

Lux Aeterna (1992-1994)

Markus Zahnhausen (b. 1965)

Markus Zahnhausen is one of a new generation of musicians whose activities include most aspects of the modern professional musician's portfolio. He is a composer, performer, teacher, editor, publisher, and has worked as a music journalist and critic for radio and magazines (Zahnhausen 1998a, 178). He therefore brings a wide range of musical experiences to bear in the creation of new repertoire for the recorder, and his experience suggests a relatively broad range of interests. Indeed, he has written orchestral works, an oratorio, choral and chamber music, as well as numerous works for recorder. He has achieved recognition for his compositions in the form of stipends and prizes (Zahnhausen) indicating a wide engagement with, and acceptance by, the music industry in general. It can be argued that this not only adds an aura of credibility to his works for recorder within the broader musical community, but also to a large extent sets him aside from what has been called the recorder ghetto (Meynaud 1997, 6-8), a derogatory expression that emerged during the second half of the twentieth century, due primarily to the overwhelming number, and influence, of players whose sole interest lay in early music, compared to those seeking professional recognition for their work within the field of new music.

The development and success of the recorder's repertoire, during the twentieth- and early twenty-first centuries, can indeed be traced and linked to the improved knowledge and performance skills of influential players – a process that began with Brüggem and Linde in the 1960s and continues to this day. Zahnhausen's role as a composer-player in this is

a continuation of a process that was first outlined in *The Recorder Today* (O'Kelly 1990, 11-19).

As a professional performer, Zahnhausen's knowledge of the instrument has enabled him to exploit its expressive and technical potential. His broader understanding of the milieu in which he composes, gained, for example, from his experience in journalism, places his music in a more central, or at least, a less peripheral position in contemporary music (and indeed contemporary *recorder* music) than much repertoire, which seeks nothing more than to satisfy the needs of the market of amateur players, rather than communicate the expression of deeper, and more abstract, musical ideas of the quality likely to satisfy the needs of contemporary music audiences and professional performers. For it is this, the creation of high quality contemporary repertoire, that many professional players see as being so important for the future of the recorder, and which forms the basis of both Hauwe's and Zahnhausen's divergent approaches to the creation of new repertoire.

Zahnhausen brings his technical expertise on the recorder, and his musical preferences to his compositions, in a variety of ways that ultimately find their expression through the stylistic and musical variety of his works, each one a new development of his compositional style and technique, as well as having something new to express, for he claims 'to repeat oneself is, for me, very inartistic'¹ (Zahnhausen 1998a, 186). His twenty-four works for recorder (twelve published) include eighteen unaccompanied solos, one unaccompanied duet for recorder and transverse flute, two for recorder, voice and other instrument(s), one for recorder and string orchestra (*The Awakening of Pan*, 2006), one for string orchestra and four recorders (*Sviréli*, 2001), and one for recorder

¹ 'Sich zu wiederholen ist für mich etwas sehr Unkünstlerisches.'

quartet. The titles of a number of the pieces indicate a strong interest in music of the past as well as with song (his output includes 7 works for voice and instrument(s) as well as an *a capella* motet) and include titles such as *Carmina Romana* (composed 1997) (using texts of ancient Roman poets), *Klangreden* (composed 1986),² *Lux Aeterna* (composed 1992-1994)³ and *Ikona* [Icon] (composed 2006).

A strong didactic intent underpins a number of his earlier pieces: he refers to his *Flauto Dolce Solo - Sieben Stücke für Altblockflöte* (composed 1989-90) as being a ‘sort of *haute école*⁴ for recorder playing, in which the advanced player can work on fingering, breathing, and tonguing, and also on contemporary techniques such as multiphonics, glissandos, noise effects, and so on.’ (Zahnhausen 1991, 3). The didactic intent of the *Jahreszeichen* cycle is acknowledged in the programme notes accompanying the scores (Zahnhausen 1992a-d). Later pieces such as *Lyrische Szenen*, *Lux Aeterna*, and *Horns of Elfland* (composed 1999) include sufficient instructive notes to the player, including fingerings, to indicate the continuing presence of a didactic intent there too, though this is not openly⁴ stated. A number of pieces are also imbued with romantic ideals: a connection with nature is evident, for example, in his *Jahreszeichen* [*Signs of The Seasons*] (composed 1989-1991) and *Lyrische Szenen* [*Lyrical Scenes*] (composed 1992). He describes *Jahreszeichen* as ‘mood paintings’, based on evocative poetic titles inspired by landscape and the natural world, whilst the pieces of *Lyrische Szenen* ‘are to be regarded as standing squarely in the romantic tradition.’ (Zahnhausen 1997, III). *Horns of Elfland*, a piece ‘inspired by the poetic imagery’ (Zahnhausen 2003, 3) of Alfred, Lord Tennyson’s (1809-1892) *The Splendour Falls on Castle Walls*, that makes extensive use

² The title *Klangreden* is a reference to the baroque ‘sound speech’ aesthetic.

³ The title is taken from the incipit of the Requiem Mass of the Roman Catholic church and is discussed in detail below.

⁴ High School

of rubato, silence and extremely quiet dynamics (referring to the ‘echoes’ of the poem) through the use of flageolet tones, to evoke an atmospheric and reverential tribute to Benjamin Britten, who set words from the same poem for the third movement, *Nocturne*, of his *Serenade for Tenor, Horn and Strings* (1943).

The overwhelming preference for solo pieces in Zahnhausen’s *oeuvre* is derived from his desire to compensate for the instrument’s complete lack of opportunities for virtuosic display through great music, similar to that found in the nineteenth century repertoire of the piano, violin, and other standard orchestral instruments (Zahnhausen 1998a, 178). Allied with his passion for contemporary music, his solution has been to write his own virtuosic solo repertoire.

An indication of Zahnhausen’s aesthetic preferences thus established, it may now be instructive briefly to investigate his dislikes, for, as Hauwe suggests, one must accept the potential for an artistically restricted approach in the works of the specialist performer-composer, whose prime concerns during the compositional process may be personal technical preferences, rather than artistic ideals and which, as Hauwe less kindly implies, thus brings limitations to bear on his instrumental compositions. This is almost certainly the case with Zahnhausen who, for example, has a number of times publicly expressed his dislike of extended techniques, abstract noises, and other tricks of some avant-garde music, which ‘seem all too often to be an alibi for an intellectual and emotional vacuum’⁵ (Zahnhausen 1998a, 184), as well as expressing an intense distaste of the new complex style that became prominent during the 1970 and 80s. He noted in particular Spahlinger’s *Nah Getrennt* (1992), which the commissioner, Gerhard Braun, described as ‘probably

⁵ ‘die nur allzu häufig ein Alibi für das gedankliche und emotionale Vakuum [...] zu sein scheinen’

one of the most physically and psychologically strenuous pieces for recorder of our time’ (Braun 1994, 294) as ‘simply too much’⁶ for the listener (Zahnhausen 1998a, 177-189). His rejection of the avant-garde aesthetic, whilst at odds with Hauwe’s more adventurous, and at times, confrontational approach,⁷ is not, however, a denial of the importance that period played in the twentieth-century *renaissance* of the recorder, and the development of playing techniques, and new repertoire (Zahnhausen 1997, III). Rather, he would prefer to take stock of the situation in which the recorder finds itself, and point to new ways of improving the image of the instrument (Zahnhausen 1998a, 177). He wants nothing more ‘than to write *natural*, idiomatic music for the recorder.’⁸ (Zahnhausen 1998a, 184). The thread, he says, that ‘binds all my works together is perhaps my attitude to the recorder itself, the love of its specific sound, of its absolutely unalterable lyrical quality’⁹ (*ibid.* 186). In this sense Zahnhausen sees himself as a trendsetter, a late twentieth-century modernist who has escaped the bonds of highly complex, difficult music (for both player and listener), and the self-conscious virtuosity that is so often associated with the instrument, and Hauwe’s attitude to contemporary repertoire, in order to find a new way forward. Rather, for Zahnhausen ‘music should [...] touch the heart’¹⁰ (*ibid.* 185).

Zahnhausen’s conservative, romantic leanings in his approach to compositional content, and style, are balanced by a desire to find new means of expression on his instrument. As Jann Pasler puts it ‘neo-romantic has become synonymous with neo-conservative post-modernism’ (Pasler). This fusion of backward-looking conservatism, and forward-

⁶ ‘schlichtweg eine Zumutung’

⁷ An example of this is his approach to technique as exemplified in his *The Modern Recorder Player* (Schott Ed 12150, 12361 and 12270).

⁸ ‘... wollte ich nicht anders, als *natürliche*, idiomatische Musik für die Blockflöte zu schreiben.’

⁹ ‘*Der rote Faden, der alle meine Werke verbindet, ist vielleicht meine Einstellung zum Instrument Blockflöte, die Liebe zu ihrem spezifischen Klang, zu ihre absolut unverwechselbaren lyrischen Qualität.*’

¹⁰ ‘Musik soll [...] das Herz Rühren’

looking post-modernism, sums up the complex set of influences at work in contemporary recorder music, a situation discussed in 1983 by Hans-Martin Linde in his article *Neue Musik für alte Instrumente*¹¹ in which he discusses the conflict produced by the confrontation of the old and the new – ‘a delightful tension’¹² (Linde 1983, 395-404).

Zahnhausen completed *Lux Aeterna* in 1994. He was 29 years old, and his enthusiasm for the instrument and its repertoire, combined with a youthful idealism, are evident in this work. He began composing *Lux Aeterna* in 1992. It was initially intended as a movement, a ‘universal memorial piece’, as part of his fantasy-cycle *Lyrische Szenen*, but felt it would be more suitable as a stand-alone piece and was subsequently revised and completed in 1994 (Zahnhausen, 3 June 2010).

Peter,

Lux aeterna was originally part of my solo cycle *Lyrische Szenen*, composed in 1992. As I got aware that *Lux aeterna* would match better as a stand-alone piece, I revised it for final publication in 1994. So, originally it was not a memorial piece for Jens Rohwer, rather a ‘universal’ memorial piece.

When I heard of Rohwer's death in 1994, I decided to dedicate the piece to his memory. Rohwer was – in my humble opinion – one of Germany's most original composers of the older generation. We had personal contact but he was not a teacher of mine. I have recorded his marvellous Sonata for harpsichord and treble recorder for the Bavarian Radio.

That's all in brief, I think.

Best,

Markus (3/6/2010)

¹¹ *New Music for Old Instruments*

¹² eine reizvolle Spannung

The three fantasias that make up the cycle *Lyrische Szenen* are: *Pastoral*,¹³ *Traumspiel* (*Recollection of a Fantasia by G. P. Telemann*)¹⁴ and *Nostalgischer Waltzer*.¹⁵ They ‘owe something to the solo fantasias of Georg Philipp Telemann’ and ‘are similar in nature’ though ‘quite different in character’ to *Lux Aeterna*, ‘being intrinsically united by the element of lyricism and an instrumental poetry completely idiomatic to the instrument.’ (Zahnhausen 1997, III). Due to the composer’s use of altering agogic accentuation and tempo rubato, ‘all three fantasias should be regarded as standing squarely in the romantic tradition.’ (*ibid.*). The poetic titles and Zahnhausen’s subjective response to their imagery, as well as his emphasis on the importance of ‘timbre’ or tonal colour in performance, are clear and ample testament to the presence of the element of lyrical romanticism in his music, as noted above. This is all the more significant for his performance instruction, in the *Jahreszeichen* cycle, that concert halls with excessively dry or reverberant acoustics should be avoided (Zahnhausen 1992a-d).

The inspiration for *Lux Aeterna*, on the other hand, was the desire simply to write a piece for performance in a church with significant acoustic properties, including long reverberation times (Zahnhausen, 1995b, 6). Unusually for Zahnhausen’s works, extensive use is made in *Lux Aeterna* of extended instrumental techniques, including playing by blowing across finger holes, and using a transverse flute embouchure, producing flageolet tones, whistling, and microtones, the musical purpose being to explore the recorder’s sound world: ‘it should be completely new, an ‘outrageous’ piece of music in the truest sense of the word’¹⁶ (Zahnhausen 1998a, 185), but the effect should

¹³ Dedicated to Andrew Mayes: amateur player and editor of the English *Recorder Magazine* from September 1993-Autumn 2005.

¹⁴ Dedicated to Dan Laurin, a Swedish recorder player.

¹⁵ Dedicated to Markus Bartholomé, a student of Zahnhausen between 1995-2000. Although *Lyrische Szenen* was composed in 1992 it was not published until 1997, hence Zahnhausen’s opportunity to dedicate *Nostalgischer Walzer* to his student retrospectively.

¹⁶ ‘...es sollte ein ganz neues, im wahrsten Sinne des Wortes unerhörtes Stück Musik werden.’

nevertheless be to produce a piece of music that is ‘still, simple and beautiful’ (Zahnhausen 1995a, 4). *Lux Aeterna* carries the dedication “*Für Dan Laurin, Jens Rohwer in memoriam*”.¹⁷ In order to present a thorough analysis of Zahnhausen’s *Lux Aeterna* it will be necessary first to investigate the origin and meaning of the piece, and the context in which it was performed. We will then be able to examine the extent to which the composer was influenced by the original and how he may have incorporated these ideas into his own composition.

Lux Aeterna is a communion antiphon and is part of the *Requiem Mass (Missæ Defunctorum)*. The text for the communion of the Requiem Mass was confirmed by the Council of Trent (1545-1563) and is taken from the apocalyptic Old Testament fourth book of 4 Esdras, 35 and 34 (Roman Catholic Church 1962, 118):

*Lux æterna luceat eis,
Domine,
cum sanctis tuis in
æternum,
quia pius es.
Requiem æternam dona eis,
Domine;
et lux perpetua luceat eis ;
cum Sanctis tuis in
æternum,
quia pius es.*

May everlasting light shine upon them, O Lord,
with your Saints forever,
for you are kind.
Grant them eternal rest, O Lord,
and may everlasting light shine upon them.
with your Saints forever,
for you are merciful.

It is one of several books considered by Jews and protestants not to be of canonical value, and was therefore omitted from approved versions of the Jewish and protestant bibles, but admitted in Rome as being of some value, and, therefore, partially included in Catholic versions (Anon 1991a).

¹⁷ Jens Rohwer (1914-1994) was a German music teacher and composer – ‘unique among contemporary German composers’ (Zahnhausen 1995a, 4).

It is thought that the communion in [its current] form dates back to the fourth century, though the earliest Mass for the dead can be dated to the second century (Karp). The earliest sources for the chant melodies date from the tenth-twelfth centuries. The original melodies for the *Lux Aeterna* were commonly in the plagal versions of either the sixth or eighth modes (hypolydian or hypomixolydian respectively), and these were also sometimes transposed. Furthermore, the communion melodies indicated a ‘high incidence of modal instability’ (McKinnon), however, during the twelfth century, modal ambiguity had increasingly been rejected as not being faithful to the original divinely inspired chants as noted by Saint Gregory, and ‘modally ambiguous chants were emended in order to remove uncertainty’. (Hiley, 1990, 133).

There have been a number of attempts to modernise Gregorian chants, including the *Lux Aeterna*: initially, following the 1546 Council of Trent; and then, in 1582, Giovanni Guidetti published the first post Tridentine chant book “*Directorum chori ad usum sacrosanctae basilicae vaticonae et aliarum cathedralium et collegiatarum ecclesiarum*” (Lockwood and Crawford). A further version, edited by Franz Xaver Haberl (1840-1910) in Regensburg in 1871, was rejected in 1903. A commission was established in 1904 to prepare a new edition, and this work resulted in the *Graduale Romanum* 1908 (Haberl 2010, 225-289 and Dyer).

Example 6-4a, Facsimile of The Chant for *Lux Aeterna*, still in use within the Roman Catholic church's Requiem Mass according to the 1908 *Graduale Romanum* (Ordinarium Missae, page 88*)

Comm.
VIII.

LUX ae-térna * lú-ce-at e-is, Dómi-ne: * Cum sanctis tu-
is in aetérnum, qui-a pi-us es. †. Réqui-em ae-térnam dona
e-is Dómi-ne, et lux perpé-tu-a lú-ce-at e-is. * Cum san-
ctis tu-is in aetérnum, qui-a pi-us es.

REQUI-ESCANT in pa-ce. †. Amen.

† *Finita Missa pro Defunctis, si facienda est Absolutio, Cantore incipiente, Clerus circumstans cantat sequens Responsorium.*

Example 6-4b, The Chant for *Lux Aeterna*, still in use within the Roman Catholic Church's Requiem Mass according to *Graduale Romanum* 1908 – on modern staff

Comm. 8.

Lux ae - tér - na * lú - ce - at e - is, Dó - mi - ne: * Cum sanc tis tu - is in ae - tér - num, qui - a

pi - us es. Ré - qui - em ae - tér - nam do - na e - is Dó - mi - ne, et lux per - pé - tu - a lú -

ce - at e - is. * Cum sanc - tis tu - is in ae - tér - num qui - a pi - us es.

Re - qui - é - scant in pa - ce. A - men

The *Lux Aeterna* is composed in the eighth church mode within the range D-D, has the final note G and is, therefore, in the plagal Hypomixolydian mode. It is in two sections, the antiphon *Lux Aeterna*, and the verse *Requiem Aeternam* (see Examples 6-4a and 6-4b, above). It has existed in this form since at least the time of the *Missale Romanum* of 1474 (Harper 1991, 126). The dominant note, also called the tenor, in this case C, is so called because it acts as the reciting tone of the mode and is also a melodic pivot, or the tone around which the melody centres, see Example 6-5 (Powers and Wiering).

Example 6-5, The Eighth Mode, Hypomixolydian:

Final

Dominant

The significant feature of the officially adopted version of the chant melody is the range, primarily restricted to the notes between the fourth and seventh degrees of the scale, G-C. It is further characterised by the consistent use of stepwise movement with occasional skips, between the fifth and seventh degrees of the scale (A-C), with the melody just twice descending the minor third G-E. The use of larger intervals is slightly extended in the 1871 Ratisbon version, with a rising perfect fourth occurring on the *Cum Sanctis* (twice), and a rising major third, F-A, also occurring twice on the *quia pius es*. However, it is the later version, taken from the 1908 and later editions of the *Graduale Romanum*, that has prevailed within the church, and that I have used as the prototype for the present study.

The officially adopted 1908 version of the chant melody appears to show little evidence of the ‘modal ambiguities’ referred to by McKinnon and Hiley, above. On the contrary, the melody appears stable and supportive of the text. It reaches its upper extent just once, leading up and on to the word *Domine*, whilst the stabilising and central role of the dominant note, C, is confirmed by its persistent use on the words *æternam* and *perpétua*. Cadential patterns make consistent use of a falling second, including in the varied second phrase, *lúceat eis Domine*, which in this case is extended with a low F inflection before the repeated final note. The pattern of tones within the mode includes two semitone steps and use of these is restricted to two occurrences of E-F, both times on *quia pius es*, and several uses, generally in a repeated pattern, of the interval B-C, thus highlighting the strength, and confirming the importance within the piece, of the dominant or chant tone C.

Zahnhausen's *Lux Aeterna* has C and G as tonal centres of gravity, where G is used in the role of a dominant, reflecting the important dominant and final notes of the Hypomixolydian mode. It is in three parts, A (bars 1 – 58), B (bars 59 – 96) and C (bars 97 – 127). Part A can further be sub-divided into five shorter passages (A1; A2; A1a; A2a; A3), each of which can be defined by the tempo and characteristic sound production techniques employed. Section B is largely microtonal, whilst section C is both musically and, in its use of instrumental techniques, the most conventional. The three-part form has elements that are characteristic of classical sonata form: it consists of an exposition (with two subjects; bars 1-39); a development, bars 59-96; a recapitulation, bars 97-127.

The opening passage, A1, marked *pp dolente, quasi da lontano*¹⁸ (see Example 6-6), is performed by blowing across a finger hole, in the manner of playing the transverse flute. The sound thus produced is *pianissimo*, breathy, and ethereal. The melody is restricted to just three notes in this section: C, D, and E \flat , suggesting the key of C minor. The piece begins with a bar of silence in 3/4-time, and each short, quiet phrase that follows is, in a similar way, separated from its neighbours by a three-beat silence. The silences, accompanied by the reverberation of the large acoustic envisaged by the composer, arguably create a reverential atmosphere and a sense of expectation, and thus intensify the listening experience, as well as adding a sense of occasion, spirituality, contemplation, and because of their irregular nature in the context of the phrases, uncertainty to the performance: throughout sections A and B, the time signature regularly alternates between 3/4 and 4/4, causing the melodic patterns to be subjected to constantly varying 'agogic accentuation' (Zahnhausen 1995a, 6). The length and frequency of the

¹⁸ sorrowful, as if from a distance

silences gradually decreases through the first section, are minimal in the second section, and absent throughout the third, until the silence surrounding the final note. Thus the sense of rhythmic uncertainty diminishes through the piece, until stability is finally established with the meter settling into a regular 3/1 from bar 112 to the end.

Example 6-6, *Lux Aeterna*, Section A1

Altbloekflöte

ca. 66

pp dolente, quasi da lontano

8

(ord.)

Material from section A1 is used again, from bar 26, at the beginning of A1a, but in a shorter version just 9 bars long. Here the layout of the phrases is similar to that in A1 but the material is rhythmically offset compared with section A1, in addition to which the silences are foreshortened, in bars 33 and 34, prior to a short repeat of material in the dominant key from A2, at bar 15. As with section A1, this material too is re-used in an abridged version from bars 35 – 39 (section A2a). The final section, A3, calls for the player to whistle and uses material from previous sections. See Table 6-1, below, for an outline of the structure and development of the section.

Table 6-1, showing the development of the first part of *Lux Aeterna* through sections A1

– A3

Section	Tone Production Method	Tempo	Performance Instruction	Length (bars)	Features
A1	Flute	♩ = ca. 66	<i>pp dolente, quasi da lontano</i>	1-14	Key = C minor Regular three-beat rests between phrases. Phrases are short, comprising 1, 2 or 3 notes. Character = ethereal
A2	Flageolet	♩ = ca. 76	<i>ppp e semplice</i>	15-25	Key = G major Occasional single-beat rests; longer phrases, up to 14 beats Character = brighter, with more ‘presence’
A1a	Flute	♩ = ca. 66	<i>pp dolente</i>	26-34	Key = C minor Rests between phrases becoming shorter Character = ethereal
A2a	Flageolet	♩ = ca. 76	<i>ppp e semplice</i>	35-39	Key = G major The final E hints at a change of tonality Character = brighter
A5	Whistle	♩ = ca. 84	<i>pp</i>	40-54	Key = Mixed, alternating between C minor and G major. The whistling and the mixed tonalities suggests a reconciliation and may represent the introduction of a human/physical element.
B	Microtonal	♩ = ca. 96 – ca. 176	<i>pp poco a poco crescendo ed accelerando</i>	59-96	Tonal centres C and G Microtonality and constant accelerando lends a sense of melodic instability
C	Ordinary	Minim = varies ca. 60-ca.84	<i>f Cantando espressivo e sonoro</i>	97-127	Rhythmically, melodically and tonally the most stable section. Strong sense of modality in final 14 bars.

Section B continues without a pause, separated by a one-bar rest from the end of Section A. Whereas the section A created uncertainty and instability through the use of constantly changing rhythmic patterns, distant, ethereal, thin, and wispy sounds, section

B creates a similar effect through the intermittent use of microtonal intervals and hesitant shifts in tonality. Other features are, again, the limited tonal range - for all except the last three bars this is restricted to a diminished octave, a constantly increasing tempo, which begins at $\text{♩} = \text{ca. } 96$, and finishes with $\text{♩} = 176$, nearly double the original tempo.

Tonally, it begins with a short scalar passage in C minor that uses new melodic material covering the interval of a fourth, and finishes in G at bar 96, having first been subjected to several transpositions; up a minor third at bars 66 – 68, and returning to C at bar 69. A pivot at bar 71 takes us in to D minor and then, hesitantly, to a central section tonally centred around G, bars 73 - 79, where it lingers uncertainly, until returning to C minor at bar 83. The same minor third transposition at bar 86 is a variation of material heard in bars 66 – 69 but this time there are hints of G, before returning to C, at bar 93, prior to the final descent to G. The melodic movement is mainly stepwise, though use is made of falling minor thirds (bars 64 and 84). The range of the melodies also often covers the interval of a minor third, for example bars 60 – 61 and bars 66 – 67. As the extent of the microtonal usage increases through the section the step-wise intervals become increasingly frequent and small, with extensive use of quarter-tones. This process begins with the introduction of d-quarter-flat, and then b-quarter-sharp in bar 68, and with the exception of bar 85, continues unabated until bar 88. The steady accelerando throughout the section and the increasingly frequent occurrence of quarter-tone intervals correspondingly increases the sense of instability through to the final descending phrase, bars 93 – 96.

The final section (C) is melodically and rhythmically the most regular of the three. It takes material directly from section A2 but places it in a new metric context. In this section the alternating 3/4 - 4/4 bars settle in to a regular pattern of extended passages, in

either triple or duple time (3/1 or 2/1), the exclusive use of semibreves and minims up to bar 114, and thereafter of breves and semibreves, in triple time, accompanies the introduction of a modal feel to the work, particularly at bar 107, where the opening G major/E minor passage moves towards an E^b-B^b-F modality, based on the two corresponding diatonic tetrachords, which are made explicit at bar 114. Thereafter follows an extended passage that emphasises the modal origins of the concept for the piece, which ends on an F-C plagal cadence.

The following microtonal accidentals are used in Zahnhausen's *Lux Aeterna*.

Quarter-tone sharp = \sharp Quarter-tone flat = \flat

Threequarter-tone sharp = \sharp Threequarter-tone flat = \flat

These are inconsistent with either of the systems recommended by Stone (Stone 1980, 67-69), Risatti (Risatti 1975, 16-17), or Karkoschka (Karkoschka 1972, 2-3), though in these latter cases the quarter-tone sharp and quarter-tone flat signs are employed in separate systems by different composers for microtonal inflections in tonal music.

Zahnhausen's choice of signs indicates a surprising absence of consistency of systematic approach within the piece. According to the system chosen for the quarter-tones, the three-quarter-tone flat might more logically have been indicated by the addition of an arrow to the regular quarter-flat sign,¹⁹ which although not widely in use has, according to Risatti, been used by Mauricio Kagel (b.1931-d.2008) (1953), Azio Corghi (b.1937) (1967) and Paul Méfano (b.1937) (1968).

¹⁹ That is, \flat

The same signs have been used in *Winterbilder* and *Sommerklänge* of *Jahreszeichen*, though the use of microtones in these pieces is limited to incidental occurrence, as part of a short passage of multiphonics, e.g. in *No. 2, Weisse Weiten* from *Winter Bilder*, see Example 6-6. The most prominent note in each of the multiphonics is in bar 20, the $c\sharp$, and in bar 21 the $e\flat$, and $f\flat$ respectively:

Example 6-7, bars 19-22 from *Weisse Weiten*



and for motivic colouration as part of an extended chromatic passage in *No. 1, Der Tag erwacht* from *Sommerklänge*, see Example 6-7.

Example 6-8, bars 27-34 from *Der Tag erwacht*

⊛ = crescendo by raising pressure of breath
(regardless of any change in pitch)

The general increase in breath pressure through the passage above plays no role in the execution of the microtones in the following passage, which requires the use of accurate dedicated fingerings for the b-quarter-flat in both registers.

Flauto Dolce Solo - Sieben Stücke für Altblockflöte (Zahnhausen 1991, 3) uses

different signs for the quarter-tones; quarter sharp = \sharp ,

three-quarters sharp = \sharp , and quarter flat = \flat .

Usage is similar to that found in the two movements from *Jahreszeichen* (see page 182), i.e. a combination of multiphonics based on a microtonally chromatic rising scale which, in turn, incidentally produces high-pitched microtonal notes as a result of altering the breath pressure in bar 105. It is unclear whether this could actually accurately be achieved as part of a breath glissando incorporating a trill, without the use of a complex combination of fingerings including shading with left hand finger three (see Example 6-9). There is evidence to suggest that the composer has chosen here a rather complicated notation to indicate a slow, simple vibrato (glissando) in combination with a trill on C-sharp:

Example 6-9, bars 99-105 from No.6 *Hommage à D. SCH.* From *Flauto Dolce Solo - Sieben Stücke für Altblockflöte*

The image shows a musical score for a flute solo. It consists of two staves. The top staff begins at measure 99 and ends at measure 105. It contains several notes with sharp and flat symbols. Dynamics include *ff*, *fff*, and *attacca*. The bottom staff begins at measure 104 and ends at measure 105. It contains several notes with sharp and flat symbols. Dynamics include *mf*, *f*, *p*, *mf*, *p*, *mf*, and *pp*. Performance instructions include "Senza misura (♩ = ca. 88)", "Commiato (♩ = ca. 100)", "gliss.", and "tr (4)". There are also trill markings (tr) and a glissando marking (gliss.).

The rather primitive approach to the production of microtones shown in the example above is in contrast to the more sophisticated and extensive use of microtones in *Lux Aeterna*. Here their role is both as a central melodic feature of the work and as a structural element within the central section, which makes this piece unique in Zahnhausen's output. A significant feature of the microtonality in *Lux Aeterna*, is the composer's structural use of enharmonic equivalents at points in the passage that suggest modulation. For example, the use in bar 71 instructs the performer in the direction of melodic movement and indicates a point of tonal modulation, in this case from C minor to D minor: down towards the $c\sharp$ from the first beat d -quarter-flat and up from the third beat c -three-quarters-sharp towards the $d\flat$ at the beginning of the following bar as shown in Example 6-10, below.

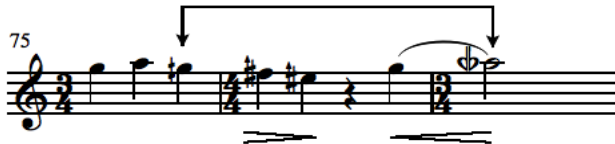
Example 6-10, bars 70 – 72



Example 6-11 shows how the movement towards the dominant key, G, hesitates, initially by the use of a semitone fall away from the microtonally sharpened leading note, and secondly, by the addition of a rest before the G, thus weakening movement towards the dominant tonality, which is further destabilised by the use of microtonal deviations from the G immediately before, and after, the hiatus at the third beat of bar 76. The use of enharmonic equivalents, indicated by the bracket in Example 6-11, either side of the hiatus, again highlights, at least on paper, the instability of the movement between

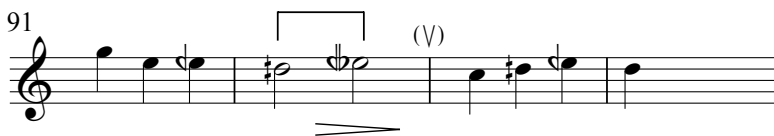
tonalities, and hints, in this case with the a-threequarters-flat², at the future direction the modulations may take; here it presages the movement down towards C, which is finally reached seven bars later, at bar 83.

Example 6-11, bars 75 – 77



The final phrase begins at bar 93 and is preceded by a third enharmonic equivalent – the d-quarter-sharp – e-three-quarters-flat (see Example 6-12, below). Unlike the other two occurrences, here we find the end of a phrase. The two notes are clearly intended to be played separately, and since the possibility of a breath is indicated after the second of the pair, the player must not assume to have been given any instruction regarding forwards movement; the phrase ends, and a new start is indicated.

Example 6-12, showing a third use of the enharmonic equivalent



Section B finally comes to rest on G at bar 96, following an extended descending passage that begins in bar 90, with the B \flat , the highest note encountered in the piece thus far.

The use of b-quarter-sharp leading in to c (see Example 6-13, below), may be seen to highlight tonal modulation pivots in the same way as the enharmonics in Examples 6-9, 6-10 and 6-11, above. The quarter-tonal raising of the leading note strengthens the melodic move to C: it occurs twice, at bars 68 – 70 and across bars 82 – 83:

Example 6-13 shows the use of the raised leading note in C

Musical notation for Example 6-13, showing a melodic line starting at bar 82. The notation is in treble clef, 4/4 time, and features a raised leading note (B-flat quarter-sharp) leading into a C note.

The movement towards the dominant G, on the other hand, is teasingly withheld by quarter-tonally flattening a previously sharpened leading note, so that the melodic movement is away from the G, and also by the insertion of rests, breaths, or by microtonally altering the home note. Example 6-14 shows a variety of playful ways in which the G is repeatedly withheld in the central section, bars 69 – 81. Note the descending quarter-tonal scale, bar 76, leading out of the passage, eventually to arrive in C at bar 83:

Example 6-14

Musical notation for Example 6-14, showing a complex melodic passage starting at bar 69. The notation is in treble clef, 2/4 time, and features various rhythmic and microtonal alterations, including a descending quarter-tonal scale in bar 76.

It has been shown that Zahnhausen's use of microtonality in this section highlights important structural points and heightens the sense of melodic movement and instability. Example 6-15 shows the main centres of tonal gravity as the middle section progresses.

Example 6-15. Highlighting the tonal centres of gravity (shown in boxes) in the central microtonal section.

The image displays a musical score for a single melodic line in 4/4 time, spanning measures 60 to 90. The score is written on a single staff with a treble clef. The music is characterized by frequent microtonal shifts, indicated by the changing time signatures (2/4, 3/4, 4/4, 5/4, 6/4, 7/4, 8/4, 9/4, 10/4, 11/4, 12/4, 13/4, 14/4, 15/4, 16/4, 17/4, 18/4, 19/4, 20/4, 21/4, 22/4, 23/4, 24/4, 25/4, 26/4, 27/4, 28/4, 29/4, 30/4, 31/4, 32/4, 33/4, 34/4, 35/4, 36/4, 37/4, 38/4, 39/4, 40/4, 41/4, 42/4, 43/4, 44/4, 45/4, 46/4, 47/4, 48/4, 49/4, 50/4, 51/4, 52/4, 53/4, 54/4, 55/4, 56/4, 57/4, 58/4, 59/4, 60/4, 61/4, 62/4, 63/4, 64/4, 65/4, 66/4, 67/4, 68/4, 69/4, 70/4, 71/4, 72/4, 73/4, 74/4, 75/4, 76/4, 77/4, 78/4, 79/4, 80/4, 81/4, 82/4, 83/4, 84/4, 85/4, 86/4, 87/4, 88/4, 89/4, 90/4). The score includes several performance instructions: *pp* poco a poco crescendo ed accelerando (measures 60-65), *simile* (measures 66-71), and *ritardando* (measures 84-90). Three specific tonal centres of gravity are highlighted with boxes and dashed lines: 'ca. 116' (measures 66-71), 'ca. 160' (measures 84-89), and 'ca. 176' (measures 90-95). The score also features various musical notations such as slurs, accents, and dynamic markings.

Considerable emphasis is placed in all of Zahnhausen's works on tonal quality or timbre. In *Jahreszeichen*, for example, he advises the performer on the acoustic properties of the performance space, as an aid to enriching tone quality, and expects advanced and professional players to be familiar with a range of 'dynamic' fingerings, with which it is possible to achieve dynamic and timbral variety. A relatively straightforward example of this kind of usage can be seen in the second movement, *Blätter im Wind*, from *Jahreszeichen, Herbstmusik* (see Example 6-16, below) where the use of a *piano*

fingering will produce a somewhat quieter and timbrally softer, or more muffled, tone. However, this kind of specifically notated usage is rare. More common in his works is his recommendation that the performer use ‘recorders with so-called “low” tuning (A 415)’, because of their ‘considerably greater sonority and softer range of timbres’ (Zahnhausen 1992a, 11). A similar note appears in *Lyrische Szenen* (Zahnhausen, 1997, III), see Example 6-16. This perceived difference in sonority might be due to little more than the effect of the lower pitch or it may be an entirely subjective assessment of a particular instrument, or of the instruments of a particular maker, or makers. Whether such a difference can be quantified, is assessed in Chapter 5 of this study.

Example 6-16, *Blätter im Wind*, from *Jahreszeichen, Herbstmusik*

2. Blätter im Wind
Agitato (♩ = ca. 184) *sempre* ♩ = ♩

Altblockflöte

*) = change of timbre for c²
 (fingering: 0 1 2 4 5 6 7)

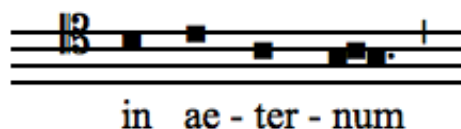
Thorough knowledge of the use of fingerings, such as the one used in the example above, is essential for determining dedicated microtonal fingerings of the kind, and accuracy, necessary for the successful performance of microtonality in works like *Lux Aeterna*. Once familiarity with the fingerings has been acquired they can readily be applied to the straightforward melodic context of *Lux Aeterna*. Zahnhausen’s suggested fingerings produce notes with a consistently bright, open tone with the exception of the fingering for G-quarter-sharp/A-three-quarters-flat, which due to the number of holes covered

(1234567), produces a softer, darker, slightly ‘muffled’ sound. It is not clear whether this ‘darker’ timbre is intended or not, but it certainly has the feeling of wanting to return to the dominant note G rather than continue rising in pitch, away from the dominant. Should a timbre more in keeping with that of the rest of the movement be desired, a suitable alternative in the context of the surrounding fingerings, in order to produce a consistent bright and open tonal quality across the range of notes used, might be to remain in the first register by using the fingering - - - - 5 6 - . (the use of fingers 3 and 4 in Zahnhausen’s fingering sends the instrument into the second register).

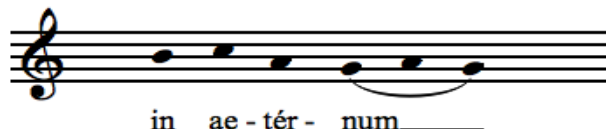
Original Gregorian chant melodies, including *Lux Aeterna*, varied from place to place and changed over time (Hiley 1990, 120-142), and part of the purpose of this study, and an important element in the performer’s role of interpreting the piece, is to determine the extent to which Zahnhausen has incorporated elements of the original chant melodies in his piece. This information will form the foundation on which a considered interpretation may be based. The clearly defined phrases of the chant melody are determined by the underlying text and supported by consistent use of the falling second at cadences, and the mode’s final note, G. A comparison, for example, of the twice-occurring G-A-G rocking motif on the syllable ‘num’ in *aetérnum*, in the original chant (see Examples 6-17a, 6-17b), with similarly phrased motifs in Zahnhausen’s piece (see Example 6-18) reveals just three occasions where Zahnhausen uses the motif, albeit with the smaller semitone interval. Bar 75 includes a microtonally modified version of the same motif (see

Example 6-18):

Example 6-17a, from the original Gregorian chant *Lux Aeterna*



Example 6-17b, from *Lux Aeterna* in a modern transcription



Example 6-18, bars 68 – 76 from Zahnhausen’s *Lux Aeterna*

Zahnhausen’s *Lux Aeterna*, like the original chant melody, makes extensive use of stepwise melodic movement, indeed, it is a defining characteristic of the piece, but in all other respects this is a contemporary instrumental composition with few references either to the modal nature, or the vocal roots, of the original chant. Indeed, Zahnhausen’s use of rhythmic instability as noted above (see page 14), and the extensive use of microtones in the central section, are in direct contrast to the modal and melodic stability of the chant melody. Despite his ‘love of [the recorder’s] specific sound, of its absolutely unalterable lyrical quality’ (Zahnhausen 1998a, 186), he makes extensive use of extended instrumental techniques, including tonally unstable microtonality, the production of ethereal sounding flageolet tones, transverse flute sound production techniques, and whistling, thus removing his composition a step further in intent from the sung source material, and conceptual inspiration for the piece. He simultaneously invokes the recorder’s expanded tonal and dynamic possibilities through the use of unconventional playing techniques as the pieces *raison d’être*. Indeed, it is the performer’s skill with ‘the painstaking dynamic calibration of the four levels of timbre: ‘flauto traverso’, harmonics, whistling, and ‘ordinario’, Zahnhausen writes, that is ‘the decisive element in performances of *Lux Aeterna*’ (Zahnhausen 1995b, 6).

The lyrical qualities of the recorder, so highly valued by the composer, are here secondary to dynamic and timbral variety. However, dynamic control over the flageolet and flute passages is naturally limited by the techniques themselves, leaving one element of performance - the ability to sustain the melody, to find the instrument's lyricism through these passages - that is likely to prove the greatest *musical* challenge for the performer. Only the final passage of the first section (A3 in the score, see Appendix 11, 364), which is to be whistled, offers the player the opportunity to demonstrate dynamic variety, not through the recorder, but with his whistling skills. How is the performer to reconcile these apparent contradictions? This more 'human' element of the performance, the whistling, 'mediate[s] timbrally between the 'flauto traverso' notes or [sic]²⁰ harmonics, and the subsequent *ordinario* notes' (Zahnhausen, 1995b, 5), and suggests one stage in the move from the purely ethereal to the physical world, in a way that suggests a reconciliation of the two, and a 'coming to life', an interpretation that is supported by the gradual increase in tempo through the section, and indeed the gradual establishment of rhythmic, and tonal, stability as the piece progresses.

Section B (see Appendix 11) is technically more straightforward - once familiarity with the nine microtonal fingerings is established (see the microtonal fingerings that are given in the accompanying notes to the score) and the performer has the skill to play a melodic line convincingly, with all that entails – breath control, sensitivity to phrasing - no further technical difficulties are presented. The few dynamic markings are in accordance with the natural rise and fall of the melodic lines, and the same is true of the final section (C). It is clear that the composer has composed the dynamic and timbral variety into the piece

²⁰ '...sollen klanglich vermittelnd zwischen den "Querflöten"- bzw. Flageolet-Tönen und den *ordinario*-Tönen wirken.' Bzw. (=beziehungsweise) here means "and" or "likewise". A more accurate translation would read '... should mediate timbrally between the "flauto traverso" notes and likewise between the harmonics and the subsequent *ordinario* notes.'

leaving little in the second and third sections to challenge the performer technically.

Instrumentally, there are, in the first section, two technical challenges: the production of flageolet tones, and a transverse flute embouchure, as the method for note production, and in contrast to much nineteenth century music, the virtuosity of these is understated – there are no displays of instrumental bravura. This is in direct contrast to Hauwe's, as Zahnhausen might see it, more extravert approach to performance.

One may have reservations about Zahnhausen's inconsistencies in his use of microtonal signs, his attitude towards and use of unconventional playing techniques, including calling on the player to whistle, and to blow across finger holes in order to produce tones with a transverse flute embouchure, nevertheless the result is an effective and in some ways challenging piece.

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