4 (2 1
7 2) (2 1 7 2) 1 4 1 2 5 1 (3 1
(2 2) 2 6) (2 1 1 2) 4 1 4 1 (2 2
2 6) 4 4 2 1 3 4 2 3 7 (3 1 (3
1) [2 5) 3 2 (2 2 2 6)] (3 1 2 5) 4
1 (2 2 2 4) 2 4 4 2 1 1 6 2 1
1 8 3 4 1 2 5 4 1 (2 2 2 4) 2
[2 (2 1 1 2) 5 5 (2 2 2 4) (3 1 2
2 2) (2 1 7 2) 2 1 7 (3 1] (3 1) 2
2) 3 4 1 (2 2 2 6) (3 1 2 5) 4 1
(2 2 2 4) 2 4 4 2 1 4 3 2 2 1
7 1

has been governed by some process involving indeterminacy. It is known that Pärt was interested in avant-garde music and the processes by which it was constructed. The composer Cage is mentioned in an interview by Pärt: '...so it's very possible that I was influenced by Cage'[4]. It would almost be surprising if Pärt were not to use this method of writing sometime in the period in which this work was written.

The third movement begins with a 48 note chord, with timpani playing repeated E flats. The chord is constructed according to relationships between the intervals separating the notes. The notes of the chord are written out in ascending order of instruments on the following page. The fourth is the most apparent interval, separating every pair of notes. Initially the fourths rise in two groups of four notes, each interlocking by a semitone, and the two groups are separated by a semitone. There is then a descent of a major seventh, which is repeated in the violas' notes. Indeed, the pitches from the fourth pair of notes of the basses and the fourth pair of notes from the 'cellos is repeated from the second pair of notes in the violas. Some octave transpositions have to be allowed for, as does the fact that the violins double notes an octave above. The repetition ends after the fourth pair of notes of the second violin. The descent of two octaves after two pairs of notes has no precedent, but it can be seen from the diagram how a tone can be related back to two pairs of notes played by the second violin. Therefore it can be seen that the idea of two fourths separated by a tone (and therefore enclosed by an octave, the interval in question) is used as the precedent. The interval of a major seventh has been seen before, but descending. It is perhaps more likely that the descent of a semitone between the previous two groups of

[4] Jamie McCarthy. An interview with Arvo Pärt Musical Times 130 March 1989 p. 130-134

eight notes played by the violins is the precedent for this (it will be remembered that octave transpositions have to be taken into account).

The first piece of activity after this chord (apart from the timpani) is the sextuplet semiquavers played by the violas in bar 29. This is where the distinctive cellular property of the row comes into play for the first time: the pitch material here consists of alternate minor thirds and semitones, the intervals which make up the four-note cells in the row. It is assumed that the notation of E naturals rather than E flats in the first chord is a possible printing error. This would also seem likely from the fact that the choice of E flat as the top note of the chord is presumably suggested by the E flats of the timpani.

Just before the second occurrence of the sextuplets, the violins drop out of the chord, and three bars later, at figure 30 the other instruments stop playing. This leaves the texture for the two-dimensional interplay of E flats played by the timpani and the interjections in sextuplets and other note values by the strings, the instruments being gradually added by sections. There are always several note-values apparent in each interjection, which makes for a dense, cluster-like sound. At its thickest (six bars after figure 31) the texture is made up as shown in the table at the top of the next page (and can be seen in example 27):

Instrument	Note Values
Violin 1 (upper)	sextuplet semiquaver
Violin 1 (lower)	semiquaver
Violin 2 (upper)	semiquaver
Violin 2 (lower)	quaver
Viola	crotchet
'Cello	triplet quaver
Double bass	quintuplet semiquaver

Every combination of instrumentation will be heard twice before another instrument is added. The intervallic properties of the cells in the note row are still in use: initially the second violins are separated by the minor third and the violas by the corresponding semitone (filling in the minor third). When the 'cellos are added the layout of the pairs of intervals is less clear, since minor thirds and semitones are now heard between every pair of instruments. The arrangement is only partially shown (in example 28) to avoid over-complicating the example, and is symmetrical between the two interjections played by this group of instruments. In the following group (after first violins have been added), the corresponding intervals are still used, but the arrangement is not symmetrical but maps exactly from the one interjection to the other; the second is in fact the first transposed a minor third down (with some octave transpositions). Transposition is also used in the next pair of interjections, more complicatedly: the layout of corresponding intervals maps from one to another, in

spite of some notes being transposed up a major third and some a fourth in the second interjection. In the next pair of interjections, the transposition of notes is such that Pärt can set up the following pattern of minor thirds and semitones between the two interjections:

Instruments	**Interjection 1**	**Interjection 2**
1st violins (upper)	m m s m m m	s s m s s s
1st violins (lower) + 2nd violins (upper)	m m s m	s s m s
2nd violins (lower)	m m	s s
Violas	s	m
'Cellos	s m* s	m s s*
Double bass	s s s s s	m m m m m

The intervals on the one side counterbalance (with one exception; the third interval of the 'cellos) those on the other. The exception is probably to allow a link between the two asterisked intervals, which could not otherwise occur. The corresponding intervals of a minor third and a semitone can still be paired off (but not in any regular pattern discernible between the two interjections).

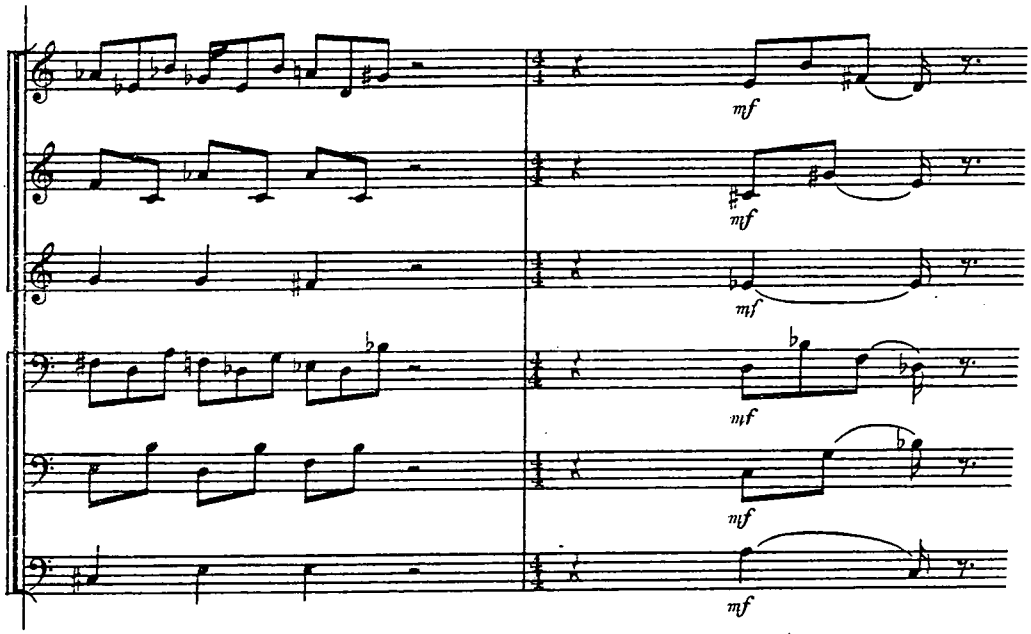
At figure 32 there is an abrupt change of texture, which now becomes three-dimensional. It is shown in example 29. The constituents are as follows:

(i) Strings: 'Arhythmic striking of the string (on top of the fingerboard) in different places. The strings will then be dampened by the left hand'[5].

[5] Pärt. op. cit p. 62

On the next page of score this is varied by the low strings: 'Col legno on the places shown [on a diagram in the score] of the instrument , in free rhythm'[6].

(ii) Brass: Interjections which last one beat (alternating with the woodwind), which are serial in their construction: after the first three instances, which can be regarded as introductory and germinal in their fragmented nature, all twelve tones are present:



(iii) Woodwind: Interjections, alternating with brass, which are similar in character to the interjections heard up till now, but constructed in a different manner.

The material played by the woodwind is controlled by a system which uses recurring patterns, but which is not exact. Again the intervallic properties of the cells found in the note row are employed, but in a different way to that described above. The intervals concerned are the minor third, the tone and the semitone. The texture starts in four parts, and every one of the intervals between the four parts will be one of these

[6] Pärt. op. cit p. 63

intervals. However, it is no longer possible to link the corresponding intervals of a minor third and a semitone. Instead these two intervals, with that of a tone (also found in the cells) are used to separate the notes played by the woodwind in this passage. The intervals (S=semitone, T=tone and m=minor third) are used in the following successions in the two bars after figure 32 (it will be remembered that there are three intervals in a four note chord!):

S S T T m m S T T S S S S T T S S S S

S m m S T T S S S S T T S S S S T T m

S T T S S S S T T m m S S T T m m S T

It can be seen that there are recurring patterns. These include:

S T T m m S;

S T T S S S S T T;

and S S T T m m S.

There are smaller patterns also (eg m m S).

The material that begins at figure 32 persists until figure 36, gradually getting louder. For the most part the brass and woodwind alternations happen fairly swiftly, but at one point the woodwind take over (three bars after figure 33), and at another the brass do (figure 34). The piano, playing in the bass, is added to the woodwind during this passage, to give a firm underpinning to the texture.

From figure 35, novel notation is employed, but it is actually intended to indicate the same music as in the preceding bar. It is at this point that the climax of the work is reached. The Tchaikovsky song *Susser Taum* ('Sweet Dreams') enters the texture at this point, played by the clarinets, hardly audible initially (example 30). The

other music fades out, leaving this simple music as a stark contrast to the chaos that preceded (example 31). At figure 37 the music preceding bursts back on the scene (with brass and woodwind playing simultaneously), as if to underline the contrast. It is alternated by simple bare fifths (A and E), perhaps to underline the contrast between the chaotic and the simple. The symphony ends quietly with the Tchaikovsky song. The juxtaposition of this song with the other movement is similar to other juxtapositions of material in the work: that in the first section of the first movement, for example, or throughout the last movement where timpani are alternated with strings, and later brass with woodwind.

This symphony appears quite simplistic in its clear-cut structure and the types of materials that it uses, which are not developed but are intended to stand on their own, and contrast with the other material (particularly the Tchaikovsky at the end). However, this is obviously what Pärt intends, since he has proved himself more than capable with 'Perpetuum Mobile' and the first symphony of creating much more complex and developed structures and materials. Thus he proves himself capable of not over-complicating matters unnecessarily, which is an unmistakable aspect of the tintinnabuli works.

Use of quotations appears elsewhere is Pärt's music from this period (the late 1960s), for example in the earlier setting of the 'Credo' and 'Collage sur BACH' (both using music by Bach). This is a precursor of his adoption of tonality (and modality) found in the next work to be analysed, which could be described as a halfway house between the serial and tintinnabuli works.

Symphony no. 3

The third symphony was written in 1971, and is dedicated to the conductor Neeme Järvi. It stands on its own in Pärt's output, between the serial and 'tintinnabuli' music. Its composition followed a study that he made of early music, and can be regarded as a direct reaction to this, as there are strong influences from mediaeval, renaissance and baroque music.

The archaic influences stemming from the study that Pärt made of early music are: plainchant, discant, organum, hocket, responsorial writing, *fauxbourdon* and renaissance polyphony; and from the Baroque, chorale-like textures, the 'Corelli clash', and such techniques as pedal points, stretto, imitation and augmentation. All of these features are apparent to a greater or lesser extent, though some more so than others. Imitation, a hallmark feature of renaissance and Baroque music (if not medieval), is also a key ingredient of the work.

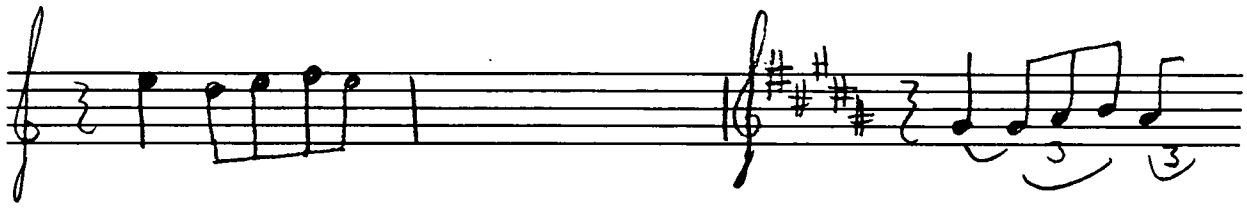
The ensuing analysis will be clearer if the main musical ingredients which are made clear at the outset of the work are described at the outset of the analysis. There are five pieces of basic material or motives. All are shown in example 32.

A: This is monodic initially, and probably derived from plainchant as the movement is generally stepwise and the music is modal (in the aoelian mode). At the end consecutive fifths are implied by the entry of the trumpet, suggesting discant writing, and a foreshadowing of motive C (the Landini cadence, bar 9). This motive could be regarded as germinal for the *moto perpetuo* motive (D), since it is similar (as described below) but slower.

B: This is a cadence with strong modal overtones. One expects it to be II-V-I in B major, but in the second chord what one would expect to be an A sharp is A natural, leading to a progression of Vc-I in E major. The A natural which is the upper neighbour note of the top line is heard as a flattened seventh, suggesting the mixolydian mode, and the decorative B natural which is part of the first chord suggests the aoelian mode (since the chord is minor).

C: This is a Landini cadence, so named after the medieval composer who used the cadence often, the main characteristic of which is a falling from the seventh degree to the sixth degree of the scale at a cadence before resolving to the tonic. The sixth and seventh degrees are both sharpened, suggestion the melodic version of the minor scale.

D: A *moto perpetuo* aspect is introduced to the work here (bar 21), which is of paramount importance to the rest of the work, since it pervades the development sections of the first and third movements, as well as making an appearance in the recapitulation of the second movement. It is in unison until motive E begins, relating clearly therefore to the monody of motive A. Some parts of the melodic contour are derived from motive A and continue to be heard throughout the work – compare bars3 and 26:



The use of predominantly two notes in each phrase perhaps is derived from the upper neighbour note idea from the top line of B. The *moto perpetuo*

continues after E begins, accompanying it. At this point it becomes polyphonic, and the use of a particular triplet rhythm (♩ ♪) reminds one of the first rhythmic mode (seen again in the 'Stabat Mater'), and also perhaps of hocketing (a rest could be seen to be implied in the second of the three quaver subdivisions, although it is not written). The overlapping of the parts found here is also something that happens continually in medieval polyphonic music. Finally, traces of the Landini cadence are occasionally found (eg bar 40).

E: This is a melody, played on the trumpet, which again is largely stepwise. Organum is brought to mind here, with this more sustained melody (largely in crotchets) being juxtaposed against the more rapid triplet *moto perpetuo*. In bar 41 a horn joins the texture, to create a chain of suspensions with the trumpet – it will be remembered that the interval of a sixth was a discord in medieval times, and that of a fifth a concord. The Landini cadence is again heard at the end of this section. The E material is then repeated, this time homophonically, with consecutive fifths (from discant writing) very apparent (example 33). There is also a snatch is *fauxbourdon* (bar 55), and the timpani provides an instance of imitation (of the bass line). The predominance of brass in the instrumentation at this point inescapably recalls the brass writing of Gabrieli.

Looking at the piece as an entity, it can be seen that it is in three movements, and cyclic. All but one of the main musical ingredients used in the work, heard in the first section of the first movement, are repeated at the end of the third movement (in a different order). The shape of the movements are all similar to each other: tripartite, basically following the sonata form principle of exposition, development and

recapitulation, and with a substantial climax marking the end of the development section in every movement. All the movements dovetail (which is reminiscent of sections in the first symphony): for example the material which begins the second has actually started five bars before the *attacca* for the beginning of the movement. The second ends on an imperfect cadence followed by a series of accelerating timpani notes on the fifth of the second chord (which all sounds incomplete), before the third movement starts. The purpose of this passage is probably to separate what would otherwise be two passages in D minor, since its tonality is remote from D minor. The tonal uncertainty of this cadence has already been commented on – here a much flatter key than D minor is suggested (E flat minor or A flat major). To start the third movement in the same key as the second would finish in were it not for this cadence would sound weak. The texture is also different in this passage to help achieve this effect (example 34):

Before fig 29: High wind and string instruments; very light texture (quiet)

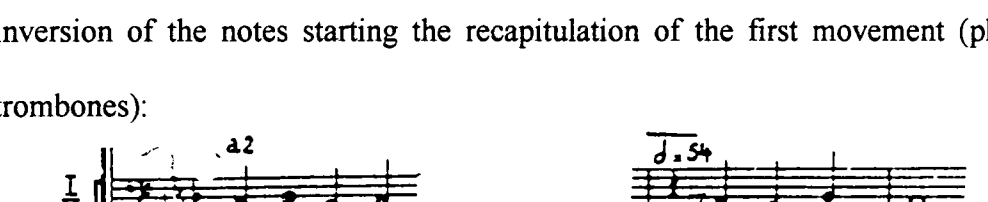
Fig 29-30: Strings and low woodwind, all in low register, and timpani (loud)

Fig 30 on: Four-part strings (quiet)

Despite following the outline of sonata form, there are peculiarities in the structure apparent in each movement: the recapitulation is very brief in the first, and in the second there is no clear division as to where the exposition ends and the development begins. In the third movement material from the first and second movements as well as from the third is developed. The recapitulations show the most distinctive differences, because it is almost invariably material from the exposition of

the first movement that is recalled. The recapitulations become more extended with each movement, with a growing amount of material being recalled (and sometimes developed). The separate parts of each movement are considered together (expositions, developments and recapitualtions) as it is their comparison that is the most illuminating way to analyse the structure and developmental processes of the work

The exposition of the first movement has already been described, presenting as it does the main motives for the work. The expositions of the second and third movements, as one would expect, present new material. In the second movement the material is monophonic and largely stepwise like that at the opening of the first movement (example 35). There is some similarity of melodic contours (a common feature of the work) since the opening four notes (at the bottom of page 27) are the inversion of the notes starting the recapitulation of the first movement (played by trombones):



It is in the bass register ('cellos and violas, and bassoon), and the way the music unfolds is quite different. The texture expands to three parts as more instruments are added (also seen in example 35). Because one of the parts moves at a slower pace (in semibreves or even slower compared to largely crotchets of the other parts), the effect is again like organum. The material really begins to be developed from figure 17, just 17 bars after the movement has started and where the second

instrumental part enters. One could perhaps say that that it is the break between exposition and development. However, there is no definite change of material as there is in the corresponding place in the other two movements; on the contrary, there is a feeling of continuation since the line moving mostly in crotchets continues as before, using the same kinds of melodic shapes and still largely stepwise. Therefore it is best to say that the exposition and development are merged. After expanding to three parts just before figure 19, the texture drops back to two parts, but then expands in a different way. More instruments are added to each part so that at figure 20 the woodwind and strings are set against each other over a tessitura of four octaves in each case (example 36). During this (reminiscent of the dovetailing of sections found in the first symphony in particular) the trumpets enter and start to lead towards the climax, with their purposeful, sequential descending melodic line (example 36). This is a contrast to the almost improvisational nature of the melodies which have pervaded the movement so far – they rarely appear to be leading to a definite cadence or climax.

The exposition of the third movement juxtaposes two archaic influences (example 37). The first, played by four and five-part strings, is a chorale-like texture. The melody sometimes recalls melodic contours heard in previous monophonic material. The second is played by the woodwind, and displays qualities of discant medieval music and hocketing. The texture is essentially that of open chords (cf. discant) which are disguised by syncopation (an impression which is often given by using the hocketing technique, although here no rests are written, but rather implied). In the latter passages the timpani play before and on the second beats of the bars.

These would not otherwise be outlined by the woodwind, and gives the passages a greater impression of rhythmic stability than would otherwise be the case.

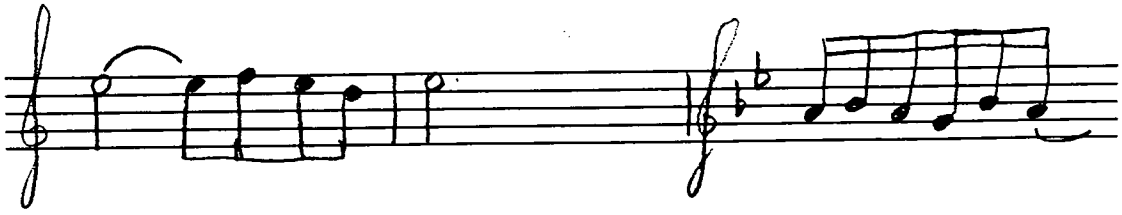
The two passages are juxtaposed between figures 30 and 35, and there follows without a break a passage (figures 35 to 37), clearly based on the second movement with the crotchet movement and organum elements. For reasons of tonality this can still be considered part of the exposition, since it is based in and cadences in D minor (with the Landini cadence). The passage that follows, although still based on the second movement, sometimes seems to want to deviate from D minor through chromatic inflections. This is where the development begins, since the material in this passage appears to be germinal for that in the development. This will be described later.

The development of the first movement makes an interesting use of accidentals to create modal inflections which of course is an important archaic quality (from medieval and Renaissance music) which has found its way into this work. An element of it has already been heard, since the distinctive sharpened sixth and seventh notes that make up the Landini cadence sound as though they should be flattened as in the descending melodic minor scale. This is first heard in bar 72 where G flats replace G naturals on alternate repetitions of the three-note figure. This gives a Phrygian inflection (with the flattened second) to the F minor tonality.

The other note most often so changed is C, to C flat. In the context of F minor this does not indicate a particular mode, but the inflection it most readily provides is that of the Mixolydian mode, since it gives the impression of an alternately flattened and sharpened seventh (in relation to the D flat above it).

The texture of this development is polyphonic, and it makes use primarily of the *moto perpetuo* and organum ideas from the exposition, as well as the Landini cadence (eg bars 86 and 87). Melodic contours from motive A are apparent; for example bar 78 in the first clarinet is the same as the opening phrase of the work:

Opening Bar 78



The *moto perpetuo* is omnipresent, and the organum idea is suggested at places like bars 84 to 86 (oboe and trumpet – example 38). The texture is thin (rarely more than three parts) until figure 10. A wide range of registers are used (eg flute in bar 95 compared to 'cello and double bass in bar 100), and instrumental timbre (eg alto flute and horn with strings and then flute from figure 10). Bitonality makes an appearance in bars 98 to 104 (timpani, 'cello and bass in E minor juxtaposed with strings in B flat minor – example 39). This is a natural development from the chromatic inflections described above, and begins the build-up of tension to the climax at figure 14.

This build-up continues with a pedal F in 'cellos and basses (a technique very much associated with baroque music – fugues and other polyphonic music in particular), an unprepared dissonance in the horns (bar 104) and a new idea played by the horns and clarinets from bar 106 (all seen in example 40). This is in triplets which undermines the pervading semiquaver movement, and with these other elements creates the tension which leads to the climax. From figure 13 the number of parts in the polyphonic texture increases. Example 41 shows parts for horns, trumpets and two

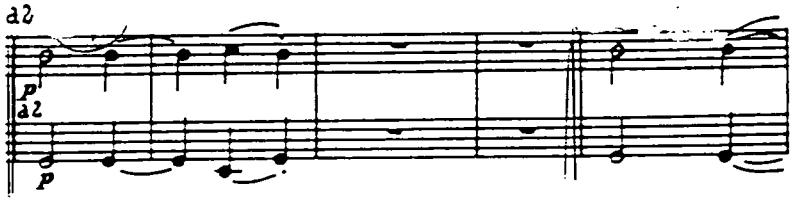
parts for trombones, in addition to other elements. The *tessitura* being used at any one time also increases – it is five and a half octaves by the time the climax just before figure 14 happens. The *moto perpetuo* (often confined to just two or three notes as originally eg. bars 113 to 115) and organum elements are still element is till apparent up to this point, with semiquaver movement retained by some of the strings and woodwind, and longer note-values used by the other instruments (all visible in example 41). This all culminates in the climax at figure 14.

The development of the second movement has already been described above; as said it is not clear where there should be a division between the exposition and development, and therefore both processes were described.

The cumulative nature of the recapitulations is also evident in the development of the third movement, where material from the first and second movement is used as well as that from the third. The material beginning at figure 37 is, because of the register and the fact that it is monophonic, is certainly intended to be related to that opening the second movement, despite the different time signature (3/4 instead of 4/4). The instrumentation is also similar: it is written for 'cello, though without bassoon initially. However, it also leads very easily into the chorale material which is found again here. This begs the question as to whether the chorale from the opening of the movement is intended as a progression from the monophonic material from the expositions of the first two movements. It certainly seems likely.

The bassoon is used in this passage, along with the horns (and later the trumpets), to isolate a motif (below) based on the 'cellos' material which is found

throughout the first part of the development (up to figure 41), unifying this part of the movement.



The two minim-length notes and the staccato, detached nature of some of this motif bring to mind the second, homophonic statement of motive E in the exposition of the first movement. This material leads very easily to the snatches of melody found in the rest of this development – another sound progression from a motive to a significant aspect of the music.

From figure 40, *moto perpetuo* material is introduced by the violas, played alternately with the motif described above. This initially brings to mind the similar material from the first movement, but the way it is then developed, being played in unison by the strings over four octaves (example 42), is clearly derived from the development of the second movement. The syncopated nature of this passage has been seen before, implied in the various uses of hocketing, as well suggested in the delaying of strong beats often apparent throughout the work. This is apparent even in the opening passage, though because the passage is fairly slow it is not a particularly obvious example of syncopation.

From figure 41 the material from the exposition of this movement returns and is developed (example 43). The scoring for the chorale material now includes woodwind and brass as well as strings, and the strings contribute to the hocketing material previously confined to wind (eg bar 133-137). There are also snatches of

melody usually played by wind (eg bars 127-128, 132-137, 150-155) where again syncopation is often evident. This is based on several pieces of material. In its often stepwise nature and occasional syncopation it recalls *moto perpetuo* material and also the slower monophonic material; for example the melodic contour of the flute from bar 132 (seen in example 43) is notably similar to that of the melody at the very beginning of the work. Eventually, as in the other movements, the momentum of the music builds to a climax, at figure 46, with *tutti* playing from figure 45 (example 44).

As said, the recapitulations of each movement are cumulative, recalling more material with each movement. In the first movement this is a motif (which is extended) from the *moto perpetuo* material that has been so evident and the Landini cadence. In the second, the opening material of this movement, the Landini cadence, some *moto perpetuo* writing and the modal cadence make up the recapitulation. There is also a substantial passage (bars 93 to 136) based on the upper neighbour-note motif which is part of the modal cadence (B). The distinctive textures of this passage (described later) also are almost certainly derived from that of the cadence (which is played on strings and celeste).

In the third movement the recapitulation acts as a recapitulation to the whole work, since as said material which has been important to the whole work, and was first heard at its outset, is heard again. Here it is in a different order, which is suggested by the different context of the passage. The Landini cadence (motive C) is heard first, since it is heard at the climax marking the end of the development section as in the first two movements. The modal cadence (motive B) is heard next. These two cadences are perhaps heard together first because they have been very prominent

throughout the work, particularly the Landini cadence, and they were heard together at the outset. Motive E is recapitulated next, accompanied by motive D (the *moto perpetuo)*, both sounding the same but written in 2/2 time instead of 4/4. The note values are doubled, but the aural effect is the same. The passage is somewhat differently orchestrated, with the melody being played initially by the piccolo rather than the trumpet, which instead starts the *moto perpetuo* (bar 183). A is the final element to be recapitulated, to make the cyclic nature of the work particularly strong. Again the instrumentation is changed: the melody is played by the trombone instead of oboe and clarinet, and unlike previously there is some accompaniment (woodwind and *pizzicato* strings), derived from the second, homophonic statement of motive E in the first movement (example 45). The work ends with a triple-*forte* statement also derived from this homophonic statement of motive E.

Timbre, register and characteristic groupings of instruments play an important part in this work. In much of the work there is careful, subtle combination of timbres. Sometimes timbres are contrasted as blocks of sound, just as in the symphonies but often in a different, more subtle way – this is discussed further below and in the commentary. The full orchestra is used only for climaxes, for example at the end of the development sections. The very beginning of the work is monophonic, with the melody being played by doubled oboe and clarinet. In bar 8, the trumpet joins quietly with another line, giving a very striking combination of timbres. For the next two of the initial motives the instruments are used in sections, with motive B played by strings with celeste and motive C by the brass. Also, for the second statement of motive E the brass predominate until the rest of the orchestra joins for one of the few

occasions except for the climaxes. Motive D is another example of instruments being carefully combined (increasing numbers of woodwind and strings, and then trumpet playing motive E accompanied by this).

For much of the rest of the first movement the instrumentation consists of this careful, subtle combining of timbres. The use after figure 6 of wind, low brass and (initially) *pizzicato* strings, together particularly with the imitation provided by the timpani to link phrases is another such. In the development of the first movement there are contrasts in register (eg bars 77, 80, 98), and interesting groupings of instruments to play polyphonic lines (eg bars 88-95, where the piccolo, flute, alto flute, horn and strings are combined). From figure 14 there are several low, loud brass entries, which contrast heavily with the high *moto perpetuo* passages in high woodwind and strings. In the 'recapitulation' of the first movement the distinctive sound of the low brass and woodwind is heard, followed by the equally distinctive, contrasted sound of four trumpets (a contrast of register rather than instrument family but using the same principle of contrasting blocks of instrumental sound found before).

In the second movement the emphasis is again on polyphony with interesting groupings of instruments. For example, from figure 17, oboes, second violins and celeste all double the same line (example 35). From bar 30 the clarinet and trumpet double the same line, making it conspicuous above the other melodic strands. The two-part texture from figure 20 with antiphonal woodwind and strings playing different lines in unison over a wide *tessitura* is another example of contrasting the different sound colours of instrument families. Another dimension is added when two trumpets add to this texture with another line in octaves (example 36). In the

recapitulation, from bar 76, bass instruments playing in unison are alternated with a distinctive use of brass (playing the Landini cadence with which they are associated).

At figure 24 there is a very good example of careful blending of timbres (piccolo, contra-bassoon, trumpets, celeste, marimba playing *tremolando*, and basses). This is followed by passages for different groups of instruments (celeste, violins in four parts, and then trumpets and a trombone). This is seen in example 46. The latter passages are an excellent example of the contrast of blocks of sound discussed in the commentary, though here more similar to that found in the tintinnabuli works than the symphonies. This is achieved by being more subtle, often using fewer members of instrument families, and using carefully chosen pitches and harmonies rather than clusters of notes. The two thick chords which follow these passages, whose texture is created by low strings and woodwind with trombones, timpani and a bell played *tremolando* for the first chord, also contrast well as a block of sound compared to the preceding brass instruments.

In the third movement contrast between different families of instruments is very clear initially, with a highly contrasted lush string texture and brittle woodwind texture being set against each other (example 37). This is followed by use of combinations of instruments similar to that found in the second movement, but then there is an extended passage where bass string instruments are contrasted with horns, and bassoons and contra-bassoon. The development is based on the material in the exposition, but instrumentation has changed - families have been combined in the two different types of material. Oboes and upper strings play the syncopated material whilst brass and sometimes other woodwind play the chorale material. This is as

appropriate for the material as the previous instrumentation, and provides a contrast from it, as well as to each other (still brittle and high for the chorale, and closely voiced and in a generally low register for the chorale). The snatches of melody provide another striking contrast from the other material in their distinctive instrumentation: oboe, contra-bassoon and marimba at figure 41, trumpet at figure 42, and bassoon, contra-bassoon, clarinets (including bass) and flutes and piccolo at figure 44.

In the recapitulation the third movement, the most distinctive piece of orchestration is that from figures 50-51, where a solo trombone plays motive A, accompanied during the longer notes by *pizzicato* strings and staccato woodwind (example 45). Two other trombones join for the two-part passage at the end.

This work is one that stands on its own in Pärt's output, between the earlier, avant-garde type music and the tintinnabuli music. It is preparing the way for the more developed reaction to the study of early music which was the tintinnabuli music (with which it is primarily linked through its modality), whilst also sharing some features of Pärt's earlier music. This includes a form that is not determined mathematically or by any other extra-musical means (for example, a text), as the vast majority of the tintinnabuli works are. The earlier works tend not to be, although 'Perpetuum Mobile' is an exception. Other features are the use of a traditional symphony orchestra, which is not used by Pärt again until 'Litany' (1994), and the fact that the work is a multi-movement one. Apart from mass settings and the Seven Magnificat Antiphons this is not usual in Pärt's tintinnabuli works; and Pärt has in fact turned his back on traditional instrumental forms such as the symphony to date.

Part 2

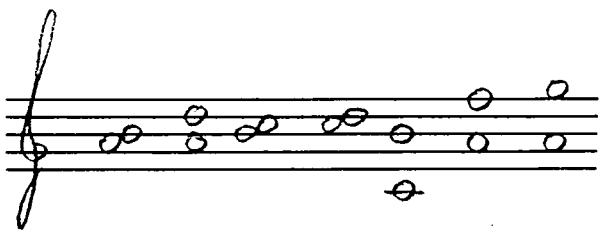
The Tintinnabuli Works

The Tintinnabuli Style and Method

The tintinnabuli music came into being after a study of early music made by Pärt in the late 1960s and early 1970s, and its relationship to early music will be discussed later in the thesis. Another major influence in the formation of this music has to do with the sound of bells. The word 'tintinnabuli' refers to the sound a bell makes after it has been rung, which lingers long after the bell has been struck, and Hillier notes that 'During this period Pärt came to appreciate the special resonance of bells...'[1]. These sounds are overtones of the original sound that is heard immediately after the bell has been struck. This word has been used by the composer because in the tintinnabuli music there is always the sound of the triad to be heard in the music, and he clearly feels that this is a logical comparison to draw.

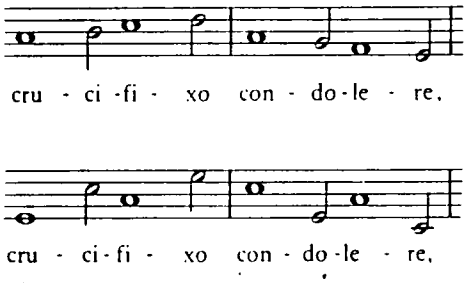
The Method

The unmistakeable sound of the tintinnabuli technique is created by combining the scale and arpeggio in two parts. This creates discords which are to a large extent responsible for the unmistakeable sound of the music, as is the fact that they are not resolved as in traditional tonal music, but may well move to another discord. The most frequent discords are the minor and major second and seventh, though other intervals can occur between notes of the arpeggio and adjacent notes of the scale. Examples in A minor are given below.



[1] Paul Hillier. Arvo Pärt (Oxford, Oxford University Press, 1997) p. 86

The notes of the arpeggio, as explained by Hillier[2] may be above (superior) or below (inferior) the melody note, or may be alternating, although not necessarily as strictly as in his example. Compare the following phrase from the 'Stabat Mater' sung by soprano and alto, where arpeggio notes are found both in superior and inferior positions, but not strictly alternating:



Although the word 'scale' has been used in this explanation, there is a danger of it being misleading. This is because Pärt often uses modes rather than scales. The 'Cantus in memoriam Benjamin Britten' is in fact in the aoelian mode, since there are no accidentals (not even a sharpened leading note) in all of the nine pages of score. However, arpeggios are also used, and these have specifically tonal connotations because they suggest chords, which are not a feature associated with modality. This is why the boundaries between modality and tonality can be blurred in this music, and it is difficult to describe a piece as being in either a mode or a key. In the 'Miserere', which is in F minor for the majority of its length, both E flats and E naturals are found. This means that it is theoretically possible to talk of the aoelian mode and F minor, but the former cannot really exist in the context of the arpeggio of F minor.

It will be found that the early tintinnabuli works have a tendency to use rigorous systematic organisation for nearly every component of the music (structure, instrumentation etc). The most direct antecedent that these works have from the serial

[2] Hillier. op. cit p. 93

period is 'Perpetuum Mobile'. However, the logical processes of the symphonies (*without* always going as far as numerical organisation) also have a place in the tintinnabuli works. Systems have limitations (as Pärt himself acknowledges: 'It's better when they're under control.'[3]), as the deviations that are found, always for good musical or textual reasons, testify. The later tintinnabuli works in particular are logical in the way that they have been composed without going as far as numerical exactitude. The symphonies, then, are more direct antecedents to these works.

Analysis of 'Cantus in memoriam Benjamin Britten'

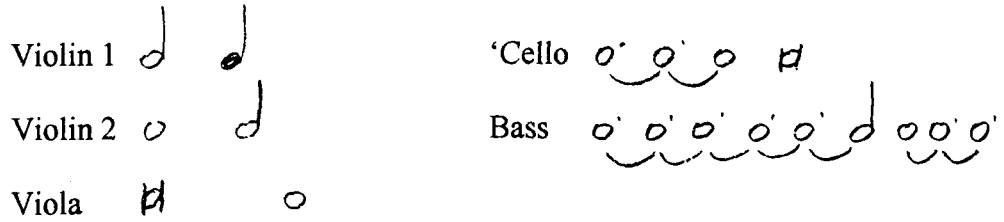
The 'Cantus' is an early work of Pärt's tintinnabuli style (1980), although not the first, but it is an ideal work with which to present the workings of the style. Only one other element is evident in it, which has also often proved to be an important feature of the style: the canon. Canons are also found at the outset and conclusion of the 'Stabat Mater' and in 'Festina Lente' for string orchestra. Coincidentally, the scoring includes a bell in addition to the string orchestra. Others of Pärt's works do (for example the 'Miserere' and 'Litany'), but not in such a clear way as here. It begins the work with three notes, and since it is a bell tuned to the tonality/modality of the piece (A), it is possible to hear exactly the comparison of the music with the sound of the bell.

The reproduction of the first page of the score (example 47) illustrates the canonic nature of the piece, and also the fact that it is not just canonic in terms of melody but is a mensuration canon also. This is one where time values are involved in the canonic process (this also happens in 'Festina Lente'). It will be seen that the violins, violas and 'cellos use the same melodic material. This is simply the

[3] Jamie McCarthy. An interview with Arvo Pärt Musical Times 130 March 1989 p. 130-134

although every instrumental section starts on an A and the E below, with that lower voice being the arpeggiating part.

As in a non-mensuration canon, the parts start at different times, although in a mensuration canon it is possible for all parts to begin together without losing the effect. This is done in 'Festina Lente'. Every part progresses at a different speed, the first violins being fastest and the 'cellos being slowest. The first medieval rhythmic mode is used:



The lower basses play a single note for much of the piece (E), except of Cs on two occasions. Only at the end does it descend to an A. By the end every instrument has come to rest on a note of the arpeggio of A minor (first violins on middle C and the other instruments on notes successively lower). As one would expect, the slowest moving instruments are the last to settle on their finishing notes.

The instruments are divided into two parts (except for the violas). This is to allow the upper part to play the scale material and the lower to play the arpeggios. For the violas and higher double basses, there is no arpeggio part partnering the scales. The discords mentioned above clearly occur between the two parts. Example 47 shows that the first intervals in the first violins are a fourth and a third, but two bars after one there is a minor second between E and F. The layering of the differently paced moving parts causes discords between the different instrumental groups also. All instruments except viola are *divisi* in two, and sometimes further, to make at least

All instruments except viola are *divisi* in two, and sometimes further, to make at least nine parts. An F in any of these parts is always going cause a minor second in relation to the lower basses, for example, except on the few occasions that they play another note. The bell plays periodically throughout the piece, also using the trochaic metre of the strings, but at a different, much slower speed.

This method of composition is the basis for all of Pärt's works from the mid 1970s. It will be seen that used by a composer of Pärt's stature (and it will be remembered that he was already well thought of as a composer before inventing the tintinnabuli style, even if not beyond the Soviet Union) that it can be used in many ways, to different effect. It is possible to build large scale structures as well as small ones, and despite its reliance on one key area or mode, need not sound polarised. This can happen, perhaps most noticeably in the 'Stabat Mater' (analysed in the next section), which is a 25 minute work exclusively in the aoelian mode. The composer has not even taken advantage of the interludes (or 'ritornellos' as they are described) to change the key area. This lack of tonal differentiation, which would otherwise provide points of reference may have been a conscious choice on the part of the composer, wanting perhaps to recreate musically the highly charged nature of the text, but to some listeners this may not work.

The principle additional feature used with the tintinnabuli style, particularly in the early works written in the style, is the use of systems to determine structure and other aspects of the work. This will be seen time and again in the analyses of the 'Passio' and 'Stabat Mater', and is the principle link between the early and later styles

of Pärt. The systems are often drawn from serial procedures, but even those that are not owe their logic to such procedures.

A description of how the style works musically is not the whole issue in an explanation of it. It should not be forgotten that the style came about after a study of early music (Medieval, Renaissance and probably Baroque if the evidence of the third symphony is anything to go by), and needs to be regarded as a result of this study. The third symphony was the immediate reaction to the study, but the tintinnabuli style is a more considered reaction, and what needs to be discussed is what the relationships are. This, however, will be done after the rest of the analyses, so that the reader is aware of how the method works in different pieces of music.

'Passio'

'Passio' was written in 1982, and is Pärt's most extended work to date. It is a setting of St. John's Gospel (chapter 18, verses 1 to 40 and chapter 19, verses 1 to 30), and is scored for SATB soloists and chorus, with tenor and bass soloists for Judas and Jesus respectively, with organ, violin, 'cello, oboe and bassoon. This work is a 'tour de force' of systematic construction, with every aspect of the work being controlled by systems, which however are always employed to be at the service of the musical effect.

The entire work is framed by passages for chorus and organ. A rich texture, which contrasts with the sparer sounds of most of the rest of the work, is created by dividing the voice parts into six (for the beginning) and eight parts (at the end). The organ doubles the voices (contributing very much to the richness of the texture), and also adds powerful bass lines: a pedal E throughout the initial passage and a descending bass line at the end. These passages have a dramatic purpose, which is not unsuited to the dramatic nature of a passion setting: the first is introductory ('The Passion of our Lord Jesus Christ according to St. John'). The second is a prayer: 'You who have suffered for us, have mercy upon us. Amen'. This text is not from St. John's Gospel, but is an appropriate one for a concluding flourish. The passages are also dramatic in that they stand apart from the rest of the work in the combination of their richness of texture, slow tempo and harmonic peculiarities. The first sounds harmonically unstable because the bass note (E) means that the passage is based on the chord of the second inversion of A minor. The second is a resolution from A minor to D major; a perfect cadence of sorts, which the listener waits for over an hour for. The

passage immediately preceding this passage is sung on unison A's, which makes the progression sound particularly convincing, as well as being appropriate for the text.

In the introduction (example 48), the sopranos and tenors descend the notes of the arpeggio of A minor. The altos (starting on A) and basses (starting on C) descend by step using the notes of the aoelian mode, which is the mode that is used for the most part of this work. The combination of scale and arpeggio causes discords within a narrow range, which are partly responsible for the rich texture (along with the presence of the organ). In the epilogue (example 49), the upper parts of each voice sing the arpeggio of D major, whilst the lower parts ascend by step. The organ doubles this, and in the pedals adds a descending scale of D major. The combination of scale and arpeggio, and also contrary motion scales (ascending in the voices and descending in the organ pedals) cause discords, but these are relentlessly resolved because of the irresistable magnetism that the major key gives after so long in the minor (particularly after the V-I cadence). The resolution is not according to conventional harmony, but according to the rules of Pärt's 'tintinnabuli' system of composition.

The 'Passio' is not in the same tradition of passion music as Bach's passions. Bach's passions, as well as containing the text from the gospels concerned, include chorales for congregational participation, and arias reflecting the feelings and situations of the protagonists. Both of these use text not from the gospels. Pärt's 'Passio' has neither chorales nor arias; it is a setting of just text from the gospel. However, the dramatic nature of a passion setting has already been mentioned in connection with the 'Passio', and it is retained from Bach's model. There is a chorus to declaim the utterances of the crowd, and separate soloists for the parts of Jesus and

Pilate. Jesus is a bass, but unlike Bach Pärt has Pilate as a tenor. (It has been suggested that Pärt intended to express the two characters' social gulf in this way.) Most originally, the part of the Evangelist has been set for four solo SATB voices. This is a musically sensible decision, since without chorales and arias, the evangelist becomes by far the most prominent character, and with four voices the texture can be and is constantly changing, along with the accompanying instrumental quartet. Pärt's setting of the passion is generically most like the earliest Lutheran responsorial passion as composed by Johannes Walter, where Jesus, Pilate and the evangelist are sung by separate soloists and the crowd's interjections ('turbae') are sung by a chorus. There are no chorales or arias. The soloists use the liturgical passion tone and the 'turbae' are set to simple polyphony. Pärt retains differentiation such as this to characterise the different protagonists, and to keep the dramatic element of the genre.

The text is set in the same way throughout, regardless of which character is delivering text, and the method has been seen before in the 'Stabat Mater'. A word either begins on the same note and deviates away from it by step, or ends on this note (referred to here as the principal note), approaching it by step. Where there is more than one voice, the melody line may be heard in inversion. These methods are alternated with successive phrases, and the principal note can vary with each character, as part of that its characterisation. In the case of the evangelist quartet and the chorus, the soprano and tenor arpeggiate and the alto and bass carry the melodic lines. This is never varied.

The characterisation of each protagonist is achieved by differentiation of certain elements of Pärt's 'tintinnabuli' method, which is used throughout the work.

Although certain characters might share one element, another element will differentiate them. The table below shows how this is done.

Character	**Principal Note**	**Arpeggiating Voice/Mode of Melody Voice**	**Accompanying Instruments**	**Duration (usual unit of movement)**
Evangelist (Example 50)	A	A minor/ Aoelian	Orchestral instruments	Crotchet
Chorus (Example 51)	B	E major/ Phrygian	Unaccomp./ organ	Minim
Jesus (Example 52)	E	A minor/ Phrygian	Organ	Dotted minim
Pilate (Example 53)	B	F major/ Lydian	Organ	Minim

The key of the arpeggiating voice does not necessarily indicate that this is the key of the music that that particular character sings; the evangelists actually sing in the aoelian mode, because there is no G sharp present. Pilate similarly sings in the lydian mode, since there are no B flats.

The use of different arpeggiating triads and principal notes make for very individual musical sound worlds for each protagonist. The evangelists are of course differentiated from the other protagonists since they alone have the accompaniment of the instrumental quartet. However they have in common with Jesus that the

arpeggiating voice is in A minor. It is the fact that Jesus' principal note is E and the mode of the stepwise voice is the phrygian mode, and there is a drone of E and B present in the organ that provides the differentiation. The drone is almost always present, except sometimes in pauses (it can be seen in example 52). It invariably produces tension since the B is discordant with both A and C of the arpeggiating line, and F which sometimes appears in the melodic line creates a discord with the E of the drone. There is more tension between A minor and the phrygian mode because the note E always begins or ends phrases. Although this note is the final of the phrygian mode it is also the fifth degree of A minor and the aoelian mode, and therefore perhaps gives the slight impression of a lack of cadencing. This is possibly intended to express the impossibility and unavoidable conclusion of Jesus' situation in the passion story.

A very individual effect in the music of the chorus is caused by the juxtaposition of G sharps (from the arpeggio of E major) and G naturals of the phrygian mode, creating a false relation (very resonant with the mediaeval music which was the overriding inspiration for the 'tintinnabuli' style). It is particularly effective for the often abrasive nature of the chorus's interjections eg 'We have a law, and by our law he ought to die, because he made himself the Son of God.' Even shorter contributions such as 'Not this man, but Barabbas' benefit from this device, as do particularly unfortunate parts of the narrative such as where Peter denies Jesus. For the most part the chorus is unaccompanied, but for particularly telling passages it is accompanied by the organ. The first is the second declamation 'Jesum Nazarenum' after Jesus has repeated his question to the officers with Judas 'Whom seek ye?'. The second occurrence is where the chorus asks Peter if he is one of Jesus' disciples, and

Peter then denies Jesus for the second time (again this occurs at a repetition). The third occurrence is where the crowd shout 'Crucifige, crucifige eum!' (example 54). The final occurrence is the lengthy passage where the crowd tells Pilate to write not 'The King of the Jews', but "He said that he was the King of the Jews.'

The individuality of Pilate's music is that the arpeggiated triad of F major is more remote to A minor (or the aoelian mode) than the other used, that of E major. This makes Pilate seem remote from Jesus, which is apt given the unfortunate part the former plays in the story. So is the emphasis of the tritone (*'diabilis in musica'*) between the principal note B and the F of the Lydian mode, a feature characteristic only of Pilate, the 'devil' in this story. These observations relate to the remark made about the characters' *tessituras* and their social gulf made earlier.

It has been mentioned that the part of the evangelist in 'Passio' is set for four solo voices. The way in which these are combined is controlled by a system. The basic pattern is that the number of voices singing at any one time increases from one to four, and then decreases back to one. This happens four times during the course of the work (though the last few lines are set for four voices after this pattern has been completed). The sections that are set for all four voices and for one voice alone tend to be particularly dramatic ones. The sections sung by four voices are:

(i) where Jesus twice asks the crowd 'Whom seek ye?', and where the servant Malchus' ear is cut off by Simon Peter;

(ii) where Jesus answers when asked about his doctrine by the high priest and is struck by one of the officers, and then a little later Peter denies Jesus;

(iii) where Jesus has the crown of thorns put on him, mocked ('Hail, King of the Jews'), and the crowd exhort Pilate to crucify him for the first time; and

(iv) where Pilate writes the title 'Jesus of Nazareth the King of the Jews' and puts it on the cross, and then declines to change it to 'He said, I am the King of the Jews', and where the soldiers divide Jesus' clothes amongst them, and cast lots to decide who should have his coat.

(v) Finally, as said, the four voices sing unaccompanied for the last lines of the drama, where we learn that all things were now accomplished', and Jesus drinks the vinegar offered to him. The last line 'And he bowed his head, and gave up the ghost' is sung in unison on a monotone A, an incredibly dramatic device at the end of such a monumental work (and story).

The parts of the text that are narrated by just one voice of the evangelist quartet are as follows:

(i) where Caiaphas counsels the Jews that 'one man should die for the people';

(ii) Pilate's cross-examination of Jesus in the judgement hall (in private away from the crowd);

(iii) where the crowd exhort Pilate to crucify Jesus for the second time, despite his efforts to persuade them otherwise ('Shall I crucify your King?'); and

(iv) where Jesus indicates that one of the disciples (it is not made clear in the text which) is to take the responsibility of looking after his mother ('Woman, behold thy son!' and 'Behold thy mother!').

The use of just one of, and all four of the evangelist voices for various parts of the drama have been carefully chosen for the different dramatic effects that these have. The use of just one voice has been reserved for more intimate parts of the drama (numbers (ii) and (iv) of the list above), or where pathos is particularly evident. Examples of this are where Caiaphas' words that effectively seal Jesus' fate (by saying that someone has to die), and where Pilate is singlehandedly and vainly trying to persuade the Jews not to have Jesus crucified. The choice of voices is also telling. After the texture has thinned to one voice for the first time since the beginning, when it becomes known what death Jesus is to die by, the voice is a bass. However, before Pilate's cross-examination of Jesus immediately following the evangelist's voice changes to a tenor. This arguably reflects better than a bass voice would the pathos of that exchange. The system controlling the groupings of the evangelist quartet calls for a change of solo voice here (see below), but it is surely no accident that Pärt has found such an appropriate place for it. Where the crowd is crying for Jesus to be crucified, the lone voice is an alto (a particularly moving choice for this passage), and when Jesus unites one of the disciples with his mother, the voice is a tenor, again perhaps a good, moving choice for this passage.

The use of all four voices has been reserved for parts of the text that have more violent and forthright actions (the crown of thorns and Pilate's title on the cross, for example), and, generally, the more public scenes. The exception is the last lines of

the story; the effect given here is that the drama has essentially finished (the text: 'knowing that all things were now accomplished'). All four voices can now narrate the last details of the story (the drinking of the vinegar and Jesus' death), in a wholly neutral and detached way that is not unsuited to the end of such a shattering story.

Other parts of the drama have been highlighted by the grouping of the evangelist's voices, and the changes. For example, where Jesus is arguing with Pilate, saying that 'Thou couldst have no power at all against me', and sometimes not answering him, the rising tension is reflected by an increase from two to three voices when he refuses to answer. Similarly, where the crowd decide to release Barabbas rather than Jesus, the voices at that point are the tenor and bass – a low *tessitura* is appropriate at that point. Where, after this, the crown of thorn is plaited, a third voice is added, and a fourth joins where the crown is placed on Jesus' head, four phrases later.

The manner in which the voices of the evangelist quartet is varied in a characteristically logical manner.

(i)	B	SAT	SA	ATB
	TB	SA	SAT	TB
	ATB	S	SATB	B
	SATB			

(ii)	T	SAB	SA	STB
	TB	SA	SAT	TB
	STB	A	SATB	T
	SATB			SATB

In the first half of the work (i) the number of voices singing increases by adding voices upwards from bass to soprano, and then gradually dropping out the lower voices until just the soprano is singing. Then voices are added downwards, and then dropped out again from the top, until just the bass is singing again. At this point, the tenor takes over from the bass as the only voice singing (already commented on above), preparing the way for the same procedure to take place in the second half of the work (ii), but with voices being added and subtracted in a different order: tenor, bass, soprano and alto. This makes some of the textures different from the first part of the work (STB instead of ATB, for example). It also ensures that all voices sing alone at some point.

A further device in the evangelist quartet that Pärt uses for articulating dramatic points in the story is of having a pedal A, which is held even in breaks between the phrases in the bass or alto. This only ever happens when the whole quartet is singing. The first instance is where the text tells that Judas betrayed Jesus (where the voice is an alto – example 55), and where the band of men whom Judas is with fall back when Jesus says 'I am He' (bass). The next is the third betrayal of Jesus by Peter (alto singing the A when the question is asked, and bass where the cock crows). The third occasion (bass) is when Pilate becomes afraid when the crowd insists that Jesus should die, despite the fact that Pilate can find no fault with him. The final occasion

concerns the title put by Pilate on the cross. It is drawing attention to the significance of the fact that Jesus was crucified close to the city (bass), and that the title is written in Latin (as well as Hebrew and Greek), which was the vernacular tongue of the time (alto). The significance is that many people will have read and understood the title.

Durations play an important part in the word setting. Whilst all of the protagonists have a basic unit of movement, other duration are also used. These are as shown below:

Character	**Main duration**	**Other Durations**
Evangelist	Crotchet	Minim, semibreve
Chorus	Minim	Dotted minim, dotted semibreve
Jesus	Dotted minim	Semibreve, breve
Pilate	Minim	Dotted minim, dotted semibreve

The shorter of the 'other durations' always start a sentence, and are also found in the last word of a phrase, on the syllable that is stressed in speech of the textual phrase. The longer of the 'other durations' is found at the end of a sentence, on every syllable, and this is particularly effective when a word has a lot of syllables, such as 'pontificis', or particularly, 'crucifigeretur', sung by the alto evangelist, ascending six notes in semibreves to F``. It forces a listener to reflect on the text (it is likely that a listener will have enough knowledge of Latin to be aware of what stage the narrative

has reached) and the distinctive nature of the sound world (in terms of timbre and tonality/modality).

The evangelist quartet is accompanied by an instrumental quartet, allowing for more variation of timbres. After two unaccompanied phrases, the instruments join one by one, every two phrases (in alternate order of the instrument family ie string, woodwind, string, woodwind or vice versa). When a voice is added to the texture, all instruments already playing drop out, and then are gradually added again in the same way. Only when all the voices are singing do all the instruments play together, for four phrases. Then the instruments gradually drop out (again in alternate instrument family order) every two phrases. After this, instead of gradually adding the instruments, they play alone with the voices in turn to give further variety to the texture, for two phrases, with two unaccompanied phrases between each. This occurs as the voices are being subtracted from the texture, with every instrumental solo. It happens four times during the work, and the instruments concerned are:

(i) Bassoon, 'cello, oboe

(ii) Oboe, violin, bassoon

(iii) Bassoon, 'cello, oboe

(iv) Oboe, violin, bassoon

It will be seen that the woodwind instruments are favoured here (two in every instance); again perhaps Pärt felt that the nature of the story suggests the distinctive timbres of the double reed instruments be favoured. Again the instrument families are always alternated.

At the end of every sentence sung by the evangelists, there is an instrumental 'echo' of the notes sung to the last word of the sentence (example 50). The word echo is in parentheses because there are differences in the musical content: the note values are half of those that they are echoing in the voice parts, and the instrument echoing the melody line does so in inversion, where this is apparent. It will not be if there are two melody lines in the voices. One of these will be the inversion of the other, and both will be echoed by the instruments; there are always the same number of instruments echoing as there are voices. The only exception to that rule are the final passages where the voices are unaccompanied but all four instruments echo (figures 168-172).

The way in which the instruments are grouped for this echoing depends very much on the instruments playing with the voices. If three instruments are to play at any one time, then the otherwise unused one will provide the echo. For example, between figures 38 and 41, where the violin, 'cello and bassoon are eventually to play together, the oboe provides the echoes. There are however times, such as when all the voices are singing together, that instruments have to accompany voices and provide the echoes as well.

The organ accompaniments of Jesus and Pilate are controlled as follows. In the case of Jesus there are four textures, differing mainly in terms of register, which are used in turn, including carrying the ordering forward through between different passages. All are found in example 52, found on page 12. This table covers the first nine contributions of Jesus only; the pattern continues like this.

Page number of Jesus' passages	Order of textures
8	A
9	B
11	C
12	DABC
16	DABC
27	DABCDABCD
31	ABCDAB
44	CD
46-47	ABCD

For the accompaniment of Pilate, there are three organ textures which are varied according to a pattern, which is:

(i) two parts on organ manuals

(ii) three parts using manuals and pedals

(i) again

(iii) one part on a manual.

All are found in example 53. This pattern is broken twice, at telling moments, where (iii) is replaced. The first time this happens, at figure 108, (iii) is replaced by (i), and the text is 'Behold the man!', where Jesus is presented to the crowd wearing the crown of thorns. The second time, (iii) is replaced by (ii) at figure 131, and the text, similarly, is 'Behold your King!', shortly before Jesus is led away to be crucified.

As with the evangelist quartet, echoes occur in Jesus' and Pilate's solos, played by the organ at the end of sentences, also in halved note values. They do not occur at the end of their contributions, however, to keep the flow of the music alive. With one exception the echoes are in two parts, and for Jesus sometimes juxtaposed with the drone. The exception is Jesus' first echo which is a single line in the pedals. The stolid nature of the response 'I am He' is perhaps the reason for this. The abandonment of the metric scheme in Jesus' cry 'It is finished' is probably for a similar reason (example 56).

For Pilate, echoes are less frequent: there are only three, and as might be expected they highlight key parts of the drama. At figure 82, it is where Pilate asks of Jesus if he is the King of the Jews, only because he does not understand why Jesus has been brought to him. He is making clear that he is not a Jew and has not been saying this about Jesus: 'Am I a Jew?'. At figure 93, it is where Pilate says that he finds no fault in Jesus, and at figure 122, it is where Pilate is becomes exasperated when Jesus refuses to answer him (shortly before Jesus is taken to be crucified): 'Speakest thou not unto me?'.

The 'Passio' is a monumental work, and is probably the masterpiece of the earlier tintinnabuli works. It is certainly the most extended, and its construction in terms of musical systems is beyond reproach aesthetically, both in terms of the extent of their effect on the music and the way in which they are occasionally broken to make a particular point in the text. They are used extensively also in the next work to be analysed, the 'Stabat Mater'.

There is something about Pärt's tintinnabuli music which sometimes prompts the word 'minimalism' to be used in relation to Pärt's music. The 'Passio' is an archetypical tintinnabuli work in terms of its sound world, systematic construction and other features of this music, so it is worth considering with reference to it whether this is an appropriate label. There is controversy as to whether this is an appropriate label. It is associated principally with such composers as Terry Riley, Philip Glass and Steve Reich, and in association with such composers conjures up music with an almost mechanical nature. Repetition is often the main constructional feature of this music, with occasional gradual changes occurring so that the music evolves from its initial guise to something rather different by the end of a piece or movement. In terms of this description it must be questioned whether minimalism is the right label for Pärt's music, since repetition is by no means a major feature of it. The use of the label is perhaps rather suggested by the apparent simplicity of the music – one common element which it appears to have with the American-based music described above. Yet it has been seen in the above analysis that the music is not simple; rather it is constructed using many tightly organised systems, which are such a great feature of the early tintinnabuli works. In this respect, then, the label 'minimalism' is not appropriate. But is there still some reason for its use, even if inaccurate?

The music appears simple because it is very economical in the elements apparent to a listener (ie not necessarily the constructional systems), rather than because it is simple in construction. These elements are the harmony and sound world. The number of discords that make the music so expressive are in fact quite limited (mainly major and minor seconds and sevenths), although they are used in many

disposition and in conjunction with other intervals. It is the fact that these discords are so expressive and constantly return that makes the music successful, as well as Pärt's gift for making timbre a striking feature of his works. He does this by generally keeping the range of timbres used limited (to strings, double-reed instruments, organ and voices in the 'Passio'), making for very concentrated sound worlds.

The concentrated nature of the music, produced by the sound worlds and the discords which are constantly returning, perhaps does prompt the label 'minimalist' for a good reason. Something that is striking, as these features are, will endure and hold interest through long periods of time, as many of Pärt's works prove. However, these are different reasons to that of the music of Terry Riley *et al.*, which hold interest because of gradually changing patterns, and therefore another label would probably be safer as a description for Pärt's music.

Stabat Mater

The 'Stabat Mater' was the third of the large sacred choral works. It was written in 1985, and is scored for soprano, alto, and tenor with violin, viola and 'cello, the string instruments being the counterparts in the string family (the upper three) to the voices.

The form shows the same concern for proportion as the other music in Pärt's tintinnabuli style. Its organisation is dictated mainly by the text, in terms of the stanzas, which are clearly discernible. To provide contrast of speed, timbre and the method of setting the words to music used here, the four sections of the work (two of four stanzas and two of six) are interspersed by music for strings alone. These interspersions are of the same character each time, and have thus been labelled as ritornellos. An introduction (for strings alone) and a tailpiece (for voices and strings) frame the work. The material for these parts is the same. The form is thus symmetrical, with just three different types of material:

Introduction	Strings
Four stanzas	Tutti
Ritornello	Strings
Six stanzas	Tutti
Ritornello	Strings
Six stanzas	Tutti
Ritornello	Strings
Four stanzas	Tutti
Tailpiece	Strings

Other aspects of the work show the same concern for numerical proportion as its form, or alternatively other systems are used, such as that for the organisation of the use of voices and instruments, described below.

The word setting is generally neutral (ie no attempt is made to reflect any particular parts or events of the text). This is appropriate given the reflective nature of the text. However, some of the systems have been engineered such that the climax of the work is clearly discernible by the material it uses (the highest pitches and dynamic of all of the stanzas, and the fullest texture).

The introduction consists of a slow canon, played four times. The fourth statement is shown in example 57. It uses the notes of the aoelian mode, descending by step. The first three statements are played by the strings alone and the fourth by strings and voices. The function of the canon is to establish the prevailing tempo and tonality/modality of the work. The measured nature of the tempo in particular, together with the uniform timbre of the string instruments, creates a concentrated, contemplative atmosphere. This is intensified by the addition of voices in the final statement, which are a new, also quite uniform set of timbres, and which also cause the texture to be thickened and become more dissonant because the strings now play the notes of the arpeggio (example 58).

The canon is organised metrically by having long notes of varying duration sometimes preceded by shorter notes, making up short phrases. The durations of the long notes are shown in the matrix below (and the figure includes the duration of rests following these notes), and the number of shorter notes preceding these notes are shown in brackets, and are the same for every part.

Violin	5	(1)	8	(2)	10	(2)	11	(1)	8 [4]
Viola	6		9		1		9		6 [5]
'Cello	8		1		10		8		5 [4]

The above matrix of note and rest durations is diagonally symmetrical, except for the final figures, which is why they are in square brackets. The durations of these notes are different so that the total durations of all the lines are the same. The numbers of notes preceding the longer notes is also symmetrical (1, 2, 2, 1). Symmetry has obviously been found before in Pärt's output, in the serial music.

Each of the three parts begins on a different note of the arpeggio of A minor, on a long note. The subsequent shorter notes begin on this same note, and then descend by step until the longer note is reached, so that the longer notes descend by step initially. When there have been two shorter notes preceding the longer note, the next lowest note of the arpeggio becomes the starting note of the phrase. Then the longer notes ascend by step as the number of preceding notes decrease. For each new statement of the canon the instruments (or voices where appropriate) begin two notes of the arpeggio lower than the previous section. The shorter notes establish the trochaic meter of the poem, being of one or two minim beats.

The work concludes with the same material in six sections. The strings play the canon for all of these, and are joined by each voice in turn using the notes of the arpeggio in three of the sections.

The meter of the poem is trochaic, and for most of the work this is retained in both voices and strings, but sometimes it is varied, usually in the strings, so that there are attacks on the first and second (), or the second and third () beats. For

the most part these alternative permutations are limited to the strings, to keep the meter of the text intact (see example 58). The latter occurs in both voices and strings (though only in arpeggiating lines, keeping the meter of the melodic lines intact). The latter is limited to the strings, except in one vocal echo (in the third stanza of the third section).

At its fullest, the texture of the music associated with the text consists of one melodic line and two arpeggiating voices, in both voices and strings. The melodic line of the string melody will be the inversion of that for the vocal melody. More usually the texture is thinner than this (perhaps three or four voices and instruments altogether). Example 58 shows a typical stanza. Because of the way the forces are selectively used, an instrument will not necessarily play a melodic line when a voice is (or vice versa). Sometimes there will be no melodic line at all, as in the first and last phrases of the fourth stanza, where there is just an arpeggiating line sung by the tenor.

The work uses the scale of the aoelian mode throughout, and the pitch organisation of the melodic lines is entirely dependent on this mode. There are two methods of pitch organisation. The first is to have the first syllable of every word beginning on the same note, which will be called the 'principal note', and then successive syllables are set alternately to a rising or falling scale from the principal note. The second method is the reverse of the first: the final syllable of the word is sung to the principal note, and the preceding syllables approach this note by means of a rising or falling scale (this is the process in example 58). The principal note is not the same for every stanza, but is always the same within the stanza.

There is a system to determine which of the two methods is to be used, shown

in the table below. The first method is X, and the second is Y.

XXXX YYYYYY XY YX XY YX XY YX XY XY XY XY

The first two groups of stanzas use one method each; the third and fourth use both. In the third the order is alternated; in the fourth method X is used first in every stanza, probably to enable all the stanzas to finish on their respective principal notes. This is an appropriate thing to do since the end of the work is approaching and these notes are all part of the A minor arpeggio.

The notes of the arpeggio are used as the 'principal notes' mentioned above. The following table shows the arrangement of the principal notes.

A'A'A'A' C'A'ECCC' EC'A'E'E'E A"E'C'A'

Pärt clearly intends that alternating notes of the arpeggio will be the predominant principal note in each group. However, he avoids too simplistic a design, and the overuse of any one note in this role, by using the other notes once in all except for the first stanza. The principal note in the first stanza is A throughout presumably to establish strongly the aoelian mode. The register of the notes is shown above, but is not important except in the final section where the principal notes descend the arpeggio with each stanza. The principal note of the first of these stanzas is the highest of the work, helping to make (with the *fortissimo* dynamic and the full texture) this stanza the climax of the work, with the soprano having to sing a top C (C").

The texture is made up throughout of varying combinations of voices and instruments. The arrangement is along the lines of having one or more voices and/or instruments singing or playing throughout a stanza, and then these voices being joined for one or more phrase by other voices and/ or instruments. For example, the second

stanza has its forces arranged as below. Each column represents a phrase of the music, and each line the voice or instrument involved.

Alto Alto Alto

Vln

Vla

Vlc Vlc

This shows that the alto sings all three phrases of the stanza, and is joined by the second phrase by the violin. Following the text there are two further instrumental phrases, the first of which is played by the viola and 'cello, and the second by 'cello alone. Instrumental phrases like this can be found at the end of nearly every stanza; the melodic lines of these repeat in inversion the melody of the preceding vocal melodic line. These phrases are intended to make for variety of timbre. On only two occasions are these echoes sung by the voices; this occurs in the third stanzas of the middle groups of stanzas. This also results in textural contrast, quite marked since the echoes are usually instrumental.

A table showing the instrumentation for the whole work is given on the following page. There is a discernible system in the way that different groupings of forces are employed throughout the work. Different groups of stanzas are linked as below:

Section 1	*	1	1	1		
Section 2	2	2	2	1	1	1
Section 3	2	2	2	1	1	1
Section 4	2	2	2	*		

Organisation of Voices and Strings in 'Stabat Mater'

	7	8	9	10
Soprano	Sop Sop Sop		Sop	
Alto	Alt Alt Alt	Alt Alt Alt	Alt Alt Alt	Alt
Tenor	Ten Ten Ten		Ten Ten Ten	Ten Ten Ten
Violin	Vln Vln Vln	Vln	Vln Vln	
Viola	Vla Vla Vla	Vla	Vla	
'Cello	Vlc Vlc Vlc	Vlc Vlc		

	12	13	14
Sop	Sop Sop Sop	Sop	Sop
Alt		Alt Alt Alt	Alt Alt Alt Alt
Ten	Ten	Ten Ten Ten	Ten Ten
Vln		Vln Vln Vln Vln	
Vla	Vla Vla Vla		
Vlc			Vlc Vlc Vlc

	15	16	17
Sop		Sop Sop Sop	Sop Sop Sop
Alt	Alt		
Ten	Ten Ten Ten	Ten Ten Ten	Ten
Vln	Vln	Vln	
Vla	Vla Vla		
Vlc	Vlc	Vlc Vlc	

	19	20	21
Sop	Sop	Sop Sop Sop	Sop Sop Sop Sop
Alt		Alt Alt Alt	Alt Alt Alt Alt
Ten	Ten Ten Ten	Ten	Ten
Vln	Vln Vln Vln		Vln Vln Vln
Vla	Vla Vla Vla	Vla Vla Vla Vla	Vla Vla Vla
Vlc		Vlc Vlc Vlc Vlc	

	22	23	24
Sop	Sop Sop Sop	Sop Sop Sop	Sop
Alt	Alt		Alt Alt Alt
Ten		Ten Ten Ten	
Vln	Vln Vln	Vln	
Vla	Vla	Vla	
Vlc	Vlc	Vlc	

	26	27	28	29
Sop	Sop Sop Sop	Sop Sop Sop	Sop Sop Sop Sop Sop	Sop
Alt		Alt Alt Alt	Alt Alt Alt	Alt Alt Alt
Ten	Ten		Ten	Ten Ten Ten
Vln	Vln Vln Vln	Vln Vln Vln Vln	Vln Vln Vln	
Vla	Vla Vla Vla	Vla Vla Vla Vla	Vla Vla Vla	
Vlc	Vlc Vlc Vlc	Vlc Vlc Vlc Vlc	Vlc Vlc Vlc	

Thus the last three stanzas of the first three sections are linked (1), as are the first three stanzas of the second, third and fourth sections (2). The very first and last stanzas (*) stand apart. The method of linking is described below.

Taking the stanzas labelled 2, the arrangement in the third section is a mirror image of that of the second section, with the alto as the axis:

1st section	Sop	Sop	Sop			Sop	
				Alto	Alto	Alto	
		Ten			Ten	Ten	Ten
2nd section		Sop			Sop	Sop	Sop
				Alto	Alto	Alto	
	Ten	Ten	Ten			Ten	

For the third stanzas in these sections, the arrangement is not quite symmetrical:

1st section				Sop	
	Alto	Alto	Alto		
			Ten	Ten	
2nd section		Sop		Sop	
	Alto	Alto	Alto		
				Ten	

In order for the arrangement to be completely symmetrical, the soprano would have sung in the third phrase, not the second, of the second section.

The arrangement of voices in the first three stanzas of the final section is thus:

Sop	Sop	Sop		Sop	Sop	Sop			Sop	Sop	Sop
				Alto	Alto	Alto		Alto	Alto		Alto
	Ten										Ten

The first stanza is the same as that of the second section of the work. The second has two voices singing throughout, as do the second stanzas in the second and third sections, though these have an added voice. The third stanza has the vocal echo which has occurred before, and the addition of one voice for one phrase, though unlike the corresponding stanzas in the second and third sections the added voice (Sop) continues singing and the original voice (Alto) stops for that phrase. The reason for this is that the melodic line, as dictated by the system for pitch organisation, is too high for altos to sing.

The instrumental accompaniment increases in each section for the stanzas marked 'B'. In the second section, the first three stanzas are accompanied by only one instrument, which is different for each stanza. In the third stanza the accompaniment is for two instruments, a different pair for each stanza. For the fourth section all the instruments accompany all the stanzas.

For the second half of the second and third sections of stanzas, the arrangement of voices is again symmetrical. The use of instruments is more intermittent, though still systematic. The fourth and fifth stanzas have one instrument added for a phrase (the second and third respectively). After the fourth stanzas there is an echo of two phrases, the first for two instruments, the second for one. After the fifth stanzas, there is only one echo, for two instruments. The last stanzas are unaccompanied, appropriately for the text.

In the first section, the last two stanzas use the same numbers of voices as those of the second and third stanzas. The second stanza of the first section only different from its counterpart fourth stanza in the second and third sections in that there is no added voice for the second phrase.

The very first and last stanzas stand apart from the overall scheme. The reason for this is musical and dramatic. The initial entry is with all voices and instruments, in order to provide a rich, imposing beginning to the setting of the text. The last stanza is for unaccompanied voices, very quietly, providing an appropriate setting for the text of this stanza. It is also an effective contrast to the very solid texture of the three preceding stanzas, which underlines their excitement, and the contrast to that excitement to the simple request of the last stanza.

The arrangements of where the melodic and arpeggiating lines occur is not organised as clearly as is the arrangement of the voices and instruments, though the arrangement is based on the table on page 100.

The clearest relationships are found in the stanzas labelled 'Arp' below. The system in the first of these stanzas in each section is that the first two are inversionally linked, and the third is similar but with a varied disposition of the types of phrases:

1st section: three melodic phrases (Alto) and one arpeggiating phrase (Vln)

Mel Mel Mel

Arp

2nd section: one melodic phrase (Alto), three arpeggiating phrases (Ten) and an extra arpeggiating phrase (Vlc)

Mel

Arp Arp Arp

Arp

3rd section: one melodic phrase and three arpeggiating phrases again, arranged differently, with an extra arpeggiating phrase (Vla)

Arp Mel Arp

Arp

Arp

In the second of these stanzas, there are three arpeggiating and three melodic phrases every time, and one arpeggiated phrase for an instrument in the third phrase.

In the third of the stanzas the arrangement of melodic and arpeggiating voices is reversed almost exactly from that of the first section:

Mel Mel Mel Mel Mel

Arp Arp Arp Arp Mel Arp

Mel

The aim of the instrumental ritornelli is to create a feeling of variation in terms of tempo, rhythm, meter and texture (no voices) in the work. They are similar to each other in their construction, however. They consist of several small cells, repeated in a fairly complicatedly arranged pattern. It is complicated to try to avoid too predictable a system. There is a melodic line which is rhythmically the same in every ritornello, occurring respectively in violin, viola and 'cello. The other lines consist of repeated

Organisation of Melodic and Arpeggiating Voices in 'Stabat Mater'

	7	8	9	10
Sop	Arp Arp Arp			
Alt	Arp Arp Arp	Mel Mel Mel	Arp Arp Arp	Mel
Ten	Mel Mel Mel		Mel Mel Mel	Arp Arp Arp
Vln	Arp Arp Arp	Arp	Arp Mel	
Vla	Arp Arp Arp		Arp	
Vlc	Mel Mel Mel			

	12	13	14
Sop	Mel Mel Mel	Arp	Mel
Alt		Mel Mel Mel	Arp Arp Arp Arp
Ten	Mel	Arp Arp Arp	Arp Arp
Vln		Mel Mel Mel Mel	
Vla	Arp Arp Arp		
Vlc			Mel Mel Mel Mel

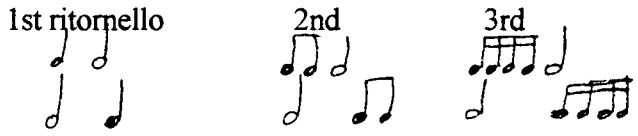
	15	16	17
Sop		Arp Arp Arp	Mel Mel Mel
Alt	Mel		
Ten	Arp Arp Arp	Mel Mel Mel	Arp
Vln	Arp		
Vla	Mel Mel	Arp	
Vlc	Arp	Arp Mel	

	19	20	21
Sop	Arp	Mel Mel Mel	Mel Arp
Alt		Arp Arp Arp	Arp Arp Arp Mel
Ten	Mel Mel Mel	Arp	Arp
Vln	Arp Arp Arp		Arp Arp Arp
Vla	Mel Mel Mel	Mel Mel Mel Mel	Mel Mel Mel
Vlc		Arp Arp Arp Arp	

	22	23	24
Sop	Arp Mel Arp	Mel Mel Mel	Mel
Alt	Arp		
Ten		Arp Arp Arp	Mel Arp Mel
Vln	Mel Mel	Arp	
Vla	Arp	Arp	
Vlc	Arp	Mel	

	26	27	28	29
Sop	Mel Mel Mel	Mel Mel Mel	Arp Mel Arp	Mel Mel Mel
Alt		Arp Arp Arp	Mel Mel Mel	Mel Mel Mel
Ten	Arp			Arp Mel Mel
Mel				
Vln	Arp Arp Arp	Arp Arp Arp Arp	Mel Mel Mel	
Vla	Mel Mel Mel	Arp Arp Arp Arp	Arp Arp Arp	
Vlc	Arp Arp Arp	Mel Mel Mel Mel	Arp Arp Arp	

rhythms, and its inversion in the other instrument:



The first (or last) beat is subdivided each time.

The first ritornello consists of the same music played twice (example 59 shows the first page, annotated so that the pattern of cells described below can be seen). The violin part uses six cells and their inversions, arranged thus:

1 2 3 4 1 2 3(inv) 4(inv) 1 2 3(inv) 4(inv) 1 2 3 4

3 2 3(inv) 2 5 6 1

It will be seen that these cells are arranged into larger groups: the first and fourth groups consist of the same cells, and the second and third groups are also the same as each other. The fifth group is different, not starting with cells 1 and 2, probably to remove the emphasis from these cells. Cell 2 is symmetrical and therefore no inversion is possible, which is why no inversion is marked at the end of the fifth group, even though there logically would be an inversion to continue the practice of sometimes inverting the last two cells of a group. Two new cells, 5 and 6, are presumably used to avoid too much of a sense of repetition.

The pitches of the cells played by the violin, and indeed the viola and 'cello when they have similar material in the successive ritornellos are organised in two ways. They are either entirely made up of notes of the A minor arpeggio, or of two notes of the arpeggio in the centre (the quavers in each cell) preceded and followed by other notes. These notes are selected so that there are no more than two successive notes moving in the same direction. In the latter case the notes of the arpeggio are always as

shown below, except for those in cell no. 6, where the register is increased suddenly.

The viola and 'cello use two cells, which correspond in length to the larger groupings of the violin part. All the notes in the cells are derived from the first violin melody:

Third violin cell (pitches): G C A B

Viola (third pair of notes): A G

'Cello (third pair of notes): B C

The viola takes the first and third pitches from the violin cell and reverses them, and the 'cello uses the second and fourth pitches similarly. The third violin cell is used as the example because it is the first to use four different pitches, and therefore shows the system (which is used throughout this ritornello) at its clearest. The rhythms are in triple meter, and are the mirror image of each other.

The viola starts with cell 1 and the 'cello with cell 2. Each pair of notes in the cells are then reversed, and the viola then plays cell 2 and the 'cello cell 1 in their altered states. The rest of the section is accompanied by successions of pairs of notes, mostly from cells 1 and 2. They are the notes that were heard before with those cells of the violin used at this point (mainly 2 and 3). Cells 5 and 6 use new pairs of notes derived in the same way as the other accompanying notes.

In the second ritornello the viola plays similar material to the violin in the first, whilst the other instruments accompany with cells in a similar triple rhythm to the previous accompaniment. The musical material is played only once in this ritornello.

Like the first ritornello, the string parts of the second are made up of cells (example 60 shows the first page). There are eight cells, and unlike the first ritornello

are the same lengths in every part. Each cell in each part consists of different notes, but the arrangement of cells is exactly the same in each part except for the penultimate cell, where the viola uses a new cell, whilst the violin and 'cello use one that they have played before. The cells are organised in a system employing repetition, but which is not an exact system. It is very similar to a system found in the third movement of the second symphony controlling intervals. The cells are arranged as follows:

1 2 3 4 1 2 5 2 1 6 7 2 5 2 7 2 1 2 5 2 7 6 8

The organisation of the cells is intended to strike a balance between variation and the use of recurring material, and it works on several levels. On the first level, the organisation process is based on the repetition of various combinations of cells, involving cells 1, 2, 5 and 7, shown below. The basic sequence is 2 5 2, with the addition of initially cell 1, then cell 7, and then both cells:

1 2 3 4 <u>1 2 5 2</u> 1 6 7 <u>2 5 2 7</u> 2 <u>1 2 5 2 7</u> 6 8

The intention is that there is stability of material and of the order of that material, whilst not being too regular or predictable. The second level of organisation is that the sequence 2 5 2 has a structural significance, appearing three times with three elements between each appearance:

1 2 3 4 1 <u>2 5 2</u> 1 6 7 <u>2 5 2</u> 7 2 1 <u>2 5 2</u> 7 6 8

The third level of organisation is that there are also two arrangements of cells in the composer's favourite method of organisation: symmetricality, to add to the stability of the material and its ordering:

1 2 3 4 <u>1 2 5 2 1</u> 6 <u>7 2 5 2 7</u> 2 1 2 5 2 7 6 8

There are some cells that are only used once or twice (3, 4, 6 and 8) for the sake of

variety of material. This latter is quite important when one considers the brevity of the cells – there is a fine line between stability of material and mere repetition.

The process is not an exact one, unlike many of Pärt's, but the composer does not regard himself as being ruled by such systems, as the third symphony shows – it is completely free of them.

The accompanying instruments, as in the first ritornello, derive their pitches from those of the melody instrument (the viola). This *is* an exact process:

Viola (pitches):	EAAE	ECCE	GEAC	FCED
Violin:	AGE	CDE	AG	EF
'Cello:	EAB	ECB	CEF	DCB

The violin sometimes uses only two pitches if there are four different pitches in the viola cell. These will be the first and third violin pitches, in reverse order. Where there are two pitches for the viola, there are always three for the violin, consisting of the two pitches and a passing note. The 'cello pitches consist of the first and third viola pitches, followed by alternately the higher and lower note of the second of these pitches.

The third ritornello, with the 'cello having the melody (example 61 shows the first page) uses cells in the same way as the second, although the exact ordering is different. The groupings of cells can be seen below:

1 2 3 2 4 2 3 2 5 6 3 2 1 7 4 2 1 2 3 2 4 7 8

1 2 3 2 4 2 3 2 5 6 3 2 1 7 4 2 1 2 3 2 4 7 8

1 2 3 2 4 2 3 2 5 6 3 2 1 7 4 2 1 2 3 2 4 7 8

Like the second ritornello there is always either one or three cells between each

occurrence of the second cell.

The dynamics are arranged as below (generally one dynamic for every stanza or passage of a similar length), and they aim to communicate an increase in intensity of the text and the music. Where there is an oblique line between two dynamics, two different dynamics are indicated for different parts of the forces simultaneously, and where there is a comma there are two successive dynamics in one section

Introduction: *pp* *p* *p* *f/ mf* *mf, dim.* *p/mf* *mp*

Four stanzas: *f* *p* *p* *p*

Ritornello: *mp/mf*

Six stanzas: *mp* *mp* *mp* *mp* *mf* *mf*

Ritornello: *f*

Six stanzas: *mf* *f, mf* *f* *f, mf* *f* *f*

Ritornello: *ff*

Four stanzas: *mf/f* *f/ff* *f, mf mp*

Coda: *p* *cresc., dim. (twice)* *dim. poco a poco* *ppp*

After the introduction, which sets out the dynamic range for the whole work by ranging from *pianissimo* to *forte*, the first stanza is *forte*, as a definite starting point to the setting of the text. The second stanza is *piano*, and thereafter the dynamics gradually increase until the climax which is at the first and second stanzas of the final section, reflecting the climax of the text:

> Make me to be wounded with His wounds,
> Make me drink the cup of the Cross
> and the blood of Thy Son.
>
> That I burn not, consumed with flames,
> O Virgin, let me be defended by Thee
> In the day of judgement.

The dynamic then quickly reduces to *mezzo piano* for the last stanza, again reflecting the text:

> When my body shall die,
> Grant that my spirit may be given
> The glory of Paradise.

The postlude stays at that level (with two swells), and then decreases from there. The dynamics of the instrumental ritornellos increase with each one; the final is *fortissimo*, preparing for the climax immediately afterwards.

The 'Stabat Mater' is intentionally very restrained and concentrated to reflect the text, more so than the other vocal works discussed here (even the 'Passio', because of its dramatic nature). This is achieved by the use of limited forces, and a very subtle system to eventually achieve the climax (the register of the principal notes, which is hardly noticed by the listener until the soprano sings top C at the beginning of the final section). One aspect of this, the use of one tonality/modality throughout, is perhaps not going to provide differentiation enough in 25 minutes to allow monotony to set in for some listeners. Even the ritornellos do not vary from the prevailing tone-centre, A. This is something that does not recur in the other lengthy tintinnabuli works, and although it does in shorter ones (eg 'Cantus in memoriam Benjamin Britten), the time-scale of these works does not permit them to become monotonous. Like the 'Stabat Mater', the 'Passio' uses limited forces to achieve a concentrated atmosphere, but the differentiation between characters, as well as reflecting the dramatic nature of the story, gives the differentiation necessary to avoid monotony.

Miserere

The Miserere was written in 1989 for a festival in Rouen. It was composed for Paul Hillier and the Hilliard Ensemble to perform, and it is scored for five soloists, chorus, an instrumental ensemble and organ.

The Miserere appears more varied and freely constructed than its vocal counterparts the 'Stabat Mater' and the 'Passio'. The 'Stabat Mater' has a completely regular, symmetrical structure and never moves from the aoelian mode. The 'Passio' has a structure that is dictated by the text, with every protagonist having their own type of music, which therefore appears when the text requires that protagonist to speak. In the 'Miserere' the structure is not completely regular, and neither are the types of material used closed in the way that they are in the 'Passio' – in that work one does not expect any music other than that employed by the protagonists (excepting the passages that frame the work). Indeed, rather than allowing the text to dictate the form, Pärt has made additions to the text of the Miserere. This is done according his own poetic intentions: the composer must have had a reason for doing this – presumably because he felt that they fitted with the text of the 'Miserere'. There are also structural (in terms of proportion) and musical ramifications.

The work incorporates two other elements, both from the Requiem Mass, namely the 'Dies Irae' and 'Rex Tremenda'. The 'Dies Irae' takes its' place after the third stanza of the Miserere in a series of interludes which break up the setting of the text periodically. However, the 'Dies Irae' is considerably longer than the other

interludes, which are also all purely instrumental. The 'Rex Tremenda' becomes a coda for the work, placed at the end.

The musical ramification is that occasionally some musical material will be heard that is not heard before or since in the work and is contrasted to the principal material which is used to set the Miserere text. This does not happen in either of the other vocal works studied here.

The structural ramification is that the proportions of the work are not regular both in terms of the frequency of the various different interludes, and their unrelated lengths (except for the second, third and fifth which are of fairly similar lengths). The location of the interludes and their other properties are described in the table on the following page. Until versus 14 interludes occur every three stanzas. The 'Dies Irae' trope and the interlude between versus 14 and 15 are more lengthy than the others, and unlike the others use new material. The latter interlude by its different material prevents the material that predominates in the work from becoming over-used.

The 'Dies Irae' trope is described on page 10 with the 'Rex Tremenda' trope. The interlude between versus 14 and 15 begins with figuration played by the organ (described by Hillier as being like a toccata[1]). In the right hand this is an arpeggio texture, the top note of which uses tintinnabuli and non-tintinnabuli notes to make a resultant melodic line on the third semiquaver of each beat. In the left hand (from the second statement) are pairs of quavers with tintinnabuli and non-tintinnabuli notes. One tintinnabuli note from each pair of quavers can be isolated such that a pattern then becomes discernible, with notes rising, falling, and rising in pairs, and then falling to the middle C with which the pattern starts so that the next statement can begin.

Interlude/Material Used/ Length	Tonal/Modal Centre	Voice/Instrument Combination
'Dies Irae' (between versus 5 and 6) Canonic 684 beats*	Aoelian mode	Chorus, full ensemble
Between versus 8 and 9 Material similar to setting of Miserere text 60 beats	F minor	bass clarinet, bassoon, trumpet, trombone, electric and bass guitars
Between versus 11 and 12 Material similar to setting of Miserere text 63 beats	F minor	oboe, clarinet, bass clarinet, bassoon, trumpet, trombone, electric and bass guitars
Between versus 14 and 15 New material 130 beats	F minor	All woodwind and brass, organ, triangle, tambourine
Between versus 19 and 20 Material similar to setting of Miserere text 72 beats	F minor	oboe, clarinet, bass clarinet, bassoon, trumpet, trombone
End 'Rex Tremenda' Canonic 104 beats	Aoelian mode transposed to E	Chorus, soprano and alto soloists, organ, bells, tam-tam, bass guitar

*The length has been given in beats because the length of bars is constantly varying.

smoothly.

This material lasts for twenty beats, and is played five times. It is accompanied by triangle and then tambourine, irregularly spaced, which initially fill in semiquaver gaps in the organ figuration. After the first two statements other instruments join gradually. Example 62 shows the end of the first part of the interlude (how the instruments' texture fits together and is derived from the organ) and all of the second. The oboe and clarinet in alternation play a similar semiquaver line to the organ right

[1] Paul Hillier. Arvo Pärt (Oxford, Oxford University Press, 1997) p. 159

The oboe and clarinet in alternation play a similar semiquaver line to the organ right hand, slightly lower but shadowing the organ's undulating contour. The bassoon and then bass clarinet similarly shadow the organ left hand in quavers. The clarinet and bassoon in the last statement decorate the texture with *Klangfarbenmelodie*, on all but the first beat of every bar. The second of each pair of the clarinet's semiquavers shadows the first of each pair of the bassoon's semiquavers following, at the interval of a sixth lower (separated by two octaves!); the other notes are tintinnabuli notes. The final part of the interlude consists of chords played in quavers by the entire wind section alone, giving a very distinctive, brittle texture. The passage is also made distinctive by the use of syncopation (which perhaps brings to mind the medieval device of hocketing), caused by means of slurs and ties across strong beats. This too consists of melody and tintinnabuli lines, and the melody lines are similar to those in the setting of the 'Miserere' text in terms of ascending and descending and moving in contrary motion, apart from the repetition of every note twice. Hillier[2] mentions this interlude as being dance-like, and this impression is given by the use of the third semiquaver in every beat in the organ right hand texture to outline a melody, as well as the syncopations at the end of the interlude. So does the lilting nature of the clarinet and bassoon lines as described above.

The other interludes use music similar to that to which the text is set, with melodic lines moving by step, gradually ascending and descending (although these passages are *not* related exactly to what the voices have sung in the versus), and tintinnabuli voices present also. Example 63 shows the interlude after versus 19, with the end of the stanza preceding. The differences are that there are not the gaps that

[2] Hillier. op. cit p. 159

occur in the vocal sections, and there is a triple metre which is generally unchanging. After versus 15 the next interlude (the example shown) is five stanzas further on, so as not to interfere with the climactic versus 17 and 18, and is like the shorter interludes described above, using their material. This leaves just two stanzas until the 'Rex Tremenda' trope at the end.

Some of these interludes raise the issue of tonality/modality. The work begins in E minor, and the "Dies Irae' which follows is in the aoelian mode. The rest of the work until the end is in F minor. The 'Rex Tremenda' ends the work in the aoelian mode, but transposed to E minor so that the work does have a closed tonal structure.

The 'Miserere' is also rather different in character from the 'Stabat Mater' and 'Passio' in that strict systems are noticeable by their comparative rarity. However, the work is still composed in a very rational way, with logic playing an important part. Where there are systems, they are used in a freer way, as in the way voices are used. Although the voices are arranged between the 'Dies Irae' trope and the interlude after figure 14 such that the numbers of voices singing is symmetrical, the voices actually used may be varied. For example, in stanza 9 the second tenor and bass are singing, but in stanza 11 the soprano and bass are singing. There is no system governing where any particular voice sings at any time. After the fourth interlude the number of voices singing alternates between four and five, continuing the symmetry but also extending it to fit the increased number of stanzas of this section. For the twentieth stanza (after the fifth interlude) the symmetry is suspended; having dropped to three voices in versus 20, all five sing at the final word of the stanza: 'build thou the walls of Jerusalem' (example 64); this is obviously a key part of the text for the composer.

Symmetry is resumed on a smaller scale for the final stanza (before the 'Rex Tremenda'): it is sung by the bass, with the tenor joining for the middle phrase: 'with burnt offering and whole burnt offering'. This may be a key phrase for Pärt. Another musical underlining of a key phrase for the composer may be the change in voice colour by changing soprano for bass in versus 19 on the word 'humiliatum' and for the remainder of the stanza: 'a contrite and broken heart, O God, thou wilt not despise'. The syntax is altered from the more familiar way in which the quotation is usually heard to make clear where the change happens in the translation. This occurs seven bars after figure 45 (example 65).

Although the tintinnabuli style of word-setting is employed in this work, it is used in a more developed way than in the 'Stabat Mater' and 'Passio'. It also is not so rigorously systematic, although it is used in a logical way.

Words are set with gaps between, which may or may not be filled with instrumental interjections (example 66 shows both possibilities in versus 10 and 11). Hillier has pointed out that the lengths of these gaps are determined by and are the same as the duration from the beginning of the stressed syllable in the preceding word.

Rather than deviating from a fixed pitch (which was called the principal note) upwards or downwards, in the 'Miserere' the notion of a principal note is not so clear, and also ascending and descending motion may be used within one word. Initially there are clear principal notes, but as the work progresses it is often more ambiguous as to what the principal note might be. The pitch material then seems to be dictated by the gradual ascending and descending of the melodic lines and the principle of balance described below. If these are broken it will be for a logical reason to do with the text.

For example, the gradual ascent and descent is unexpectedly broken with the word word 'sapientiae' in versus 8, which rises to near the top of the *tessitura* of the bass, with no descent at all (though this is partially balanced by the following word 'tuae').

In versus 3 (there is no versus 1 and 2), there is a clear principal note which the tenor initially hardly deviates from: E above middle C. When it does deviate, it does so alternately upwards and downwards on certain words or syllables. This is shown in example 67, the second part of versus 3 and the beginning of versus 4. These are 'mei' and 'tuam' (not shown), and 'miserationem' (last two syllables), 'tuarum' (the only one to deviate by more than one note) and 'iniquitatem' (last two syllables). How often and how far appears not to be governed by a strict system, but they are perhaps felt by the composer to be key words, for him at least. It is related to (though not exactly the same as) the logic of the system which resumes after the 'Dies Irae' trope. Versus 4 is similar, though the alto joins with the tenor, being the melodic voice until the final word ('iniquitate'). Versus 5 is canonic, starting with the bass with all the other voices following in rising order, the soprano and alto somewhat later than the bass and tenors to delay the climactic moment. It prepares the way for the 'Dies Irae' trope (which begins *ff* and is in the aoelian mode/A minor) with its *crescendo*, and also with G sharps suddenly being added, as the leading note. This is the last, high note sung by the soprano.

After the trope, versus 6, sung by the bass, initially has a clear principal note of C. The notes above and below (D flat and B flat) are freely interspersed in a way that it is typical for the rest of the work. Example 68 shows this stanza. In the way this is done the intention (referred to above) seems to be to balance phrases. For example,

the shape of 'tibi' (descending) and 'soli' (ascending) balance each other, as do 'coram' and 'feci' (separated by the single note C). So perhaps do 'peccavi' and 'malum'. This is not quite a precise balance, because of the differing number of syllables in the words, but this is certain to happen quite often because of the constraints of the text. This further goes against the idea that this work might be governed by systems as strict as have been found in other works. Where there are words of a single syllable, they will be sung to the note that preceded them. Compare 'et' and 'te' (C) in the first two phrases with 'ut' (D flat) and 'in' (E natural) at the beginning of the third.

In the third phrase it will be seen that the principal note is now E natural. It will also be seen how long words are usually treated, either descending then ascending on 'iustificeris', or vice versa, as in 'sermonibus' – the next long word. These two words balance each other because of this, and also because of the difference in register: high then low. Balance can occur as a result of either of these reasons. The change of register occurs because the principal note has changed again to G, and rises to C and E natural during the rest of the stanza. One of the hallmarks of the 'Miserere' is that the principal note does change frequently so that voices are not bound to a particular register for any particular length of time. As in the 'Passio' the stressed syllables are highlighted, by letting them become a melisma on two notes. Long words (just as shorter ones) may or may not end on the principal note - compare 'iustificeris' and 'sermonibus' again.

In versus 6 the principal notes are based around the arpeggio of C major, and in versus 7 and 8 they are based around the notes D flat, B flat, G and E natural. Thus

they can vary through arpeggios in the work. Hillier[3] has explained that each stanza has a dominant pitch centre, which gradually rises. The above analysis of pitch organisation is not invalid, though, because despite these pitch centres, there are always words in each versus which stray from these and stress other pitches. In versus 10 (see example 66), the pitch centre according to Hillier is F, and yet the first word 'auditui' makes A flat more prominent, and in the next line the word 'laetitiam', although starting on F, makes the C below more prominent. It will be found, though, that the majority of words will begin or end on the principal note given by Hillier, thus emphasising that note. The other pitches are often related by means of an arpeggio, but not always, and consequently Pärt is allowing himself more freedom than we are accustomed to.

There are two other issues concerning the word setting. One is that where there is more than one melodic line, they usually move in similar motion a third or sixth apart as in versus 10 (example 66). This is the case in versus 14, but in versus 13 they move in contrary motion, the only other case of this being versus 11. There are never more than two melodic lines at one time, but the second of the issues is that one of them may swap voices with a tintinnabuli line. This occurs in versus 14, as follows:

Sop	M	T	M	T	M	
Alto	T	M	T	M	T	etc.
Bass	T	T	T	T	T	

The soprano and alto sing a melodic line and the tintinnabuli line between them. This has the effect of varying the tone colour of the phrases subtly. There are no systems at work dictating where either of these features occur in the work; they justify

[3] Hillier. op. cit p. 157-8

themselves by their intention of varying texture and tone colour, and sometimes also the text. The text of this stanza is somewhat more optimistic than is always the case in the 'Miserere': 'Restore unto me the joy of thy salvation: and uphold me with thy free spirit'.

There are certain other things through which Pärt makes subtle changes to the word setting to enrich the work. Again, where they appear in the work is not controlled by systems. They are as follows:

(i) Where there are two or more voices singing together, sometimes the durations of the last syllable of a word are held by one or more voice beyond the other voices (versus 9, 15 and 19).

(ii) Sometimes a voice will sing only sing certain syllables of words. This occurs in versus 10, 11, 12 and 20.

(iii) Just once, where all five soloists sing together for the first time (except briefly in versus 5), the melody voices alternate the melody note with a tintinnabuli (ie arpeggio) note, as a way of articulating increasing tension:

In versus 17 and 18, the most exciting passages of the work, the word setting is simply in four or five parts throughout, and with the whole instrumental ensemble alternating with their phrases. The excitement of this part of the work is such that the devices above are not necessary. The text at this point is supplicatory, but Pärt perhaps also interprets something else to make this point the climax; possibly it is desperation:

> O Lord, open thou my lips:
> and my mouth shall shew forth thy praise.

For thou desirest not sacrifice, else would I give it:
thou delightest not in burnt offering.

The purpose of the instrumental ensemble (which is rarely governed by a system), apart from accompanying the chorus in the 'Dies Irae' and 'Rex Tremenda' tropes and providing interludes, is to colour the contributions of the soloists, and to provide a brief tailpiece to each stanza where there is no other, longer interlude. Sometimes groups of instruments will alternate with words that the soloists sing, although the voices may hold a note through this. What the instruments play here varies: in versus 15 they simply play chords. In versus 11 (example 66) the instruments imitate in inversion (but not at the same pitch) what the voices have just sung (only the last three syllables if the vocal contribution has been longer than this in versus 17). The complete details of what instruments are used are seen in the table on the following page. Particularly striking examples of colourations where instruments play with the soloists include the use of woodwind and organ in versus three and four, timpani in versus five (with organ), six (with bass clarinet), 12 and 21, organ in versus nine, and organ and tam-tam in versus 19.

The 'Dies Irae' and 'Rex Tremenda' tropes are set to scales in canon, which descend in the former case and mainly ascend in the latter (the exception is the organ right hand which steadily descends from bass to treble throughout this passage). When the scale is finished is restarts, but a step lower than the previous one. As in the 'Cantus in memoriam Benjamin Britten' the canons move at several different speeds (example 69) shows the beginning of the 'Dies Irae'): five for the 'Dies Irae' and two for the 'Rex Tremenda', and so they are also mensuration canons. In the 'Dies Irae' only two speeds are sung by the chorus; the slowest speeds (found in the trombone,

organ left hand, bass guitar and organ pedals) would be impossible to sing convincingly for breathing reasons. Both melody and tintinnabuli lines are present, with the voices alternating them every four notes (again as in 'Cantus'). The instruments double the vocal lines or parts of them (in the case of the bells) at different octaves, and add new ones. A pedal A is contributed to the texture every eight bars by the trumpet. Because of the two different speeds used by the chorus, the text moves at different speeds, and so in the faster moving voices the text is sung twice. The timpani signal each new section of text, with an extra note each time.

This work exemplifies the result of a development in Pärt's tintinnabuli music, whereby materials are handled more freely that was seen in the first ten years or so of the use of the system. It is very possibly significant that there is a gap of three years between the composition of the 'Stabat Mater' (1985) and 'Festina Lente' and the Seven Magnificat Antiphons (both 1988), with the 'Miserere' following a year later. It is with these works that this greater freedom is first apparent. The music continues to be extremely logical , as can be seen from the form of the 'Miserere' and the organisation of principal notes (raised and lowered), but as can also be seen from the pitch organisation there is freedom about exactly how the melodic line is determined.

Part 3

Commentary and Conclusion

Commentary

The two musical styles that Pärt has used in his career as a composer will at first glance seem irreconcilable and without any sort of relationships. However, it would be surprising if a composer would completely leave behind all of the features even in an abrupt change of direction as Pärt has made. This commentary will make clear the relationships, and the ways in which there have been changes in approach and aesthetic.

Relationship to Early Music

By the number of religious texts Pärt has set in the tintinnabuli style, and other works that have had their roots in various religious aspects, it would appear that he was greatly influenced by the frequently religious nature of the medieval and renaissance music that he studied. This is clearly a major turn-around from his serial period, when he was effectively barred from writing religious texts by the Soviet authorities, and when he did (the 'Credo') he got into trouble. It is clear that if Pärt had been unable to leave Estonia, the new style would have been stillborn if he had been so dependent on religion for inspiration. Much of the music is vocal and has a modal element, like much music from these periods. However, these relationships are very general ones. Certain more subtle comparisons can be drawn, which can lead to a strong conclusion about Pärt's music, and its provenance.

More than a few of Pärt's compositional procedures and decisions are redolent of the numerical aspect of fourteenth century isorhythmic music, and North European music of the late medieval and early renaissance.

One of the most important isorhythmic works to have survived from the fourteenth century is the 'Messe de Notre Dame' by Machaut This work *may* not be an exact stimulus for Pärt , but it would have been an obvious one for him to study, being 'the most famous musical composition of the fourteenth century' and 'important because of its spacious dimensions and four-part texture (unusual at the time)'[1]. It is certainly possible to see similarities in it with some of Pärt's compositional ideas.

A fundamental similarity and one which gives a clear clue to Pärt's aesthetics is made clear by the following sentence: 'For the most part the music of the Mass ['Messe de Notre Dame'] remains on a lofty impersonal plane, without attempting to reflect any of the emotional suggestions implicit in the text'[2]. The essence of the tintinnabuli style is similar to a very large extent, since the music does not often undergo any changes except to articulate large-scale formal sections, such as the ritornellos of the 'Stabat Mater', and the changes in character of the 'Passio'. There are occasionally small variants to the stasis to make a particular textual point. There is the use of unison voices towards the end of both the 'Stabat Mater' and the 'Passio', and the unusually slow setting of Jesus' 'It is finished'. However, this too has a precursor in the 'Mass de Notre Dame': in the 'Credo', the words 'ex Maria Virgine' are set to sustained chords, contrasting with the brisker nature of the rest of the movement. Another similarity is that in the 'Berlin Mass', Pärt has opted for an altogether brisker setting of the 'Credo', because of the length of the text, as compared to the spaciousness of the rest of the Mass. This compares to the syllabic setting of the

[1] Donald Grout and Clause Palisca. A History of Western Music, 4th edition (London, 1988), p. 148
[2] Grout and Palisca. op. cit p. 149

same movement (and the 'Gloria') in the 'Mass de Notre Dame' as compared to the polyphonic writing of the rest of the Mass.

The numerical aspect of some parts of Pärt's music has clear links to isorhythmic and North European early renaissance music (as well as to serialism). The mathematical way in which the form of the 'Stabat Mater' is determined, with the symmetrical arrangement of four, six, six and four verses can be compared to the determining of form in both Machaut's Mass, and a mass such as the 'Missa se la face ay pale' by Dufay (in terms both numeracy and symmetry). In the 'Agnus Dei' of Machaut, the music setting the first section is also heard after the second section. The first section has two talaea (rhythmic patterns) and the second has three, but their rhythms and lengths are different, so that they do not correspond to a statement of the color (melody of the cantus firmus). The result is another symmetrical structure, of two colors surrounding a free section. Similarly numeracy is at work in the form of the 'Gloria' and 'Credo' of the mass by Dufay, where the cantus firmus in each case is heard three times, firstly three times the normal note values, then twice the note values and then at the normal speed. These procedures are not exact models for anything Pärt has done (he has never used preexistent material in his tintinnabuli works for a start, though he has used a cantus firmus idea in 'Fratres'), but they show the same clear logic and interest in numeracy.

The frequent use of cantus firmus as a starting point in composition in medieval and renaissance music is seen in 'Fratres', for varying instrumentation. This uses a cantus firmus of sorts, which is played at a lower pitch on each repetition. However, Pärt develops the concept, because the scale that is used, which is one of

Pärt's own devising (shown below) does not change so that the intervals between successive elements of the cantus firmus are different with every repetition.

In renaissance music in particular composers will let the text decide the form of the music, and this is something Pärt always does with vocal music. He does not try to fit the text into an existing form (eg sonata form) as other composers (from the late eighteenth and nineteenth centuries) perhaps may have felt constrained to do: 'The punctuation and syntax of a text guided the [Renaissance] composer to shape the structure of his setting and to mark the resting points in the text with with cadences of different weights'[3]. This is exactly what Pärt does, not only in terms of the macro-structure, but in smaller details as well. It has been seen in the 'Passio' how punctuation, and also the stressed syllables of certain words can affect such matters as the durations of notes and where the instruments 'echo' the voices. On long words in the 'Miserere' stressed syllables are also reflected by the music, and in that work and the 'Stabat Mater' the end of stanzas are indicated by instrumental (almost always) interludes: Pärt's way of marking resting points in the text. This would not be appropriate for the 'Passio" because it is a continuous text.

Another technique found in North European renaissance polyphony (used in a surprisingly highly developed way), and which Pärt also uses frequently (and which also comes from serialism) is the canon. This would be used in its simplest form, where the second voice imitates the original at the space of a few beats, but canon by

inversion is also found, and even retrograde canons, as well as mensuration canons. This last are particularly used by Pärt, for example in 'Festina Lente', 'Cantus in memoriam Benjamin Britten' and the 'Dies Irae' and 'Rex Tremenda' tropes of the 'Miserere'. The last of these also features canon by inversion, since all canons are rising scales except for the organ right hand, which descends.

In terms of medieval plainchant, the propensity of Pärt's melodic lines (as opposed to the arpeggiating lines) to move by step is a clear link. In the verses interspersing the 'alleluias' of the 'Berlin Mass', there is monophony that is indistinguishable from plainchant; there is similar writing at the beginning of the 'Te Deum', though here accompanied. So is the frequent use of what is the medieval first rhythmic mode:  . This is found throughout the 'Stabat Mater', and also often in the instrumental contributions in the 'Miserere'. Troping additional texts to settings of other texts, which Pärt does in the 'Miserere' with the 'Dies Irae' and 'Rex Tremenda', is a common practice in medieval plainchant. There is a hint of hocketing in the 'Miserere', with the syncopation towards the end of the interlude beginning at figure 35 in the score. This is the only example of this found in the tintinnabuli music, although it is also suggested quite frequently in the third symphony.

The metric nature of the music is sometimes similar to that of renaissance music in that it may not have a regular time structure. Although there always is a time signature, in some works Pärt has found it necessary to constantly change the time signature according to the length of the words, so that a word of three syllables is in 3/4, one of four syllables in 4/4 etc. This is the case in the 'Passio' and in parts of the 'Miserere'. A different effect is created in the 'Stabat Mater' and 'Litany'. The former

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[3] Grout and Palisca. op cit. p. 205

constantly uses the medieval first rhythmic mode, with a few variants (it is in 3/2 although this is not written in the score), and the latter often gives the impression of chanting by regular, measured delivery of syllables over a phrase of the text.

Some of the features discussed above (canon and numeracy) are, at first glance surprisingly, peculiar to serial music as well as medieval and renaissance music. For example, the first movement of the first symphony is entitled 'Canons', and the movement is full of them. There is also a mensuration canon in the woodwind at the end of the first movement of the second symphony. This does not negate the influence on Pärt of early music; he has taken other aspects from it. Rather, it simply proves the assertion that there is common ground between Pärt's serial music (and serial music in general) and the tintinnabuli style; this is the strong conclusion mentioned above. It should come as little surprise that the serialist Webern edited works of the fifteenth century North European composer Heinrich Isaacs, so in fact serial and tintinnabuli music have the same roots to an important extent.

Use of Form in Serial and Tintinnabuli Music

In the serial works studied, it has been seen that Pärt has always employed well-thought out ways of organising the music into whatever musical structure is most appropriate for the material. Whilst using a common form like ternary form, he will not allow it to constrict him and may adapt it to his own ends, and will certainly use it to great effect. In the third symphony he uses the sonata form principle, but develops this as well. In the tintinnabuli music, text will be the guiding factor in vocal music, but there are musical considerations to be taken into account also, and Pärt will, as

before, feel free to organise the music according to these considerations within the framework suggested by the text.

The first movement of the first symphony, for example, has great rhythmic energy, and this is kept alive by organising the music into short sections, so that at no point does the music become static where Pärt would not wish it to. These sections are carefully linked so that they follow on smoothly from each other, and are also realted to each other in terms of texture. This is rationalised by a ternary macro-structure that is also clearly evident, and is articulated by a short moment of rest from the otherwise unremitting activity, which makes up the middle section. The second movement is called 'Prelude and Fugue', but in fact three sections are discernible. In this movement Pärt is concerned with starting with minimal material (solo violin) and building to a huge climax, and also exploiting the potential of tone clusters. Rhythm does play a part in this, but the division into smaller sections is not found necessary except in the first section. The music is fairly static at the beginning of the movement, and the smaller sections are used to help wind the pace of the music up ready for the rhythmic nature of the fugue.

Hereafter it is the use of tone-clusters that is important. In the second section of the movement a tone cluster is gradually built from one pitch to 24, and in the third the note row is outlined over and over by a 12-pitch cluster. Smaller sections are not necessary for these processes; Pärt appears to want to complement the intense rhythmic activity of the first movement with more static (but no more effective) music. Rhythm does play a part here, but is used to contribute to the static nature of

the music, because in each section only one rhythm is used, and repeated over and over.

The second symphony displays and contrasts different textures and timbres in conjunction with the note row. Again ternary form is used. Pärt begins by setting different textures played by the woodwind and strings against each other in shorter sections within the first large section. The next section is composed of tone clusters played by the different sections of the orchestra. The final section is a block of sound played by the woodwind, but whose sound continually changes as the instruments play through the row in sustained notes. The second and third sections are not subdivided, and the form is therefore a somewhat simplistic one, but does not need to be any more complicated to achieve the aim of contrasting textures and timbres. The second movement is similar in that it is binary, and the two sections use just one type of material in each case. The third movement is even simpler in its form (although not in its musical content): it uses just one section until near the end, containing one type of material only. The purpose of this is that the constant use of the material will create tension, leading to a climax of considerable power, which can then be dissipated by the quotation of the Tchaikovsky song.

The use that Pärt has made of sonata form in the third symphony has already been discussed in the analysis of the work. Even this he has adapted it to his own ends, to create a cumulative form which can embrace the whole work by expanding the recapitulation with each movement. It is perhaps the tonal nature of the work which has prompted the use of sonata form, as well as an extension of the idea of using earlier music for inspiration (even though it is from a different period from the rest of

the material that inspired him). Although the concept of traditional tonal relationships is not used, the concept of development certainly is, as will be seen from the analysis. The sorts of material Pärt has used lend themselves well to development: short motifs such as the cadences, melodies which themselves incorporate recogniseable motifs and even an accompanying texture (the *moto perpetuo*) which pervades the development of the first movement. Therefore it makes perfect sense for Pärt to employ a form for which development is an important feature, for this work.

The approach of Pärt in 'Perpetuum Mobile' is rather different formally to the symphonies. It is an approach more akin to tintinnabuli works in its use of systems, and some of these determine the form. These are sometimes broken for musical reasons, but this does not really disturb the regularity of the form. The processes have been described before, but will be briefly summarised. The pitch material is, as one would expect, drawn from a note row which is subject to the usual different permutations, all of which are heard, and these partly dictate the form: P, R, I, RI, I, R (the symmetry after the first section will be noticed). The lengths of section are the same (12 bars), except for the first and last section (14 and 7 bars respectively), both for good reasons. In the first section there is no entry for the first three bars before the regularity of an entry every bar begins, and after figure 7 there are no new entries, and seven bars is the amount of time it takes for all the instruments left playing to stop. The form is also articulated by the register of instruments, and in fact this is the way in which the form is audible, since it cannot be heard which permutation of the row is being used. In the first and third sections the register is high, in the second and fourth it is low. After this the alternation is broken, again for a good reason. In the fifth

section, where the climax is built up to, it is high because low notes played loudly would obscure the texture, and in the sixth section it remains high so that the texture can gradually thin away to nothing. The beginning of the sixth section is articulated aurally by the gong stroke which is the moment of climax.

This precise approach is most akin to 'Cantus in memoriam Benjamin Britten', and, particularly, 'Fratres'. In the latter the structure is built, exactly as in 'Perpetuum Mobile', with sections dictated by the statement of a note row (although in 'Fratres' this has been described previously as a cantus firmus). The way in which the row is used is different in 'Fratres', but the basic similarity of the form is clear. In the 'Cantus', the similarity is that there is a predetermined system for the structure from which there is (in this case) no deviation. The symmetrical structure of the 'Stabat Mater' is also rigorous throughout. The structure of the 'Passio' is rigorous also. It is not symmetrical, but the form is dictated (and completely rigorous) in the way every protagonist is strictly characterised by different music, articulating a form that is determined by the text and the dramatic action, in terms of when each protagonist contributes to the drama.

The form of the 'Miserere' also has systems in place, but exemplifies the freer attitude that has begun to characterise the music that was written from its period. Pärt has allowed himself to break from a structure that is rigid in terms of symmetry or any other way (such as the 'Passio') by inserting two other texts into the work, the 'Dies Irae' near the beginning and the 'Rex Tremenda' at the end. The form *is* closed tonally, since the work begins and ends in E minor (although not with the same material), and after the 'Dies Irae' trope there is a regular pattern of three stanzas

separated by an interlude before a longer interlude between versus 14 and 15. There then follows five stanzas which constitute the climax of the work, and then following another short interlude two stanzas which stand well together textually at the end (before the 'Rex Tremenda'). The tone is somewhat more optimistic here: ' Do good in thy good pleasure unto Sion; build thou the walls of Jerusalem. Then shalt thou be pleased with the sacrifices of righteousness' etc. This form is extremely logical and effective, and the insertion of the 'foreign' texts very apposite. However, it displays a certain freedom that is not present in the other tintinnabuli works discussed here, or in 'Perpetuum Mobile', in the opinion of this writer, notwithstanding the slight alterations made to some of the systems for musical reasons. The proportions of the various parts of the work remain almost equal throughout.

Uses of other processes not so far discussed

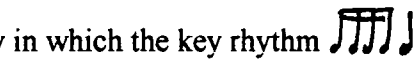
Apart from the processes discussed above which are to do with form or directly related to early music are those which can be discussed in relation with serial music or other avant-garde music. Also found in tintinnabuli music are the sorts of systems referred to below in the serial music.

In 'Perpetuum Mobile' the systems used to determine durations and how long the contribution of particular instruments should be. There are thirteen durations, which make up two rhythmic series (elements 1-12 and 2-13). There are two statements of each series, and then one of each series in retrograde – again a logical procedure.

The instruments generally play for particular numbers of bars, except for when they are required to make another entry before these have been completed, in which

case they stop a bar before the next entry. This number of bars changes, and is organised into an arch structure, but the numbers of bars are divisible by three. The permutations of the row used are also shown in this diagram; it will be seen that with the exception of the first section they are symmetrical.

Figs. 1-2	6 bars	P	4-5	15	RI
3-4	12	I	6-7	6	R
2-3	9	R	5-6	9	I

Symmetry is a very obviously characteristic feature of serialism that is also found in tintinnabuli music. Examples are the formation of the tone cluster in the third section of the third movement (up to figure 56), the symmetrical canon at the end of the first movement of the first symphony, and the rhythm made up of a symmetrical succession of durations first heard in the first section of the second movement of the same work. Other systems and processes found in the serial music include, from the first movement of the first symphony the statement of elements of two rows simultaneously, and the use of long notes to indicate the end of a section. In the second movement there is the use of the same rhythm in the first and third sections, the way in which tone clusters are voiced in the second and third sections of the second movement of the first symphony, and the way in which the key rhythm  is heard on various instruments in the third section.

As is evident from the analyses, there are many processes in the tintinnabuli works which share the same logic in the use of patterns and systems, even in the basic details of the music. The way in which the pitches are organised in the 'Passio' and 'Stabat Mater' is a case in point, with words starting from (called mode 1 in the

analysis) or going towards (mode 2) the principal notes by step. They ascend or descend with alternate words. In the 'Passio' it is simply changes with alternate phrases; in the 'Stabat Mater'. The mode changes with alternate phrases in the 'Passio', and in the 'Stabat Mater' is regulated by a system that becomes increasingly developed:

Section 1: Mode 1

Section 2: Mode 2

Section 3: Alternately modes 1 and 2

Section 4: Mode 1 except for last phrase of stanzas (mode 2)

These modes are not used in the 'Miserere', but there are principal notes discernible, and a system governing what this note is for each stanza. The principal note rises up the diatonic scale of F minor (starting from versus 6 after the 'Dies Irae' trope) from C to Db' in versus 18, and then falling from C' to F in versus 19 and further down to G. through versus 20 and 21.

Another system found in the 'Stabat Mater' is that which governs the organisation of the ritornellos. It is not a precise system, but it is an effective one. It consists of repeated successions of passages of music, but not repeated at regular intervals, and interspersed with other passages, and the effect is to give a sense of unity to the section, without making a precise system too apparent. This is a danger usually avoided by Pärt even when using precise systems, but such a system would be rather too obvious to the ear with the material he is using here.

The instruments very often play an 'echo' (in inversion) of what the voices have just sung. In three cases it is the voices that echo what they have just sung; there

is a system for when this occurs: except for the first section of four stanzas it is always in the third stanza of each section, either, as said, for reasons of contrast or text, or both.

Another example of systematic organisation is found in the instrumentation of the 'Passio' and the 'Stabat Mater'. In the former the instrumental quartet that accompanies (and echoes) the evangelist quartet is organised such that they are heard in every conceivable combination, and also so that the evangelist quartet is unaccompanied. This quite involved system is described in the analysis of the work. In the 'Stabat Mater' there is a similar system (also described in the analysis) governing the string trio, though unaccompanied singing is only heard in the last stanza.

Instrumentation and Texture

Although instruments are used in vastly different ways in the tintinnabuli and serial works, the way in which the works are composed show that Pärt is sensitive to the effect he is creating in his use of the instruments. This is perhaps more obviously evident in the tintinnabuli works, but there are numerous cases in the other works that prove this point. One particular interest of Pärt appears to be timbre and texture, and the way they can be exploited. One feature of the serial works the contrast of the sounds of different families of instruments, often using tone clusters in the serial music to create blocks of sound with which to do this. Although Pärt's use of instruments in the tintinnabuli works is perhaps more subtle (using fewer instruments and carefully chosen notes, harmonies and registers), the same interest in timbre and its contrast for articulation is evident, as will be seen. Another product of this interest is the use of novel playing techniques for string instruments found in the first two

symphonies, playing behind the bridge, or striking the bodies of the instruments in different places.

In the first symphony, the many examples of *Klangfarbenmelodie* in the first movement maintain an everchanging kaleidoscope of sounds from the orchestra. Pärt also has a habit of using different sections of the orchestra to contrast with each other, or different textures. He rarely uses the whole orchestra together except at climaxes (figure 52 in the last movement of the first symphony, figure 6 in 'Perpetuum Mobile' and figure 37 in the second symphony).

Contrast of different sections of the orchestra happens at the beginning of the first movement (brass and strings), and in the central section of the movement, with 13 part strings surrounded by a duet played by two horns. This last is also a good example of contrasted textures, as is a passage that occurs in the first section of the movement. Between figures 6 and 10 there is a uniform string texture, complemented by woodwind towards the end, leading straight into a much less homogenous texture (between figures 10 and 11) played by piccolo, oboe, clarinet, trumpet, trombone, xylophone and pizzicato strings. A slightly different example is found between figures 15 and 16, where the strings are playing very rhythmic canons whilst the woodwind play mensuration canons simultaneously in sustained notes. An example of this in the second movement is the contrast of the solo violin which begins with the massive tone-clusters (that of the second section has 24 notes) found later in the movement. There are other interesting examples of instrumentation. There is the use of 'cellos and basses to underpin the beginning of the fugue at figure 39, and the subtlety of

changing the scoring of the woodwind in the final section, so that until the end it is always a different pair of instruments playing.

The principle of contrast between different sections of the orchestra (or blocks of sound) is continued in the second symphony. In the first section the texture of pizzicato strings (which is heard as a continuous texture because of the rhythmic freedom allowed to the musicians) is contrasted with sections for a successively increasing group of woodwind instruments and portions of the row played by solo wind instruments. In the second section tone clusters are played by all three sections of the orchestra, contrasting in a very direct way the different timbres of the instruments. The final section (figure 12 onwards) has a texture in the woodwind created by having the instruments state the note row between them in sustained notes. This texture is like that of a tone cluster (particularly since many of the instruments trill on their notes), only having subtle changes in voicing as notes change.

In the second movement the brass and woodwind are set against each other, heard alternately playing the same material (again heard as a continuous texture because of rhythmic freedom). This accompanies a contrasting kind of texture: a monophonic statement of the note row (sometimes doubled by woodwind), in varying note values. The second section is the only occasion in the works studied here where the whole orchestra is playing for an extended period of time. The texture is a pointillistic one, and the contrast is that another texture almost completely takes over the original texture, with trombones starting to play the note row, joined gradually by all the other wind instruments.

The last movement has different textures for all the sections. There is a texture involving rapid notes sometimes using different subdivisions of notes within beats, creating another texture much like a tone cluster. This is heard first in the strings and then the woodwind. This is alternated with the brass, playing similar material but using shorter note values.

In the third symphony the principle of orchestration is similar in that the full orchestra is generally only used at the climax of each section (at the end of the development section). Different sections of instruments are used as blocks of sound as in the other symphonies, but there are some notably more delicate and subtle examples of orchestration also. This has already been described in the chapter presenting the analysis of this work

'Perpetuum Mobile' uses instruments in a novel way to achieve a uniform general texture that is a result of the process used. To a large extent Pärt has removed from himself the necessity of making compositional decisions, but one decision he has had to make is how to articulate the form. This is done by contrast, but of register rather than of instrument family: the first four sections use alternately high then low register. The last two sections are in a high register, so that low, loud notes do not dominate the texture at the climax, and so that the piece can quieten to nothing effectively. This piece is a fine example of the use of a block of sound, which here is ever-changing according to the gradual changes of instrumentation.

Although Pärt's instrumentation is somewhat different in the tintinnabuli works, the same interest in sound and texture is apparent. There are no fewer than four works which use string orchestra: 'Cantus in memoriam Benjamin Britten', 'Festina

Lente', 'Psalom' and 'Trisagion'; and the way in which the works are written directs much of a listener's attention to the timbre. There is the use of more than the usual five parts in 'Cantus', which is in nine parts, the sparing use of the ensemble in 'Psalom'. Here most of the activity is in the same group of instruments (mid-range tessitura, but a score could not be obtained so it is not known exactly which instruments), with occasional use of other instruments to create striking harmonies or provide pedal notes at high and low extremes of register. In 'Trisagion' there is much repetition of material, which focuses attention on the timbre, and in this work there is also the contrast of different registers that has been seen in the works described above. The slow tempi which are usual in tintinnabuli works also draws ones' attention to the timbre.

Another instrumental work that is relevant to this discussion is 'Arbos', which is scored for six trumpets, and tenor, bass and contrabass trombone and percussion, showing a different, brasher side to Pärt's soundworld. Again the material is rather repetitive, drawing attention to the sound of the ensemble, rather different to that of a string orchestra. The use of non-standard instruments such as the contrabass trombone is occasionally found in the tintinnabuli works, and this can be directly compared to the use of non-standard playing techniques and the use of other sound-sources that are not normally considered as instruments in the second symphony.

Other purely instrumental works relating to the discussion above are 'Fratres' and 'Pari Intervallo'. Both have more than one instrumentation. In 'Fratres' the arrangement for 12 'cellos is obviously relevant, but so is that for violin and piano, because here many different facets of violin sound are explored, including spiccato

bowing, double and triple stopping, harmonics and figuration. 'Pari Intervallo' provides a good opportunity for the sound of a mixed recorder ensemble to be explored, or flute stops with perhaps a solo reed stop in the version for organ.

Examples of instrumentation in vocal works which are most relevant to the discussion above are found in the 'Stabat Mater', where the voices are offset against violin, viola and 'cello (roughly corresponding in tessitura to the voice types used: soprano, alto, tenor), resulting in a most homogenous string sound. A similar approach is found in 'Es sang vor langen Jahren', where a solo alto voice is most successfully combined with a violin and viola.

The 'Passio' has only four instruments (apart from the organ), and of all the protagonists they accompany and echo only the evangelist quartet. Their function is to provide a small variety of tone colour, in what constitutes by far the greater part of the work. The variety is intentionally small because of the small number of instruments, to reflect the ascetic quality of the work, but is still greater than just the voices could provide. There are just two timbres: double reed instruments, oboe and bassoon, and two string instruments, violin and 'cello. However, the system referred to earlier and described in the analysis enables him to get the most out of these limited resources.

'The 'Miserere' has a larger number of instruments in its ensemble than the earlier works (13 including organ and percussion). Most are, unsurprisingly in view of what has been discussed, of mainly one family of instruments, namely the woodwind, although these are often augmented by trumpet and trombone, whose timbres combine well with the woodwind. Continuing his occasional inclination to use non-standard instruments, Pärt has called for electric and bass guitars, and these are used to add

colour to various parts of the work: the 'Dies Irae' trope, two of the interludes and the 'Rex Tremenda' trope (bass only).

The instruments are all used together (except tambourine) on only in the 'Dies Irae' trope and the climactic versus 17. Apart from this they are used as colouristic accompaniment to the voices (including timpani), and to provide the interludes. All the interludes use predominantly woodwind and brass; sometimes the guitars are heard as well (between versus 8 and 9, and 11 and 12). In the extended interlude between versus 14 and 15 the organ and percussion play important parts also, with the triangle and tambourine in particular playing an important part in the texture.

'Litany' is the only tintinnabuli work to date to use full orchestra. Even here, though, the instrumentation is very subtle and colouristic, and most crucially the contrast between groups of instruments is still the norm as in the symphonies. It is most common to hear strings, woodwind, brass and percussion separately, or if they are together then they are easily differentiated by their material because of the lucidity of the scoring. Another contrast which has been found in the earlier works is that between register ('Perpetuum Mobile' and the third movement of the third symphony), and this is heard again in the 'Te Deum', where the sopranos and altos are sometimes heard in alternation with the tenors and basses. This is sometimes mirrored by the string orchestra.

Although this is a discussion about instrumentation, the distinctive colour of the voice timbres are such that they can almost be considered as instruments in the way this colour is used to contrast within vocal groupings and also with any accompanying instruments. One example that comes readily to mind is the use of the

vocal quartet (alto, two tenors and bass) of 'Litany', contrasting strongly with the instrumental sounds of the orchestra, and yet complementing it and adding a different dimension to it.

Bells are sometimes used in the tintinnabuli works, unsurprisingly in view of the part the sound of bells played in the conception of the tintinnabuli music. They are heard punctuating the music in parts of the 'Miserere', 'Cantus in memoriam Benjamin Britten' and 'Litany', adding colour and depth to the texture. Other bell-like instruments are used also, for example the triangle and the prepared piano (discussed below). Interestingly a bell is also used several times in the third symphony, making it likely that Pärt was already interested in its properties at this stage, before the period of non-composition when the tintinnabuli method was conceived.

Prepared piano is used in 'Tabula Rasa' and the 'Te Deum'. It produces a sound like gamelan instruments, but it is possible that it is used because the sound is also not unlike bells – the same sort of tintinnabulation is discernible after the notes have been struck, and like the bells the sound adds colour to the texture. It is rather unusual colour, complementing the sound of the strings in these works well, as well as contrasting with them. The piano in its unprepared state is not used to a great extent in tintinnabuli works. There is some piano variations, the accompaniment to the violin pieces 'Fratres' and 'Speigel im Speigel', and the early tintinnabuli piece 'Fur Alina'. In the 'Fratres' the piano provides a simple homophonic backdrop to the activities of the violin, whilst in 'Speigel im Speigel', the violin plays sustained notes over a simple piano accompaniment consisting of slow arpeggios. 'Fur Alina' is interesting in that it uses extremes of register: it begins with the lowest B on the keyboard with B

two octaves above, which are then sustained throughout the piece by the sustaining pedal until the end of the penultimate line, above which two lines, one melodic and the other arpeggiating, unfold in the treble (example). Generally, though, there is clearly something about the piano's sound that is often not felt to be as suited as other instruments to tintinnabuli music by Pärt, even though he has found it useful as a vehicle for providing another more suitable sound.

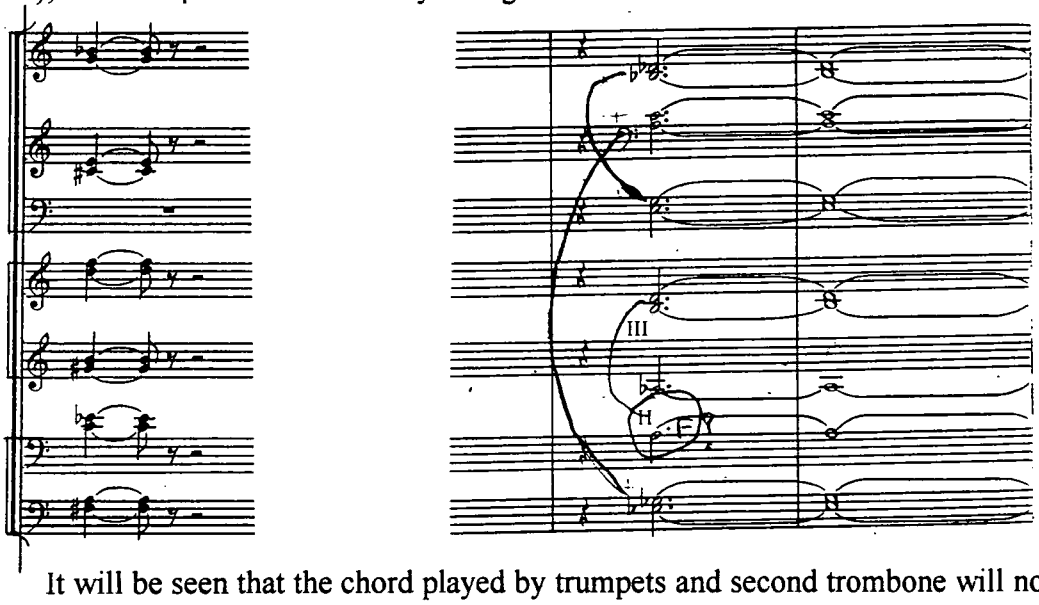
Inconsistencies in the Scores

When studying the works analysed in this thesis, it soon became clear that there were inconsistencies in terms of possible wrong notes and other irregularities in scores. The reason why this should be apparent is that, in terms of the possible wrong notes, whose pitch was expected to be determined by a note row or some other system, their pitch is not as expected. It is of course not impossible that the inconsistencies are intentional, since it has already been seen how systems can be deviated from, but it is difficult to discern musical reasons for these deviations. It is however also possible that they are errors that are misprints, and have remained uncorrected when the works have been published.

In the first movement of the first symphony, at the climax, the xylophone plays three pitches at a time, over and over, using the P-2 version of the row. In the second group of pitches (example 70), the first pitch (which would be the fourth pitch in the note row) should be a C sharp, and yet it is notated as a D. In the second movement of this symphony, during the short development of the fugue the basses double certain of the notes that the 'cellos play. There is one irregularity, however, on the first note of this section, where the basses are notated to play a G natural whilst the 'cellos play G

flat (example 71). In the same movement, in the link between the fugue and the beginning of the build of the massive tone cluster, the 'cellos play I-8, but the sixth pitch is a D flat in the score rather than the E flat that it should be according to the row.

In the second symphony, there is an irregularity in the second section. The brass are playing three superimposed diminished seventh chords. In the third of these chords, each diminished chord is not played by one instrument family as before (as shown); the example shows how they fit together.

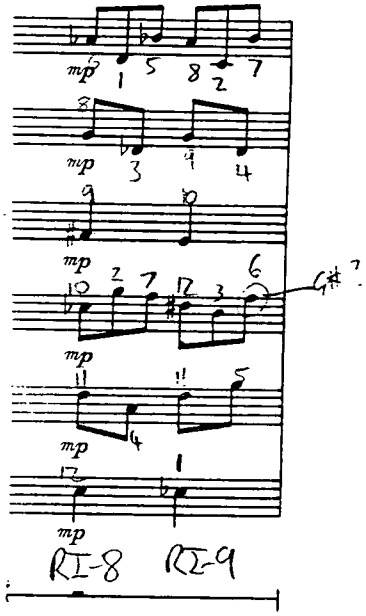


It will be seen that the chord played by trumpets and second trombone will not actually be a diminished chord unless the second trombone plays the note on the line below that actually written: an F instead of an A.

In the second movement of this work, there are three inconsistencies in the second section. In the example shown, the second trumpet plays a D where a D flat (the seventh element of P-2) would be expected (example 72). In the next case the orchestra is playing RI-10, but the violins (firsts and seconds play together in this section) play a G where the seventh element of the row (a B) would be expected

(example 73). The third inconsistency is where the violins play an A flat where an A natural (the sixth element of RI-10) would be expected (example 74).

In the third movement of this work, the property of the row of having three cells consisting of a minor third followed by the two notes within this interval is exploited. One would therefore expect the first interval of the sextuplets that the violas play in the fourth bar to be as minor third, ie that the top note would be an E flat (example 75). There are other instances: at figure 31 (example 76) one might expect the top viola part to play a D rather than an E, to make a minor third with the second viola part, between which the C and C sharp of the second violins fit, albeit an octave higher. It will be remembered that Pärt does not restrict pitch classes to a particular octave in his serial works. In the brass later in the movement, it is expected that the first trombone should perhaps be playing a G sharp rather than an A so that all twelve pitches are present within the beat.



There are other such irregularities in the next bar where a pitch is repeated so that not all pitches are heard within the beat.

All of the above inconsistencies are concerned with pitch. There is one inconsistency in 'Perpetuum Mobile', where in the last section notes played by the E flat clarinet which should be six beats according to the system controlling duration have had ties omitted between semibreves and minims.

No inconsistencies have been found in the tintinnabuli works. The publishers for the symphonies appear to be Russian in origin. The other works are published by Universal Edition, and it is perhaps not unlikely that the Russian editions are more unreliable than Universal Edition. It is worrying though that there may be other possible errors in scores of Pärt's music that cannot be so easily detected.

Similarities to other contemporary composers

Finally, a brief comparison of Pärt's music with that of Gorecki and Tavener will be presented. The reason for this is that they are often perceived as being similar in some respects: their music has been described together as 'spiritually orientated'[4], though this cannot be considered as a technical description.

However, Thomas, in a book about Gorecki, whilst drawing the same comparisons, states with good reason that they 'need to be treated carefully, mindful of...the composers' separate cultural environments'[5]. The similarities that exist have been arrived at by different routes, and are often only broad rather than exact similarities. The cultural environments are indeed different, since the composers' early backgrounds are based in different countries: Estonia (Pärt), Poland (Gorecki) and England (Tavener). Whilst Pärt and Tavener in the way their music has developed seem largely inspired by their religious belief and religious music of various

[4] Website: http://www.music.sony.com/Music/ArtistInfo/JohnTavener_AkathistOfThanksgiving.html Music for a Secular Age; John Tavener's Akathist of Thanksgiving Sony Music Entertainment

descriptions, Gorecki, whilst certainly not indifferent to religious music, has other influences; Messiaen and Ives are given by Thomas as particular examples[6]. Pärt also has modern influences, most notably the Second Viennese School, but this is not of the same aesthetic or background as Gorecki's. Like Pärt, Gorecki also has an affinity with music from previous centuries, but is largely the Classical period (Mozart, Haydn and Schubert) rather than earlier (as with Pärt). However, Thomas also cites Bach[7] as an influence, and it has been seen how some elements from Baroque music have found their way into Pärt's music (particularly the third symphony).

The relevant similarities between the composer's music are that they are often vocal (with or without instrumental accompaniment), religious, and tonal/modal; and they are contemporary with the tintinnabuli works of Pärt. It should be made clear that the tintinnabuli method of writing is unique to Pärt; no other composer has used it. However, there are some similarities between the musical materials of these composers. The most fundamental is that tonality or modality pervades, often through extensive use of the triad. With Pärt we have seen how it is omnipresent by means of the arpeggiating voice. Tavener frequently makes use of parallel triadic movement, as in the second of the 'Hymns to the Mother of God' and in 'God is With Us'; Gorecki's 'Totus Tuus' and 'Amen' are tonal throughout, and often triadic.

A further similarity is that all have drawn inspiration from earlier, religious music. In Pärt's case this is the sacred music of the Western Medieval and Renaissance traditions (the relationship is shown in the commentary). For Tavener it is the links to the Orthodox Church that he has forged: he is a member of the Russian

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[5] Adrian Thomas, Gorecki (Oxford, Oxford University Press, 1997) p. 135
[6] Thomas. loc. cit

branch of the church and also has 'close links with the Greek Church'[8] (the text of 'Ikon of Light' is in Greek). Both have taken elements from the musical traditions of this church, most noticeably the modes. Mark Pappenheim writes of Tavener 'drawing his compositional language...almost exclusively from the ancient modes of the Eastern church'[9], and this happens even when setting texts more usually associated with other churches: for example his settings of the 'Magnificat' and 'Nunc Dimittis' (1986). The style of performance of Byzantine chant is also used, for example in the tenor solo of 'God is With Us' (1987). The Eastern church also is responsible for the sound of some of Gorecki's music: the setting of 'Totus Tuus' (1987) has its hallmarks described by Milsom thus: 'Its lilting rhythm, homely melody, radiant harmonies and gentle serenity all have their origins in the hymnody of the eastern European church'[10]. The setting of 'Amen' (1975) is very similar in this respect. Again, though, the similarity to Tavener is not exact because the influence is from a different genre of music (not Byzantine chant), albeit broadly associated with the same church.

A very relevant similarity between Pärt and Gorecki is 'bound up with his [Gorecki's] habitual use of contrasting blocks'[11]. This is a great feature of Pärt's work, as has been discussed above

There are two other specific examples of similarity between the composers: both have used string trio to accompany works (Tavener's 'Ikon of Light' and Pärt's 'Stabat Mater', to be analysed). Tavener's work for solo 'cello, 'Chant' has a

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[7] Thomas. loc. cit

[8] Peter Phillips. Sleevenote: Ikon of Light; Funeral Ikos; The Lamb The Tallis Scholars (Oxford, Gimell, 1984, rev. 1991), p. 2

[9] Mark Pappenheim. In the footsteps of the desert fathers The Independent (London, Friday 14th January 1984), p. 21

[10] John Milsom. Sleevenote: Ikos: Gorecki, Tavener, Pärt Choir of King's College, Cambridge; Stephen Cleobury (EMI Records, 1994), p. 3

symmetrical structure, which is a feature often used by Pärt; it is difficult to know whether these are a direct stimulus from one composer to the other.

[11] Thomas. loc.cit

Conclusion

This thesis has examined representative works from throughout Pärt's output, and has been able to reach conclusions regarding tendencies that are similar to all these works. This despite the fact that they are written in very different ways that cause them to sound very different: serial or tintinnabuli, as well as the work that could be described as the 'half-way house', the third symphony. These conclusions encompass such matters as the use of systems to build various aspects of the works (whether or not mathematically exact), instrumentation (blocks of sound and timbre, and their contrast), and various influences from the past (such techniques as canons, or again the mathematical aspect).

It has been discovered also that both the serial and tintinnabuli music have a similar provenance. Webern, that most systematic of serialists, is known to have edited works of the Renaissance Flemish composer Heinrich Isaacs. The Flemish composers used such devices as canon, and retrograde and inverted forms of melodies, and it is clear that Webern must have reaped much fruit in terms of influence for his serial music. It is equally known that Renaissance and also medieval music is responsible for key elements of Pärt's tintinnabuli music, including perhaps a certain similar aesthetic in term of the impression that such music leaves on its listeners (although some may find this a subjective matter, not an objective conclusion).

Because of the identification of this possible aesthetic, the work of two other contemporary composers (Gorecki and Tavener), whose music are often described and performed in the same context, have also been examined for similarities of approach. That there are similarities (including the aesthetic described above) is shown in the

preceding pages, but it is also clear that there are also marked differences in terms of the composers' backgrounds. This has led to certain differences in their approach to writing religious vocal music (the influences of different churches and their styles of singing for example), despite the similarities that also exist.

This thesis has shown that, despite a marked change in the style of Pärt's music, certain elements remain constant throughout the works examined here, and therefore almost certainly to a large extent throughout the rest of his *oeuvre.*

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