

PITCH ORGANISATION IN THE MUSIC OF
WITOLD LUTOSŁAWSKI SINCE 1979

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The Candidate confirms that the work submitted is his own
and that appropriate credit has been given
where reference has been made to the work of others.

ABSTRACT OF THESIS

Organisation of pitch in the vertical and horizontal planes has been, and continues to be, the overriding compositional concern of Witold Lutosławski. Previous writings on the composer and his music have touched on the subject, in many cases merely superficially, in some cases in more depth; nevertheless, significant aspects of his musical language and compositional technique have hitherto remained overlooked. The present study aims to correct this imbalance by providing a detailed examination of Lutosławski's methods of pitch organisation as developed and deployed since 1957, with particular reference to the works composed since 1979. The study has been carried out with reference to primary source materials: including all the composer's pre-compositional sketches; his autograph scores; hitherto unpublished lectures; and the transcripts of my many hours of specially tape-recorded conversations with Lutosławski.

Chapter One introduces and outlines the case for consideration, with emphasis on his redefinition of harmonic language in the late 1940s, and draws attention to the decisive turning point in 1979 which has led to the emergence of his late style. Chapter Two examines his dramatic shaping of large-scale forms, with reference to some aspects of proportional analysis. The remaining three chapters of Part One provide detailed analysis of Lutosławski's methods of pitch organisation, drawing examples from many of his works composed since 1945. Chapter Three, 'Vertical Pitch Organisation: Harmony', presents a classification of his 12-note chords and chord-aggregates. Chapter Four, 'Horizontal Pitch Organisation: Melody', presents a classification of melodic lines based on a technique identified here in terms of interval-class pairings. Chapter Five, 'Oblique Pitch Organisation: Polyphony', examines the relationship between his technique of aleatory counterpoint and his methods of organising pitch.

The five chapters of Part Two provide detailed analytical examination and critical discussion of each major work composed since 1979, with particular reference to the methods of pitch organisation identified in Part One and the way these have been developed and refined. The following works are represented: *Epitaph* (1979); *Double Concerto* (1979-80); *Grave* (1981); *Symphony no. 3* (1981-83); *Chain 1* (1983); *Partita* (1984); *Chain 2* (1985); *Chain 3* (1986); *Piano Concerto* (1987-88); *Interlude* (1989); *Chantefleurs et Chantefables* (1989-90).

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PREFACE

Organisation of pitch in the vertical and horizontal planes has been, and continues to be, the main compositional concern of Witold Lutosławski. Previous writings on the composer and his music have touched on the subject, in many cases merely superficially, in some cases in more depth; nevertheless, significant aspects of his musical language and compositional technique have hitherto remained unexplained. The present study aims, therefore, to provide the first fully detailed examination of Lutosławski's methods of pitch organisation as developed and deployed since 1957, with particular reference to the works composed since 1979. To this end, primary source materials have been consulted, including pre-compositional sketches and autograph scores of published and unpublished works.

The decision to regard 1979 as a turning point in Lutosławski's career, separating earlier works from those composed in what now appears to be his late style, was determined primarily by my own observations during the late 1970s and early 1980s on the development of his harmonic language, confirmed by subsequent public and published statements made by the composer. This issue will be considered in Chapter One. Chapter Two examines his approach to the dramatic shaping of large-scale forms, with reference to some aspects of proportional analysis.

The primary purpose of this study is to examine the techniques of pitch organisation as applied in the later works. In order to provide a proper context for evaluating the development of these techniques it has been necessary to trace their appearance in Lutosławski's work since his adoption of twelve-note harmony in the Five Songs of 1957. Hence, examples are selected from many works, not only those representing his later style. Chapter Three presents a classification of Lutosławski's 12-note chords and chord-aggregates. Chapter Four presents a classification of his methods of generating horizontal lines according to a principle identified here in terms of interval-class pairings. Chapter Five examines the relationship between his rhythmic/polyphonic technique of aleatory counterpoint and his methods of organising pitch. The five chapters of Part Two provide detailed analytical examination and critical discussion of each major work completed since 1979, with particular reference to the methods of pitch organisation identified in Part One and the way these have been developed and refined.

Preface

My analytical approach has been that of a composer seeking to retrace another composer's steps, in an attempt to reveal the authentic techniques and methods by which his music came into being. In this sense my approach has been empirical, as a study of compositional technique, rather than theoretical, as a test of any particular analytical methodology (except in Chapter Two, where proportional analysis is tested). Overall, I have been guided by the conviction that penetrating analysis is a necessary precondition for the formulation of properly informed criticism, and by a view of the complementary relationship between composition and analysis made explicit by the Greek word for 'composer', *Συνθετις* (*synthetis*). Most of the analytical work has taken the published score as the point of departure, on the basis that the score represents the final stage of compositional decision-making. In addition, however, the sketches of many works were consulted in order to identify the essence of the original pre-compositional material. My main analytical procedure has been that of reducing the information given in the score, in order to facilitate close examination of intervallic relationships in chords, in individual lines, and between polyphonic lines, and to enable these features to be compared and contrasted between pieces. Some aspects of Pitch-Class Set analysis are referred to, although this method has obvious limitations in dealing with harmony where all twelve notes are continually present. Translation of staff notation into integer notation has proved useful, however, where it enables total interval content to be expressed and represented by an interval vector. Pitch-class set names and numbers are given, not in order to pursue such analysis here, but as a cross-referential aid to future investigators who may wish to compare Lutosławski's chords with those, say, of Elliott Carter. Such comparison, however, is outside the scope of the present study.

I am grateful to Witold Lutosławski for his invaluable co-operation and for devoting so much time to our numerous meetings in Warsaw, London and elsewhere over the last eleven years. Since April 1987 I have made tape-recordings and transcripts of many of our conversations. These have been used here as primary source material from which direct quotations have been made, particularly in Chapter Three.

Preface

I acknowledge permission from the following to reproduce music examples from works in which they hold copyright: Chester Music Ltd of London, in association with Polskie Wydawnictwo Muzyczne (PWM) of Kraków; Moeck Verlag of Celle (Five Songs and *Muzyka żałobna*); and particularly Witold Lutosławski for permission to reproduce examples and facsimile extracts from published and unpublished scores, manuscripts and sketches, and from various unpublished lectures. I also acknowledge permission from Chester Music (Edition Wilhelm Hansen) to quote from the book edited by Owe Nordwall, and the two books of conversations with the composer compiled respectively by Tadeusz Kaczyński and Bálint András Varga.

I acknowledge assistance from the following libraries in providing access to various source materials: the Library of the Polish Composers' Union (ZKP) in Warsaw, particularly the invaluable assistance of Mr Kazimierz Nowacki; the Polish Library of the Polski Ośrodek Kulturalne (POSK) at Hammersmith in London; the music manuscripts section of the Polish National Library at the Krasieński Palace in Warsaw; and the Polish Film Archive in Warsaw for allowing me a private screening of the two films of 1945-6 for which Lutosławski composed scores.

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J. C. B. R.

Ilkley
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Guide to Polish Pronunciation

The Polish alphabet contains 32 letters:

a ą b c ć d e ę f g h i j k l ł m n ń o ó p r s ś t u w y z ź ż

Unlike English, Polish is a phonetic language with consistent rules of pronunciation. The stress falls on the penultimate syllable, with the exception of a few foreign words. All vowels are simple and of even length, as in Italian, except two nasal vowels - ę and ą (as in French: ę = un; ą = on). At the ends of words 'ę' loses its nasality in colloquial Polish and is pronounced as oral 'e'; the 'ą', however, preserves its nasality. Other vowel sounds are contained in the following English words: sum (a); ten (e); heat (i); lot (o); book (u); sit (y). Most single consonants behave the same way as in English except for 'c' (ts), 'j' (soft, as in 'yes'), and 'w' (v). As in German, some consonants are softened when they fall at the end of a word, hence 'b, d, g, w, z' become 'p, t, k, f, s', respectively.

Polish		Equivalent	
ą	as in sąd	on	as in French : on / sont
ę	as in kolędy (carols)	un	as in French : un / Verdun
c	as in taniec (dance)	ts	as in English : its
ch	as in Lech	ch	as in Scottish: loch
cz	as in Iłakowicz	ch	as in English : church
ł	as in Lutosławski	w	as in English : why
ń	as in Toruń	nu	as in English : inured
ó	as in Kraków	oo	as in English : woof
rz (ż)	as in żałobna (mourning)	su	as in English : pleasure
sz	as in Szymanowski	sh	as in English : show
szcz	as in Szczecin	shch	as in English : pushchair
ś	as in Solidarność	sh (soft)	as in English : sheep
ć	as in Solidarność	ch (soft)	as in English : cheese
w	as in Witold	v (hard)	as in English : vase
w	as in Kraków	f (soft)	as in English : roof
y	as in muzyka (music)	i	as in English : ill

Examples of English (approximate) phonetic transliteration:

Lutosławski	= Lootoswawski	Iłakowicz	= Iwakovitch
Solidarność	= Solidarnoshch	Łomża	= Womzhah
Muzyka żałobna	= Moozika zhawobna	Endecja	= Endetsia
Szymanowski	= Shimanovski	Wałęsa	= Vawensa
Górne Drozdowo	= Goorne Drozdovo		

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PART ONE

THE ORGANISATION OF PITCH

CHAPTER ONE

Introduction

Few composers of our time have succeeded in establishing the twin pillars of personal musical vocabulary and coherent musical language which have enabled them to produce a substantial body of large-scale works whose authorship is instantly recognisable. Of those born in the early years of this century, those who clearly have achieved mastery include Olivier Messiaen (b.1908), Elliott Carter (b.1908) and Witold Lutosławski (b.1913).

Whereas Messiaen evolved his highly distinctive language at an early stage in his career, consolidated by the publication in 1944 of *Technique de mon langage musical*, Carter and Lutosławski have taken longer to arrive at the synthesis of elements which constitutes their individual sound language.¹ In all three cases, these composers have developed a radical approach to the crucial matters of pitch and rhythmic organisation: Messiaen through his synthetic modes and panoply of rhythmic techniques, often based on prime numbers; Carter through his rigorous manipulation of pitch sets, intervallic characterisation of instrumental parts, and rhythmic techniques such as his principle of metrical modulation; Lutosławski through the resources of twelve-note harmony and his rhythmic/polyphonic technique of aleatory counterpoint.

Emphasis on these three composers is not intended to diminish the music of other significant figures of their generation. Simply, it is to clarify the difference between those who have adopted a radical approach to their musical language and others, such as Benjamin Britten (1913-76) and Michael Tippett (b.1905), who have achieved their individual style using familiar elements of harmonic, melodic and rhythmic vocabulary. There is the hitherto undervalued figure of Maurice Ohana (b.1914), whose music is rarely heard in Britain or the United States, although it is well known in France and Germany.² There is also the question of assessing (or re-assessing) the work of Andrzej Panufnik (1914-91), Lutosławski's erstwhile piano-duo partner during the Nazi occupation of Warsaw. Comparison between the work of Lutosławski and these close contemporaries (particularly Carter) is a worthy area of investigation for future critical commentary, but is outside the scope of the present study.

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Both the music and musical language of Messiaen have been comprehensively discussed and analysed, principally by the composer himself, but also by Robert Sherlaw Johnson.³ Carter's music has been examined closely by David Schiff,⁴ and David Harvey.⁵ In Lutosławski's case, however, although much has been written about individual works, and there have been numerous published interviews with the composer, central features of his harmonic and melodic language have hitherto not received either the critical or analytical attention which they require and deserve, partly due to his long standing reticence towards discussing his own music in analytical detail.

Let me say at once that I've always avoided making any final statements about my technique of composition. All the methods we employ are, after all, in constant motion. I'd go even further and say it is a very dangerous moment indeed in the life of an artist when he imagines he has finally arrived at a formula which defines his technique or system of composition. To my mind this is an illusion.⁶

Lutosławski's negative attitude towards the whole notion of fixed, codified 'systems' (whether compositional or political) can largely be ascribed to his disillusionment with two contrasting phenomena in the post-war years. Reacting against Nazi suppression of musical modernism in Germany and Austria, and equivalent fascist control in Italy, much of the West-European *avant-garde* embraced the restrictive rigours of post-Webernian serialism, as represented by those closely connected with Darmstadt and the *Domaine Musical*. On the other hand, Poland and the other (then) Soviet-satellite states of Eastern Europe were plunged into the dark years of political constraints and coercive tactics of those promulgating socialist-realism during the Stalinist period. In both cases there was manifest adherence to an aesthetic creed, with associated dogma and 'systems'. Against this background it is hardly surprising that an individual such as Lutosławski, with ingrained liberal convictions, should reject the excesses of either extreme and attempt to steer an independent course; but it took him many years. As Edward Cowie has observed:

...Like Tippett, Gerhard and Elliott Carter, Lutosławski is that most complex of creative phenomena, the so-called late developer. ...the essential dynamic in all these cases seems to have been the persistence from the outset of a vision so individual as to require years for the rethinking and elaboration of a commensurate technique in which to embody it.⁷

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This parallel is interesting and relevant; but to designate Lutosławski as a 'late developer' can also be misleading. The creative phenomenon in this case is one of continual development, rather than simply of late development. Even now it may be premature to present a conclusive assessment of Lutosławski's work. But it is possible to trace the gradual, sometimes radical process of development which has brought about the synthesis of elements which can be identified in the works since 1979.

It is not necessary here to trace the evolution of Lutosławski's style through all the periods of his career. Several such surveys have already been made, and the general outline of the composer's life and career is well enough known.⁸ It is necessary, however, to address two crucial points. One concerns the roots of his radical approach to harmonic language. The other concerns the emergence of his late style. For the former, one needs to examine the circumstances, not of the post-Stalin cultural thaw in 1956, but of the events surrounding the composition, performance and subsequent proscription of his First Symphony.

Even during the later stages of the Symphony's composition Lutosławski found himself increasingly dissatisfied with the post-tonal language he had hitherto been using. Unfortunately, the natural progression of his development has largely been masked by the unusual external events surrounding the Symphony and its reception at the time in Poland. It bears the distinction of having been the first major musical work in Poland to be denounced as 'formalist'. A simple explanation of formalism would be 'elevation of form over content', a deliberately vague specification designed to allow for blanket condemnation of any works which failed to please the authorities of the time.

Active promotion of socialist-realism in the field of music would not have been feasible without the collaboration of certain strategically appointed arbiters of musical aesthetics masquerading as critics. One of the most influential players in this absurd tragi-comic drama of Orwellian totalitarianism was the Marxist-Leninist musicologist Zofia Lissa (1908-80).⁹ As the Polish signatory to the declaration, made in Prague on 29 May 1948 at the Second International [i.e. Soviet-bloc] Congress of Composers

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and Musicologists, which committed the Polish Composers' Union to the official line established by its Soviet counterpart, she thus condemned her Polish colleagues to aesthetic assessment according to the following four aims: avoidance of subjectivism; cultivation of national character in music; adoption of well-known forms; and increased involvement by composers and musicologists in music education. Appointed to the Institute of Musicology at Warsaw University as a Professor in 1951, she became Director of the Institute in 1954, remaining in that position until 1975. According to one's political point of view Lissa might be judged either as aesthetic arbiter or critical commissar. It is hard to comprehend now just how damaging and dangerous was the influence exerted by such engineers of socio-political attitudes under the guise of academic peer-pressure and cloaked as musical criticism.

Against a turbulent and increasingly totalitarian background, the First Symphony received its first Warsaw performance in the autumn of 1949, at a gala concert to mark the beginning of the fourth Chopin Piano Competition. During the performance at the Philharmonic Hall, several Russian jury members who, significantly, had been sitting in the government box, ostentatiously displayed their disapproval of the work by standing up and walking out. After the concert, the vice-minister of culture, Sokorski, is reputed to have said to the artistic director of the Philharmonic Hall, Raczkowski: 'such a composer as Lutosławski should be thrown under a street-car'.¹⁰ Thus the Symphony was proscribed. It was not performed again in Poland until ten years later.

Lutosławski aired his views on the Stalinist period during a speech on 'The Role of Truth in Art' delivered to the Congress of Culture, convened in Warsaw by the organisers of Solidarity in December 1981, immediately prior to the sudden imposition of martial law on December 13. As a result of his candour, Lutosławski obtained the status of *persona non grata* in the Soviet Union during the remainder of the Brezhnev/Andropov/Chernenko era, until the advent of the thaw in attitudes attributed to Gorbachev. Prior to the emergence of Solidarity in the summer of 1980 such outspoken public pronouncements containing implicit criticism of the Soviet Union would not have been possible.

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This Congress was organised by people of art and science. So I begin by stating straight away that the highest purpose of art is beauty, just as the highest purpose of science is truth. However, just as in mathematics, astronomy, and many other fields of science we can see their own kind of beauty, so in art we inevitably encounter the question of truth. ...I should remind you briefly of the "Fight Against Formalism", as it was then officially called. It was decreed that the twentieth-century had contributed to the total degeneration of art as a creation of bourgeois culture. The works of Stravinsky, Bartók, Schönberg, Prokofiev (those from between the wars), and many others, were to be regarded as 'Formalist', and we were to break with everything that those pieces represented, eradicating and forgetting them. The prescribed way to create music of our time was by returning to a simple nineteenth-century tonal language, which would reach wide masses by conveying our time in a 'realistic' way. Vocal music based on carefully chosen propaganda texts had priority over instrumental pieces... The intellectual crudity of such thinking was probably less harmful than the fact that for years this dismal picture was placed before our eyes prior to every discussion, official meeting and official criticism. ...This perfidious, primitive operation, which was a form of attack on the truthfulness of art, had terrible consequences. Composers were forced to hide their most important pieces in a drawer, whilst their previous works were not performed. The whole situation in the musical world was falsified. Critics aimed to destroy all signs of individuality, or investigation of new styles and techniques. For many of us, it was all the cause of deep psychological depression. '1

The above remarks, although made many years after the events to which they refer, testify to enduring strength of feeling behind his rejection of tonal language. Composers of the next generation, such as Penderecki, were too young to be affected in a similar way by the Stalinist era. It can therefore be seen as not merely accidental that Penderecki would have no qualms about embracing neo-romanticism in the late 1970s, whereas for Lutosławski such a course remains inconceivable. '2

Faced with the proscription of his Symphony, and prescription of the aims of socialist-realism, Lutosławski made the most decisive shift of his career, in the direction of radical redefinition of his harmonic language. His first experiment (an essay in the use of synthetic modes) came with the Overture for Strings in 1949, performed in Prague, but not in Poland. Thereafter, he lived a somewhat schizophrenic professional life, separating the world of his private sketches from the functional music which he composed in order to earn a living. Although he was not able to contemplate presenting his newly emerging approach to harmony in concert works or

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published pieces during the early 1950s, this does not mean that his experiments in methods of pitch organisation took place wholly underground. Harmonic techniques were gradually tested in the numerous scores of incidental music for the theatre which he composed throughout the 1950s. So by the time the relaxation of Stalinist control took place in 1956, the so-called 'thaw', he was able to begin the work which would introduce his harmonic language based on 12-note chords and 12-note chord-aggregates: the Five Songs to poems of Kazimiera Iłłakowicz.

Full maturity as a composer came four years later, in 1960, with synthesis of his methods of pitch and rhythmic organisation. To 12-note harmony was added the rhythmic sophistication provided by controlled aleatory counterpoint. As the latter has been discussed in various sources,¹³ it is not necessary to recount here the circumstances surrounding the introduction of the aleatory technique (its relationship to pitch organisation will form the focus of Chapter Five). By 1979, eighteen years after this synthesis had been achieved in *Jeux vénitiens* (1960-1), he was ready to progress into what can now be seen as a new stylistic phase. Whether it will prove to be the last such development remains to be seen; the future may yet hold some surprises. Although the characteristics of the 'late works' and the 'late style' now appear to be clearly identifiable, inevitably these can still only be interim, not final assessments.

Lutosławski's dissatisfaction with the lack of differentiation between melodic foreground and harmonic background in *Mi-Parti* (1976) was to act as the catalyst for change. The result has been the use of a simpler kind of harmony since 1979, effecting a development of style which has confounded the view that works such as *Mi-Parti* and *Les espaces du sommeil* (1975) represent the 'late style'. The first public intimation of this development came in the English edition of the conversations with Tadeusz Kaczyński:

I can now say, several years after *Mi-Parti* was composed, that I haven't been entirely successful. I knew it even at the time because I hadn't yet developed the techniques which would help me to realise my original idea.../ I have been trying to work out a simpler harmony for some time now and, as to a turning point, the future will show. I rather think this point has already been reached, and the first attempt at the new solution which, I hope, will simplify matters a great deal, is a short work composed in 1979: *Epitaph* for oboe and piano.¹⁴

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It is curious that such an important turning point should have been made in what at first appears to be rather a modest piece; but it is precisely because of its modest time-scale and instrumental requirements that *Epitaph* provided the opportunity for Lutosławski to test his language through a compositional study. He had done the same thing many years before, during the war, when he worked on woodwind Canons and Interludes, and a Woodwind Trio, all of which served as studies for the First Symphony. Later, in the Five Songs, he tested his experiments with 12-note chords before applying them to a large-scale form in *Muzyka żałobna*. It is also intriguing to question why the turning point came with *Epitaph* rather than *Novelette* (1978-9). The answer surely lies in the absence of orchestral resources. With a piece for only two instruments there can be little purpose in applying *ad libitum* techniques of controlled aleatory counterpoint to any great extent. Hence sophisticated orchestral texture was obliged to give way to exposed instrumental line; vertically conceived harmony thus gave way to horizontally conceived melody.

There are signs in *Novelette* that he was already trying to simplify his harmonic language, for example with 8-note rather than 12-note chords; but the absence of either a solo line or *concertante* focus for melodic expression seems to have been a missing ingredient. Lutosławski's late style is closely connected with concentration on *concertante* works. In turn, each of these has been preceded by a chamber piece acting as an essay for the larger work to follow. *Grave* prepared the way for *Partita* (in both duo and *concertante* versions), whilst *Partita* stands in such a relationship to both *Chain 2* and the Piano Concerto. *Epitaph* began this chain of events, with its treatment of the oboe line preparing the way for completion of the Double Concerto.

Lutosławski has often remarked about his experience of composing during the post-war period, up to and including the Concerto for Orchestra, 'I could not compose as I wished, so I composed as I was able'.¹⁶ Although this remark can easily be interpreted against the background of political constraints obtaining in post-war Poland, it also has another level of significance, referring to his awareness of limitations and lacunae in his compositional technique. Gradually, some of these problems were solved: 12-

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note harmony; generation of melodic lines by certain pairings of interval-classes; controlled aleatory counterpoint; but others remained. Hence, certain youthful projects such as a planned Piano Concerto, attempted several times, had to wait many years until the synthesis of compositional techniques and musical language was complete.

Refinement rather than reversal has been the path to the realisation of Lutosławski's late style. Like all over-simplifications, this one also has weaknesses; but it does draw attention to a crucial point, that new elements have been added without the previous ones being abandoned. Features of the mature style have remained, to be refined rather than replaced, developed rather than discarded. Among the essential features of his late works (to be discussed in Part Two) are: simpler, more transparent harmony using fewer than twelve notes; 12-note chords and chord-aggregates reserved for significant staging posts in the form; restraint in the use and extent of aleatory technique; greater rhythmic pace and energy achieved by making a larger proportion of each work conventionally metred; allusion to some aspects of baroque music; allusion to his own earlier works (pre-1960); realisation of compositional projects which had remained unfulfilled in his youth; and, above all, foreground projection of lyrical, expressive melodic lines, made possible by the simplification of harmonic background.

By comparison with earlier periods of his career, Lutosławski has been more prolific since 1979. Whereas in the 1950s both the Concerto for Orchestra and *Muzyka żałobna* underwent a long, four-year gestation period, new-found security of technique has led to the late works being composed much more quickly. In works of the 1960s, extensive use of aleatory technique caused progress on the production of each finished score to be very slow, while practical problems of ensemble coordination were solved, 'least advantageous solutions' of aleatory sections anticipated, and decisions made on all matters of notation, score design and pagination. In the later works, the more limited extent of aleatory technique largely obviates such difficulties. Whereas in the 1970s he invested several years of work on projects which were either deferred or abandoned, since 1979 the pattern has been reversed, with completion of previous projects and comparatively little time lost in sketching abortive attempts.

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Not all the apparently late works fully represent the late style. Both the Double Concerto and the Third Symphony, as pieces conceived, sketched and shelved several times during the 1970s, are partial throwbacks to his earlier, mature style. Although they were both completed after the turning point represented by *Epitaph*, newly composed material was combined with some earlier ideas. Thus the result, in each case, is a kind of stylistic hybrid of mature and late elements. Of the pieces conceived and composed in their entirety after 1979, *Partita* (1984) and *Chain 2* (1985) encapsulate the late style and must be counted amongst the most significant works of Lutosławski's career.

While Lutosławski was busy working on refinements to his language and technique, others in Poland and elsewhere were making radical changes to their style which would reverse the modernism of their 1960s reputations. The most obvious case is Penderecki, whose self-confessed 'affair with romanticism' reveals an aesthetic somersault which is hard to reconcile with his modernist stance of the 1960s.¹⁶ By contrast, Lutosławski still expresses a need to move forwards. His rejection of the neo-romantic wave is consistent with his equally separate stance from the modernist excesses of the *avant-garde*. In his speech to the Congress of Culture in December 1981, he referred to the importance of establishing and maintaining independence from trends:

...[the] situation until quite recently, can be described as a permanent revolution. It would be more accurate to call it a parody of a revolution, and could be described briefly as follows: "What was yesterday is bad; only what is today can be good; that which is good will be good if it happens tomorrow; so what is good today will tomorrow already be bad". ...Paradoxically, I would suggest that the most revolutionary move in a situation of pseudo-revolution is to ignore it, to exclude oneself from the dialogue with the world of critics and managers of music and those concert and festival goers who are interested primarily in continual changes of fashion and trends. Instead, one should concentrate effort on creating work which might stand a chance of a longer existence and function not dependent on immediate historical context.¹⁷

Ironically, in view of Lutosławski's avowed lack of interest in changes of musical fashion, it is precisely those aspects of his work which can be discussed in terms of trends in the application of chance procedures which have received the most sustained critical attention, often resulting in him

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being labelled an 'aleatorist' (and even spurious claims of alignment with indeterminacy). It is perhaps inevitable that many critics have focused on his aleatory approach to rhythm, together with the related issues of counterpoint and polyphony, as used since *Jeux vénitiens*. But this has had the unfortunate consequence of diverting the attention of critical and analytical commentary away from the issue of true significance:

When I discovered chance as an element of my music, my main problem was not so much the organisation of time, as it was superficially interpreted by some, but the organisation of pitch. I think that is the basic problem of music: the vertical and horizontal organisation of pitch. ¹⁸

In conversation with Jean-Paul Couchoud, erstwhile Director of the French Institute in Warsaw (1970-76) and General Secretary of the Alliance Française in the United Kingdom, the composer expanded on his views concerning the paramount importance of pitch organisation:

...the organisation of pitch... is the object of my recent work [1976-78]. I attach great importance to it, although it is now somewhat less popular amongst composers. Composers of younger generations do not concern themselves much with pitch organisation. Having renounced strict organisation, they prefer to treat sound as a phenomenon of its own and they interest themselves more with sonorities than with pitch organisation. In my view that is to deprive music of its most essential element. I am of the opinion that it is necessary to re-establish the significance of pitch organisation and the combinations of pitches. To compose a symphony with the aid of sonorities, colours, noises, rhythms, dynamics, appears to be very easy. I would readily promise to undertake to compose you a symphony of this sort in a week. And, above all, it exhausts itself immediately; in a single hearing you would know all that is in this work. Whereas, if you work on pitch organisation, it results in the musical material being more substantial and more profound. ¹⁹

In addressing the 'most essential element' of Lutosławski's music, Part One of the present study aims to reveal his principal methods of organising pitch in the vertical and horizontal dimensions (chords and lines, respectively), as well as the 'oblique' dimension of aleatory counterpoint and polyphony. It is able to build on a secure foundation of previous writings, mostly in Polish, but also significant sources in German and French, together with some in English. There have been many published interviews with the composer, of which the most significant are those compiled by Tadeusz Kaczyński, Bálint András Varga, and Jean-Paul Couchoud.

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In all three cases, however, the composer held back from exposing full details of his methods of organising pitch:

It's impossible to talk here about the organisation of pitch, and the various ways of employing it, without the risk of boring the reader. I'll be brief. ... ²⁰

...As for the harmonic system itself, it is perhaps overdone to call it a "system". It is rather a collection of procedures still growing in number and undergoing some changes. Maybe one day I shall describe my methods in detail... ²¹

...That would have to be the object of a written study, but I don't have the time to do it, and I do not believe that it would be possible for me to expose this system for you. Moreover, is it a system anyway? In fact I accumulate things, I fill gaps, I handle from many different sides the problems which pose themselves to me, those which concern the organisation of time as well as those which concern the organisation of pitch). ²²

The present study does not seek to establish Lutosławski's methods of pitch organisation with the status of a 'system', but it does make the first concentrated attempt to show the methods themselves. In Part Two the compositional methods shown in Part One are examined in the major works composed since 1979, up to and including *Chantefleurs et Chantefables*.

The first substantial study in English of Lutosławski's work came surprisingly late, in 1981. Steven Stucky's introductory survey of *Lutosławski and his music* was written in the late 1970s and includes discussion of the major works up to and including *Mi-Parti* (1976).²³ It contains useful biographical background on the composer's early years, albeit with some unfortunate omissions and inaccuracies.²⁴ His subdivision of Lutosławski's career into style periods corresponding to the Stalinist and post-Stalinist years in Poland makes good sense, although his designation of all the pieces composed since 1960 as 'late works' (ie. from *Jeux vénitiens* onwards) was certainly premature, and consequently his notion of 'the late style' is now questionable.

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Stucky's book was based on, and represents an expansion of a dissertation written as the second part of his submission for the D.Mus.A. of Cornell University: 'The Music of Witold Lutosławski: A Style-Critical Survey' (dated May 1978).²⁵ His dissertation is subdivided into five chapters corresponding roughly to the first five chapters of the book. In each case, the fifth chapter covers 'Elements of the late style', although the dissertation does not follow this with discussion of individual works. A subsection of this chapter concerns 'Pitch organisation and the technique of aleatory counterpoint' and provides an introduction to the principle of 12-note harmony, although it does not identify how Lutosławski constructs his 12-note chord-aggregates or the way they are used to define the long-range harmonic organisation of particular works. Stucky recognised his limited success in probing the subject of harmony: 'Lutosławski does have private methods of classifying twelve-note chords according to their musical effect, though we can only guess at some of the principles involved in his compositional choices.'²⁶

As John Casken observed in his review of Stucky's book, the analysis of *Muzyka zślōbna* (which 'relies heavily' on the analysis published by Wilfried Brennecke in 1963) fails to identify the method of pitch organisation employed in the climactic section: '...the description of the 12-note chords of *Apogeu*m as "widely spaced chords in which the tritone is prominent, and dense clusters of semitones" is misleading. These are actually interlocking diminished 7ths...'.²⁷

Arnold Whittall's review of Stucky's book raised the pertinent question of whether '..."late" is perhaps not the ideal word for either style or works, in view of developments in the two most recent compositions...' [i.e. *Novelette* and the *Double Concerto*]. He went on to raise further fundamental questions about the position of Lutosławski:

...because the admirer of Brahms and would-be disciple of Debussy received his most decisive stimulus to experiment from the work of Cage and Boulez, he has often seemed to walk a tightrope between harmonic techniques and formal principles that *can* be synthesized but which more naturally conflict.²⁸

Introduction

The ideas of Cage certainly acted as a catalyst for change, although it is arguable whether Boulez played such an influential role. More significantly, it is true that opposition (if not actual conflict) between form and content goes to the heart of Lutosławski's approach to composition. On one hand there are certain formal principles and dramatic shapes which are conceived in abstract and underlie many of his large-scale forms. On the other hand there are the harmonic, melodic, rhythmic, polyphonic, timbral and textural properties of actual musical material with which those forms are generated. Lutosławski has declared his awareness of these complementary aspects of a composer's task by means of a vivid and apt topographical analogy:

While working, two opposing forces must be functioning. One, the concept of the whole work, should work inwards, towards the inside of the composition. The other outwards, towards the development of the key ideas themselves. The balance of the two ensures the structure of the living musical form. ...When I start work, it is as though I am flying over a city, and slowly losing height I can see more and more clearly the outlines, the streets and houses. Naturally I also start work frequently near the 'earth', when I see every detail very clearly and in close-up, and do not worry whether they are going to be eventually part of the whole concept or not. ²⁹

There is, indeed, a strong case for arguing that there is a mismatch between Lutosławski's approaches to form and harmony; but such a conflict can be detected in his music long before the introduction of aleatory techniques. His admiration for the symphonies of Roussel (particularly the third), during the period when he was working on his own First Symphony, highlights his long standing desire to reconcile the rich resources of French harmony and a Germanic approach to symphonic form:

I heard the Third Symphony of Roussel for the first time in the Warsaw Philharmonic shortly after its first performance [Boston, 24 October 1930]... later, during the war, a record of it made a strong impression on me. ...the richness of harmony in Debussy's and Ravel's music made a strong influence on me; but I was never happy, because it was used for suites or ballets or some symphonic poems, but never for more serious forms like symphonies. Roussel's symphonies, especially the third, filled that gap. He used the richness of the French world of harmony... in a form which makes us think about Brahms. He is a sort of French Brahms of the twentieth century. ³⁰

Introduction

Whittall also engaged in some speculation concerning the possible future development of Lutosławski's work, which proved to be an accurate prediction of changes to the role and importance of aleatory procedures:

It will be fascinating to ... discover whether the harmonic imperatives of Lutosławski's music do determine a stronger tendency to uniformly synchronized, truly goal-directed structures - whether, in fact, that precious element of "freedom" will be reduced or even eliminated in the interests of a greater and more traditional kind of linear coherence and hierarchic organization - and whether this tendency will come to be seen as implicit, after all, in the best of the earlier, limitedly aleatory, works. ³¹

The later works, composed after 1979, have certainly shown a reduction in the scope and significance of aleatory counterpoint. Instead of affecting much or most of a work, as in the *Trois poèmes d'Henri Michaux*, the String Quartet, the Second Symphony, or Preludes and Fugue, its role has been restricted. Nowhere is this more clearly apparent than in the contrast obtaining between the Second and Third Symphonies. In the interests of greater pace and a quicker, less static harmonic rhythm, *Partita*, *Chain 2*, and the Piano Concerto have aleatory technique confined to certain sections of the form, whilst in *Chantefleurs et Chantefables* it is all but eliminated, being reserved just for a few brief moments in the final song. In parallel with these developments, Lutosławski has concentrated far more on the generation of horizontal, melodic lines, fulfilling Whittall's expectation for a move towards 'greater...linear coherence'.

As for the treatment of goal-directed structures, Lutosławski's approach to overall dramatic shaping of large-scale forms has remained remarkably consistent, suggesting the underlying presence of fundamental archetypes. Before proceeding, therefore, to examine the pitch organisation methods governing harmony, melody and polyphony, it is necessary to consider the nature of Lutosławski's treatment of dramaturgy and the regularly recurring kinds of *Gestalt* which have manifested themselves throughout his career. ³²

CHAPTER TWO

Archetypal Dramatic Shapes

Dramaturgy has been a crucial feature of Lutosławski's approach to large-scale closed form throughout his career. Yet there has been no detailed comparative examination made of overall structural proportions in Lutosławski's music and their relationship to psychological principles of dramatic shaping.¹ The present chapter, therefore, attempts to rectify this omission by focusing on the comparison of formal proportions and suggests the presence of certain underlying structural models which operate as archetypal dramatic shapes. Attention will also be drawn to Lutosławski's careful placing of the overall climax in his works and to the harmony used for these dramatic highpoints. As already observed in Chapter One, he tends to work on a new piece both from the outside-in (the 'aerial view') and from the inside-out (the 'key ideas').² Naturally, the former most directly determines the overall shape and provides an opportunity for the manifestation of an unconscious (or conscious) formal model.

It is significant to note that Lutosławski's compositional studies at the Warsaw Conservatory (1932-7) tended to neglect traditional techniques of harmony and counterpoint in favour of analysis of formal principles.³ This focus of his studies, directed towards form rather than content, structural schemes rather than pitch organisation, provides an important clue to his subsequent development. Whereas he later found the need to expend much time and compositional effort in redefining his harmonic language, the issue of form does not appear to have been as problematic for him. This was largely due to the strong impression made by his teacher. Witold Maliszewski (1873-1939) had studied with Rimsky-Korsakov at the St Petersburg Conservatory from 1898-1902. During this period he appears also to have attended the course on musical form given by Glazunov, thus absorbing an interpretation of the psychology and perception of musical structure which Lutosławski recalls as being Russian rather than Germanic in approach. In his classes at the Warsaw Conservatory, Maliszewski apparently devoted much time to applying this allegedly Russian approach to the analysis of first-movement sonata-form schemes from the Viennese Classical period, including many works of Haydn and Beethoven. The significance of these studies to the development of Lutosławski's approach to large-scale closed forms cannot be overemphasised. He vividly recalls the content of Maliszewski's classes and acknowledges their deep and long-lasting influence:

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I attach great importance to playing with the listener's perception. I always reckon with his power of anticipation or thinking about what *could* happen. I always purposely disappoint my listener, surprising him by giving something which he couldn't expect. All those are tricks which I learned mainly from the sonatas of Beethoven. The course in musical forms that was given by my professor of composition, Maliszewski, has remained in my memory for my whole life. In his analyses of the sonatas of Beethoven, he explained the psychological factor in perceiving a form (which is entirely neglected by German theoreticians, they even have a certain disdain to such an approach). To my mind, it is much more to the point to treat perception of music psychologically than just describing the sound phenomena and their order, independently from the perception of them. So I think the psychological approach to form is absolutely essential in my work. All that I really learned then. ... To give you an example of how the psychological approach works, I can give you the terminology he used. He used four different words of 'character': Introductory, Narrative, Transitional and Concluding. In each large-scale form there is always the use of those four characters. ...only in the Narrative is content the most important thing to be perceived, while in all the other three the role of the given section in the form of the music is more important than the content.⁴

In the absence of published accounts of Maliszewski's analyses, or cross-reference to an account by any other composer of Lutosławski's generation who attended Maliszewski's classes in Warsaw, it is not possible either to confirm or deny that the psychological approach disseminated was intrinsically Russian. Even if one were able to verify that Glazunov's course in form had been the source of Maliszewski's approach, this would not preclude a German origin for such ideas. One must also question the accuracy of Lutosławski's remark that '...the psychological factor... is entirely neglected by German theoreticians'. Yet the issue at stake is neither verification of sources, nor Lutosławski's personal perspective on the history of musical analysis, but clarification of formative influences on him, whatever their actual provenance may have been. In this context, the most revealing statement in the above recollection is that he appears to accept and apply Maliszewski's interpretation that '...only in the Narrative is content the most important thing...while in all the other three the role of the given section in the form...is more important than the content'. Mention has already been made in the preceding chapter of a distinction (and possible conflict) between Lutosławski's treatments of form and content.⁵ Here we have what amounts to a compositional creed in which he recognises a dichotomy between shape and substance.

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Lutosławski absorbed principles of dramaturgy, not only from his studies with Maliszewski, and from studying scores of Haydn and Beethoven, but also directly from the theatre. Although he tends to be dismissive about the artistic worth of his many scores of incidental music for theatre and radio plays composed during the post-war years from 1947 to about 1960, one should not overlook or undervalue his exposure to the underlying structure of dramatic works, his observation of dramatic conventions, of treatments of plot and sub-plot, and of functional principles governing relationships between characters.⁶ In a lecture intended for presentation at Darmstadt, 'Notes on the Construction of Large-Scale Closed Forms', Lutosławski discussed the problems facing a composer of the later twentieth-century in shaping the abstract drama of music without the established conventions associated with tonal language. From the outset, he makes clear his commitment to the idea of composing the whole work, including not only the notes but also the perception of the listener:

When composing large-scale closed forms, I always remember that what I am principally engaged in doing is organising the process of perception of my work. To my mind, a piece of music is not only an arrangement of sounds in time but also the set of impulses transmitted by these sounds to the listener and the reactions those impulses then awaken in him.⁷

He went on to distinguish between active and passive kinds of musical perception. The latter he considers to be where the listener's attention is totally absorbed by what is heard at a given moment; whereas the former (declared as his main concern) relates to the assimilation of what has been heard earlier, and in anticipating and waiting for what might occur.

...it would be wrong to assume that large-scale closed forms are a hopeless proposition for the modern composer. His only problem is to find ways of activating the listener's memory and anticipation, despite the absence of recognised conventions which could serve as a cue, or of a congenial soil of listening habits. It is such devices that I have been hunting for over the past years... My explorations in this field can be divided roughly into two groups. The first is a matter of providing a purchase for the listener's powers of recall and anticipation through the creation of 'once-only conventions'... The second, much less important, area... lies in the direction of borrowings from the other arts, principally the theatre. This can be fruitful when the aim is to create more intricate formal situations in which the elementary once-only conventions...are no longer enough.⁸

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The simplest kind of 'once-only convention' used by Lutosławski is where he establishes in a given work a repeated idea, in order to play with the listener's expectation for its recurrence. Such a once-only convention may be produced by a refrain, as in the first movements of *Jeux vénitiens* or the Second Symphony, and in *Építaph*. It may also be produced by a referential signal, as in the first movement of the String Quartet and the Third Symphony (in these cases, the referential signal is also associated with recurrence of a particular pitch; C and E, respectively). There is a wide range of treatments of this psychological principle across his work, and those occurring in the later works will be discussed in Part Two. Suffice it at this stage to observe that his continuing search for varied exploitation of the dramatic principles of expectation, fulfilment and denial has been brought about by a desire to simulate effects typical of music composed within the general framework of tonal conventions. Without the referential potential of tonal features, and the panoply of devices available to a composer working within a tonal language, Lutosławski has tried to find his own substitutes within the non-tonal harmonic language he has used since 1957.

Whereas these substitute conventions are diverse, created to operate only within an individual work, there is a separate convention, not of the once-only variety, which is shared by most of Lutosławski's works: the inevitable drive towards and arrival at a decisive overall climax. Obviously, this convention of goal-orientation is nothing new or unusual, as it occurs widely throughout music of the Western European tradition. But it is interesting to observe two aspects of Lutosławski's application of the principle. One concerns the resulting structural proportions, as determined by the placing of the climax. The other concerns pitch organisation, particularly the choice of harmony for the climactic point.

The clearest example of a close connection between Lutosławski's methods of twelve-note pitch organisation and dramatic shaping is provided by *Muzyka żałobna* (1954-8).⁹ Although conceived and composed in four sections, it operates in performance as a single, unbroken span. As the subtitles of the outer sections make explicit (Prologue and Epilogue), their functions are introductory and concluding, respectively; both make

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melodic use of a particular kind of 12-note row consisting of only two types of interval, semitones and tritones (see Example 4:24). The second section, *Metamorphoses*, transforms and extends the twelve-note row (by troped, modal insertions) and fulfils the transitional function of driving towards the climax. By definition, the highpoint is reached at the beginning of the Apogeu. At this point Lutosławski strategically deploys the most powerful harmonic sonority of the piece, a very widely-spaced 12-note chord (it is actually a particular type of 12-note chord-aggregate; see Examples 3:14 and 3:17).

The placing of the climax in relation to the overall duration can be calculated either in metred units (*Muzyka żałobna* was written before the introduction of aleatory technique) or through actual performance time. The number of metred units in this case is a simple calculation, as the underlying tempo of $\text{minim}=88$ does not change (ostensibly, at least) during the course of the piece. There is a total of 894 *minim* beats in the work, with the Apogeu coming after 602 of these units. According to this calculation, the climax occurs at a point dividing the overall length at 0.67, just over $2/3$. This method of calculation is not entirely reliable, however, as in practice most performances (including those by the composer) do not correspond exactly to the prescribed unchanging, underlying pulse. Taking a representative recording made by the composer (from the EMI set made in 1978), one finds that the tempo is, in fact, 'shaped' slightly. With an overall performance duration of 13'15", the climax occurs after 8'30", giving a proportion of 0.64 in relation to the whole.

In view of the dedication of *Muzyka żałobna*, to the memory of Béla Bartók, one is tempted to propose a connection with the Golden Section proportions shown in Lendvai's analyses of Bartók's work.¹⁰ Yet, whichever of the above methods of analytical measurement is adopted, the evidence would appear to show that the climax was not calculated to correspond exactly with Golden Section proportions, and Lutosławski has confirmed that such matters did not form part of his compositional scheme.¹¹ Even so, it is interesting to note that the resulting structural proportions fall between the notional point of Golden Section and two-thirds of the overall duration, albeit due to instinct rather than deliberate design.

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An example, in miniature, of a similar structural scheme is furnished by Postlude no. 1 (1958-60). Although this piece unfolds as a single unbroken span, it lasts only about 3½ minutes in performance, and can therefore hardly be regarded as a large-scale form. Conveniently, for the purposes of proportional analysis, it is notated throughout in conventionally metred bars, and neither the metre nor the tempo changes. The overall climax proportion can therefore be calculated simply by counting the number of bars. There are 95 complete bars, with the overall climax occurring on the first beat of bar 61, thus with a proportion of 0.64 in relation to the whole. As with *Muzyka żałobna* this is close to, but does not correspond exactly with the point of Golden Section ($95 \times 0.618 = 58.71$). As Roy Howat has shown convincingly, such Golden Section proportions can be found not only in the music of Bartók, but also that of Debussy.¹² It is perhaps not merely coincidental that these are two of the composers for whom Lutosławski has the greatest admiration and whose music exerted a strong influence at different points in his career. But in both cases the question remains whether the proportions were calculated as part of a pre-compositional plan, or whether they represent an unconscious formal model which operates as an archetype.

Lutosławski's long-standing and continuing adherence to formal schemes determined by a drive to a decisive climax might suggest a tendency for over-reliance on established patterns and formulae, perhaps even a tendency towards formal predictability from one work to another. Alternatively, one can regard the psychological property of dramatic inevitability in positive terms, as it provides the listener with a programme of expectation which can be treated in unexpected ways. Although most of Lutosławski's works conform to certain proportional schemes (as will be shown below), their component formal stages are subject to many different treatments. Even in cases where a similar kind of procedure is adopted for a particular formal stage, such as the recurrence of a scheme of Refrains and Episodes encountered as the first movement of several works (for example: *Jeux vénitiens*; Symphony no. 2; Double Concerto; Symphony no. 3), the marked differences in content preclude any sense of redundant repetition or undue predictability.

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In an attempt to break away from his habitual realisation of the goal-orientated scheme, Lutosławski planned to adopt a more loose principle of construction in *Livre pour orchestre*, an idea which determined his choice of title. In the event, however, he seems to have been unable to escape the influence of an unconscious formal model:

...the notion of form has always interested me. My instinctive sense of form sometimes makes itself felt against my wishes. For example, I once had the idea of writing a cycle of independent pieces, several in number, different in character and length. I devised the title *Livre pour orchestre*. When I finished it, it was much too organised, against my will, and the title no longer corresponded to the character of the piece. In this way, the composition had nothing to do with Couperin's *Livre pour clavecin* or Bach's *Orgelbüchlein*. I asked those who commissioned the work to change the title but it was too late - it was already printed. ¹³

In order to establish and compare the proportional schemes of the large-scale forms composed by Lutosławski since 1960 it is necessary to determine a suitable analytical method. Calculation in metred units, either of whole bars or of their constituent pulse units, obviously is not possible with works which contain unmetred *ad libitum* sections of aleatory counterpoint. The solution adopted here is to calculate on the basis of actual performance timings; but this presents the problem of how one can establish a timing when each performance will be slightly different. One can either take the composer's own readings of the scores and regard them as definitive, or one can compare several performances and recordings, taking an average. The apparent advantage of the latter method is deceptive, as it results in analysis of an imagined performance and may imply something defective about a real performance. In any case, in spite of the use of aleatory sections, the timings tend to have no greater discrepancy between different performances than one finds with conventionally metred music. It has often been assumed that part of the composer's reasoning in using the aleatory principle is that each performance should be different. This is not so, as illustrated by the circumstances of the String Quartet's first performance and recording. Even though it uses the aleatory technique to such an extent that the composer was reluctant to produce a score from the individual parts, when the LaSalle Quartet played it to Lutosławski prior to the first performance he asked them to "...keep it just the same." ¹⁴

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Table 2:1 shows the performance timings of Lutosławski's large-scale works composed between 1958 and 1988, from *Muzyka żałobna* to the Piano Concerto. The Postludes have been omitted as they represent an incomplete work, and therefore do not provide a proper indication of the composer's approach to large-scale form. Shorter, occasional pieces such as *Epitaph* and *Grave* have been omitted as they (and Postlude no. 1) are too short to be considered as large-scale forms. Also omitted are the two song cycles: the Five Poems of 1957; and the *Chantefleurs et Chantefables* of 1989-90. As collections of short, self-contained pieces they are clearly *not comparable* with the longer forms. A stop watch was used to measure the duration, to the nearest second, of sub-sections as well as of the overall time span. The timing of the point at which the climax occurs (or begins) was then divided by the overall timing, in order to express this moment as a proportion of the whole. In the case of those works where the moment of climax occurs individually to each part within an *ad libitum* section, and is thus not so clearly defined (i.e. *Trois Poèmes*, String Quartet), a reading was taken midway between the various climactic moments in each part. Preludes and Fugue was taken in its complete version.

TABLE 2:1 Climax Timings and Proportions

Title	Source	Duration	Climax	
			Point	Proportion
<i>Muzyka żałobna</i>	EMI 165-03-234 B	13' 15"	8' 30"	0.64
<i>Jeux vénitiens</i>	EMI 165-03-236 A	12' 44"	10' 12"	0.8
<i>Trois Poèmes</i>	EMI 165-03-235 A	19' 52"	11' 15"	0.565
String Quartet	DG 137 001/A	23' 32"	17' [ca.]	0.723
<i>Paroles tissées</i>	EMI 165-03-235 B	13' 48"	8' 25"	0.61
Symphony No. 2	EMI 165-03-232 B	32'	27' 38"	0.863
<i>Livre pour orchestre</i>	EMI 165-03-233 B	22' 15"	18' 55"	0.849
Cello Concerto	EMI 165-03-233 A	22'	20' 25"	0.927
Preludes and Fugue	EMI 165-03-231 A/B	32' 53"	28' 53"	0.878
<i>Les espaces du sommeil</i>	BBC Prom 30.7.79	15' 15"	12' 53"	0.85
<i>Mi-Parti</i>	EMI 165-03-236 B	14' 15"	9' 30"	0.666
<i>Novelette</i>	Warsaw 26.9.84	15' 02"	13' 51"	0.92
Double Concerto	Philips 416 817-2	18' 11"	15' 11"	0.835
Symphony No. 3	Philips 416 387-2	30' 05"	21' 06"	0.701
<i>Chain 1</i>	BBC/EBU 24.2.86	9' 25"	8' 30"	0.904
<i>Partita</i>	BBC 30.3.86	15' 30"	14' 30"	0.935
<i>Chain 2</i>	Première 31.1.86	17' 36"	15' 50"	0.900
<i>Chain 3</i>	Première 13.12.86	11' 10"	10' 43"	0.953
Piano Concerto	BBC Prom 1.8.89	24' 40"	23' 33"	0.955

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In the case of orchestral works, the composer's own performances and recordings were used as the source material for performance timings, as these are clearly the closest to his intentions. In the case of other works where the composer himself was neither the conductor nor performer, the recordings used were those of the original performers for whom the works were written (ie. String Quartet - LaSalle Quartet; Partita - Pinchas Zukerman and Marc Neikrug). The only exception is *Novelette*, as a recording conducted by the composer is not yet available. The timing shown in Table 2:1 is from a performance at the 1984 Warsaw Autumn Festival, with the Junge Deutsche Philharmonie conducted by Heinz Holliger.¹⁵

The most general observation one can make from Table 2:1 is that all Lutosławski's large-scale forms composed since 1958 (with the sole exception of *Trois Poèmes*), have their moment of climax at a point after 0.6 of the overall duration. Within the band from 0.6 to 0.95 two clear groups become apparent, with some works within each group corresponding almost exactly in their overall proportional scheme. These groups are shown in Table 2:2.

TABLE 2:2 Climax Proportions in groups

TYPE A (0.60 - 0.72)	TYPE B (0.84 - 0.95)	OTHERS
<i>Paroles tissées</i> 0.61		<i>Trois Poèmes</i> 0.56
<i>Muzyka żalobna</i> 0.64		
<i>Mi-Parti</i> 0.66		
Symphony No. 3 0.70		
String Quartet 0.72		
		<i>Jeux vénitiens</i> 0.8
	Double Concerto 0.84	
	<i>Livre pour orchestre</i> 0.85	
	<i>Les espaces</i> 0.85	
	Symphony No. 2 0.86	
	Preludes and Fugue 0.88	
	<i>Chain 1</i> 0.90	
	<i>Chain 2</i> 0.90	
	<i>Novelette</i> 0.92	
	Cello Concerto 0.93	
	<i>Partita</i> 0.94	
	<i>Chain 3</i> 0.95	
	Piano Concerto 0.95	

Archetypal Dramatic Shapes

All the works composed since 1979, with the exception of the Third Symphony, fall into the second group, having the climax close to the end. All the works composed since 1983 have their climax very late in the form, between 0.9 and 0.95. The five works which form the first group, clustered around the proportion of two-thirds, all have significant material following the climax. This obviously accounts for a longer final section which is not merely a subsidence from the highpoint. Expressed in terms of Maliszewski's four 'characters', the difference is between works having Narrative material following the climax, and those having merely Concluding material. The treatment of the climax and what follows it are probably the most important aspects of Lutosławski's approach to large-scale form. Whereas there is some formal predictability in the first and second stages of Lutosławski's works (functioning as introductory and transitional components of the form), the post-climactic period is subject to many different treatments:

What happens after reaching the climax can have several solutions. Many composers are content with stereotyped methods, but that is also something important. I am rather sensitive to that, and in my own works I have tried to find some natural solution. In the climax of the String Quartet, the four instruments play the highest notes, *fortissimo* and *ad libitum*, and then *subito piano* follows, but not at the same time. The climax is gradually over but the listener does not notice how and when. One suddenly realises that the climax is over. I have used that solution in many of my compositions, and I think it is characteristic of my works. ¹⁶

In those works where the climax occurs late in the form, it operates as the culmination, followed either by a brief period of winding-down, or by a fast coda. Whereas in works where the climax occurs closer to the Golden Section, it marks a decisive division in the form which provides an opportunity for something of significance to emerge in its aftermath. In *Muzyka żałobna* there is an Epilogue, beginning with a powerful, unison statement of the 12-note theme prior to the process of winding down (see Ex. 4:25). In *Paroles tissées* there is a fourth movement functioning as an epilogue, with slow, sustained chords accompanying the word 'dormez'. In *Mi-Parti* the post-climactic period is occupied by a lengthy coda containing an ascending network of *cantabile* lines for the violins (see Ex. 4:30). In the Third Symphony there is no process of post-climactic winding-down;

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instead, there is an epilogue with a memorable *cantando* theme. The listener's psychological perception of these events depends on whether the climax is exhausting or exhilarating to the mind and to the state of concentration which has been instilled by the period of build-up.

Whereas Table 2:1 is presented with the individual works in chronological order according to their date of composition, Table 2:2 is arranged in a numerical order determined by the figure of climax proportion. Comparison between the ordering of both tables reveals that several of the late works retain their relative positions. For example, the five most recent works since the completion of the Third Symphony (ie. Chains 1, 2 and 3, Partita and the Piano Concerto) all fall in the group which has the climax between 0.84 and 0.96. On the other hand, none of the first five works in the chronological order reaches its main climax before 0.8 of the overall duration (ie. *Muzyka żałobna*, *Jeux vénitiens*, *Trois Poèmes*, the String Quartet and *Paroles tissées*). These areas of comparison between later works, and contrast with earlier works, reveal a significant factor common to the late works to be examined and discussed in Part Two. Another factor associated with this change has been the composer's greater use of conventional metre (and therefore conventional conducting) which has resulted in a greater sense of pace and forward propulsion since the Double Concerto.

Table 2:3 regroups the above works according to their overall time-span. The division into five groups has been made where there was a natural separation of two minutes or more between works (except for the difference between *Chain 3* and *Jeux vénitiens* which is slightly less). Within each group, the pieces have been presented in chronological order. Only in the first group do the pieces correspond very closely. *Chains 1* and *3* not only share the same generic title, they are close in date, they are approximately equivalent in length, and they both reach their respective climactic points late in the form (These and other features will be compared and contrasted in Chapter Eight). Each of the other groups contains works from different decades, and shows a wide range of formal proportions within the given time-span.

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TABLE 2:3 Grouping according to overall time-span

<u>Group</u>	<u>Date</u>	<u>Title</u>	<u>Duration</u>	<u>Climax</u>
<u>Group 1</u> 9-11'	1983	<i>Chain 1</i>	9' 25"	0.9
	1986	<i>Chain 3</i>	11' 10"	0.95
<u>Group 2</u> 13-15½'	1954-8	<i>Muzyka żalobna</i>	13' 15"	0.64
	1960-1	<i>Jeux vénitiens</i>	12' 44"	0.8
	1965	<i>Paroles tissées</i>	13' 48"	0.61
	1975	<i>Les espaces</i>	15' 15"	0.85
	1976	<i>Mi-Parti</i>	14' 15"	0.66
	1978-9	<i>Novelette</i>	15' 02"	0.92
	1984	<i>Partita</i>	15' 30"	0.94
<u>Group 3</u> 17½-20'	1963	<i>Trois poèmes</i>	19' 52"	0.57
	1980	Double Concerto	18' 11"	0.84
	1985	<i>Chain 2</i>	17' 36"	0.9
<u>Group 4</u> 22-25'	1964	String Quartet	23' 32"	0.72
	1968	<i>Livre pour orchestre</i>	22' 15"	0.85
	1970	Cello Concerto	22'	0.93
	1988	Piano Concerto	24' 40"	0.95
<u>Group 5</u> 30-33'	1967-8	Symphony No. 2	32'	0.86
	1972	Preludes and Fugue	32' 53"	0.88
	1981-3	Symphony No. 3	30' 05"	0.7

Lutosławski tends to compose with a clear sense of a work's eventual time-span. This is usually one of the earliest compositional decisions to be made; hence he knows from the outset whether he is working on a fifteen- twenty- or thirty-minute piece. Yet, within each of the above groups, the works related by overall duration show various solutions to the more important issue of internal, formal subdivisions. For example, *Les espaces du sommeil* and *Mi-Parti* are close cousins, not only in chronology, but also in sound language and overall time-span. Yet, whereas *Mi-Parti* reaches its climax at two-thirds of its duration, followed by a long coda, the dramatic weight of *Les espaces* is positioned at 0.85 of its time-span, thus establishing a closer structural relationship with *Livre pour orchestre*. In the fourth group, the pieces with a time-span between 22 and 25 minutes include a single-movement scheme (Cello Concerto), an example of two-movement form (String Quartet), and two four-movement schemes (*Livre* and the Piano Concerto). These two concertos have similar climax placings and yet differ considerably in their formal subdivisions.

Archetypal Dramatic Shapes

Within a period of less than ten years, Lutosławski applied his principle of two-movement form to three major works: the String Quartet; the Second Symphony, and Preludes and Fugue. It is not necessary here to outline the composer's reasons for evolving such a scheme, as this subject has already been explored in published conversations with Couchoud and Kaczyński.¹⁷ But it is useful to compare and contrast the different treatments of this overall structural shape. Whereas comparison between the Second Symphony and Preludes and Fugue reveals a striking similarity between their structural proportions, the Quartet contrasts against the other two in having an epilogue after the climax, thus establishing greater structural similarity with the Third Symphony. Of the works cast in four movements, *Muzyka żałobna* and *Paroles tissées* can be seen to share a similar overall scheme with the climax occurring near the Golden Section, whilst *Chain 2* and the Piano Concerto have their highpoints at 0.9 and 0.95, respectively. The close comparison within each of these pairs, and the clear contrast between them, reveals a significant feature of Lutosławski's later works.

Attention has already been drawn, above, to the danger of over-reliance on established patterns and formulae. The considerable differences which obtain, however, between otherwise comparable works suggest that Lutosławski has consciously avoided repeating the same type of scheme in the same way. Throughout his career he has tended to avoid duplicating combinations of instrumental and vocal forces. For example, there is only one String Quartet, one Cello Concerto, one Piano Concerto, one work for tenor and orchestra, one for baritone and orchestra, and so forth. In the case of the non-concertante orchestral works, the differing permutations which have been observed between overall time-span, formal subdivision of movements, and positioning of the climax, would suggest that also in this area he has consciously sought to avoid repeating himself. Yet the most intriguing aspect of this investigation is the repetition of formal proportions which do not appear to have been consciously calculated. If one regards the manifestation of such phenomena as not merely accidental, it would suggest that they reveal some unconscious thought processes at work. The question now remains whether the emergence of these shapes from the unconscious mind is due to the existence and recurrence of ideas originating from fundamental archetypes.

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Lutosławski recognises that a significant amount of his work takes place on a subconscious level, although, understandably, he is reluctant to discuss such intangible issues. In the published conversations between himself and Varga the following remark: "It would be interesting to trace the development of one of your works from the moment of birth up to completion.", drew the response, " That is not possible because much of my work goes on subconsciously, and it would be difficult to analyse the psychological processes that go on in myself. I have pointed out that I can only start work when I have an overall idea of the new composition and I have certain key ideas." 18

The notion of archetypes lodged deep in the unconscious mind, as formulated by Carl Gustav Jung, is a concept which can be borrowed from the world of analytical psychology to explain the recurrence of certain phenomena in analytical musicology. Archetypes are usually considered as universal, in terms of the 'collective unconscious', although Jung also recognises that they may be subject to individual modification. The concept of archetypes is intended here in abstract, purely musical, terms. No implication is intended that a musical archetype need be explained in terms of analogy, either to any other art form or to natural phenomena.

Archetypal ideas... have their origin in the archetype, which in itself is an irrepresentable, unconscious, pre-existent form that seems to be part of the inherited structure of the psyche and can therefore manifest itself spontaneously anywhere, at any time. 19

It is difficult to discuss or explain a concept which is defined as 'irrepresentable'. Other aspects of the phenomenon can be considered, however: that the archetype is both unconscious and pre-existent. In the context of this discussion the unconscious level can be considered in relation both to the composer's origination of the music (as an object out of time) and to the listener's perception of a work over a particular performance time-span (as an object in time). The pre-existence aspect can also be considered on the same two levels. On one hand we have the composer struggling to reveal a particular solution and to breathe new life and expression into the realisation of a formal model. On the other hand we have the listener who may perceive the performance on an unconscious level

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as corresponding to a similar model. Therein lies the fundamental nature of formal communication effected through the medium of music: realisation and transmission of the archetype by the composer, and unconscious recognition of the archetype by the listener.

Jung's original conception of archetypes has often been mistranslated and misunderstood. One of the most common and persistent of misconceptions is the erroneous identification of the archetype as an 'idea'. Hence, in various writings and lectures, published during Jung's lifetime, he took care to emphasise a distinction between the separate concepts of archetype and unconscious idea:

Again and again I encounter the mistaken notion that an archetype is determined in regard to its content, ...that it is a kind of unconscious idea ...archetypes are not determined as regards their content, but only as regards their form and then only to a very limited degree. A primordial image is determined as to its content only when it has become conscious and is therefore filled out with the material of conscious experience. Its form... might perhaps be compared to the axial system of a crystal which performs the crystalline structure in the mother liquid, although it has no material structure of its own. ...The archetype in itself is empty and purely formal, nothing but a *facultas praeformandi*, a possibility of representation which is given a priori. The representations themselves are not inherited, only the forms, and in that respect they correspond in every way to the instincts, which are also determined in form only. ²⁰

In the present chapter an attempt has been made to examine the recurrence of patterns in Lutosławski's music, but which apply "...only as regards their form and then only to a very limited degree." Jung's distinction between form and content is as clear-cut as that disseminated by Maliszewski and applied by his pupil. Lutosławski's treatment of large-scale closed form could justifiably be described as an archetypal dramatic shape "... filled out with the material of conscious experience." Whilst his works display many different surface characteristics, ultimately they are governed by underlying formal models representing archetypes of *Gestalt*.²¹ These are not only individual to the composer but universal, emerging from the collective unconscious to operate as prime elements in the communication and experience shared between composer and listener.

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Although there are some points of significance in the tables of proportions given above, one must nevertheless proceed with caution, remembering that the interest lies not in any particular properties of the numbers themselves, but in their confirmation of close family relationships between the works. No attempt here is made to relate musical effects to other phenomena by analogy, or to suggest that either the music or these numbers of proportion indicate anything outside the music itself. Lutosławski has commented on the danger of reading too much into the presence of number relationships in his music:

I understand the process of composing above all as the creation of a definite complex of psychological experiences for my listener, the fulfilment of which is on the whole extended throughout the greater number of performances of the same work. ...It seems to me quite extraneous to discern in numbers and their arrangement some factor of equal importance to the actual perception, and which might be supposed to have some value in itself even when it has no perceptible influence on the sound progress of the work. ... In opposing the significance of numbers being raised above everything else in music...I do not, however, consider all mathematical operations as being of no use whatsoever. On the contrary, I often turn to mathematics, or rather to certain simple mathematical processes, in my composing. However, in all such operations I try never to lose sight of my basic aim, which is to compose the particular aesthetic experiences of my listener. ²²

The 'simple mathematical processes' to which he refers are merely patterns and permutations of numbers which he uses when composing the rhythmic polyphony of individual sections in aleatory counterpoint. These calculations are made, not in order to constitute part of the listener's perception of the work, but simply to enable the composer to exercise control over the degree of rhythmic discrepancy occurring between different performances of *ad libitum* passages. Such number sequences representing rhythmic patterns can be found amongst the pre-compositional sketches for each work composed with aleatory sections. But there is no evidence in any of the sketches which would support suggestions that Lutosławski had calculated Golden Section or other proportional schemes.

Finally, one must consider the crucial question of whether there is any causal link between pitch organisation and overall structure, and whether the former governs and generates the latter, or vice-versa (or neither).

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Whereas tonal structures such as fugue and first-movement sonata form are defined primarily by key relationships and key change, there does not appear to be any equivalent procedure operating in Lutosławski's non-tonal works. One might suspect there to be some latent influence of Bartók with regard to changes of tone centre (as distinct from key), such as the axis system promulgated by Lendvai. But even though there are similarities to Bartók, particularly in *Muzyka żałobna* and Postlude no.1, there is no evidence in the sketches of such schemes of quasi-tonal, long-range organisation of pitch centre.

Pitch organisation plays an important part in defining the formal stages of an individual work, but appears to serve rather than govern the overall dramatic shape. The most potent device employed by Lutosławski in the long-range pitch organisation of his large-scale forms is the strategic placing of certain types of 12-note chord and 12-note chord-aggregate. In the works of the 1960s and 1970s continual use of such dense harmonic sonorities undermines the potency of their effect at climactic moments. In the late works, however, comparatively sparing use of 12-note chords and chord-aggregates enhances their property of marking structural stages in the form. This is particularly evident in *Chain 2*. Before discussing their structural significance in the late works, however, it is necessary to present a full explanation of Lutosławski's methods of vertical pitch organisation, his way of constructing 12-note chords, and the constitution of his complex chord-aggregates.

CHAPTER THREE

Vertical Pitch Organisation: Harmony

INTRODUCTION

Lutosławski is, by his own declaration, 'a composer of harmony'.¹ Of all the elements which constitute his personal musical language, the vertical organisation of pitch, according to the use of certain combinations of intervals and chord types within complex pitch collections, has proved to be the most decisive, determining characteristic of his sound-world. Although his musical language has undergone various changes, none more radical than the redefinition he undertook after 1947, there is nevertheless clear continuity in the tradition from which his music stems and in the aesthetic position to which he is drawn.

The roots of his harmonic language lie firmly in Franco-Russian soil and owe comparatively little to nourishment from Austro-German sources. This is declared throughout his work, even in his earliest pieces. In the Sonata for Piano of 1934 there is evidence of the formative influences of Ravel and Stravinsky. Even at this early stage it was evident that his treatment of harmony was not governed by the chord functions of tonal relationships. In this context it is clear why Lutosławski identifies with a Franco-Russian tradition, in which he includes Debussy, Ravel, Stravinsky and Varèse, rather than with the various contemporary developments of Austro-German musical tradition.

...An important feature of Debussy's world of music is his sensitivity to vertical aggregations, and also the independence of functional thinking in determining the logical sequence of musical events. Schönberg's twelve-tone system was, in my opinion, a natural consequence of the functional system, and was born to replace it. Debussy's system of organising sound shows that he was indifferent to functions - that is what I have in common with him. The German method, on the other hand, is characterised by the absolute need for some kind of system which determines the transition from one chord to another. Debussy organises the sequence of chords in a very individual manner - and the need for an individual system is also something that makes me similar to him.²

Although Lutosławski's indifference to harmonic functions led to an affinity with the music of Ravel and Debussy, and he was drawn towards the characteristically French harmonic language of colouristic extended chords, this does not necessarily mean that he was sympathetic to other trends in the French music contemporary with his youth:

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In my youth, when I composed my first works, I was surrounded by a world of 'violated tonality'. In other words, tonal music with false notes, such as early Hindemith, or some of the works of *Les Six*. That is what I found to have no future, what was alien to my nature, for I longed for order. I tried to create order in my very first compositions, but that was of course very difficult in that period of my life. Perhaps not a tonal order, yet, some kind of order. ³

The first turning point in Lutosławski's search for a more ordered, organised harmonic language came after completing his First Symphony (1941-47). Even during the later stages of the work's composition he found himself increasingly dissatisfied with the 'post-tonal language' (his term) he had hitherto been using. Reference has already been made, in Chapter One, to the circumstances under which the First Symphony was proscribed in 1948.⁴ While denied a platform in Poland for performance of his serious work, Lutosławski turned to the composition of functional music in parallel with the search for different means of pitch organisation.

The first attempt at a solution was made in 1949 with the Overture for Strings. In this short piece he experimented with melodic and harmonic cells derived from an 8-note synthetic mode comprising two tetrachords with internal interval steps as in a major scale, but with the connecting interval between them (the fourth and fifth degrees of the mode) being a semitone rather than a full tone (E, F#, G#, A, - Bb, C, D, Eb). But he was not satisfied with this method and it was not pursued further:

[12-note harmony]... was the next stage of my endeavours to work out the sound language in the 1950s and later. The very idea of a harmony containing all twelve different notes came to my mind when I resigned from further working on scales and modes, because they turned out to be not efficient enough and not interesting after all. ⁵

During the next few years his experiments continued, not in concert works, but in the scores of incidental music for theatre and radio. By the end of the four years it took Lutosławski to complete the *Concerto for Orchestra*, the difficult conditions in Poland had begun to show potential for change. The events of 1956, which relaxed the grip of Stalinism, and released it as far as music was concerned, enabled him at last to consider bringing into the open the radical revision of sound language which had occupied him since 1947.

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The first result of Lutosławski's investigations into the properties and potential of 12-note harmony came in the set of Five Songs for voice and piano to poems of Kazimiera Iłłakowicz, completed in 1957 and orchestrated the following year. This was followed by *Muzyka żałobna*, which uses 12-note chords and chord-aggregates for the harmonic density of its climactic third section, *Apogeum*. It has often been supposed, wrongly, that the use of a twelve-note row for the Prologue and Epilogue of *Muzyka żałobna*, taken with Lutosławski's exploration of the resources of full chromaticism at this time, indicates gravitation towards the ideas and aesthetics of Schönbergian serialism. Lutosławski has consistently claimed that this was not the case, and that his aims in exploring the potential of 12-note harmony have little in common with the work of Schönberg:

You know I can't say I owe much to the Second Viennese School, apart from the twelve-note rows that I use. But I don't think it is their exclusive property because it was 'in the air' already when they started to use it methodically. ⁶

If any source of influence could be demonstrated it would be likely to show connections, conscious or otherwise, with the isomorphic division into complementary hexachords characteristic of Josef Hauer, thus predating Schönberg's theories. There are also intricate isomorphic intervallic schemes similar to those found in some rows used by Webern. As the use of 12-note rows is a horizontally conceived method of pitch organisation, it will be deferred for discussion in Chapter Four.

Apart from the mistaken idea of influence from Schönberg, one of the most common misconceptions about Lutosławski and his music, in the wake of the many flawed perceptions of the 1960s, is for him to be identified with a Polish 'School' of texturalism. The work which might encourage such a view is *Trois poèmes d'Henri Michaux*. His use of dense harmonic effects for dramatic and colouristic purposes, however, even in this piece, is still governed by the organisation of pitch into 12-note chords. Few Polish textural pieces written during the 1960s (by composers of the generation born in the 1930s) have such specific sound sources. Lutosławski uses 12-note chords not merely for textural effect, but for the characteristic interval patterns which they contain and which determine their individual sound.

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One thing is always undeniable to me: no sound sequence, no vertical aggregation should be composed without regard being given to every single detail of expression, colour, character, physiognomy. Even the minutest detail should satisfy the composer's sensitivity to the maximum degree. ...there should be no indifferent sounds in music. 7

It is impossible accurately to assess Lutosławski's use of 12-note chords without understanding his attitude towards the concepts of consonance and dissonance. According to traditional harmonic theory, stemming from the acoustic properties of the natural overtone series, there is a hierarchical principle by which notes played simultaneously either 'agree' or 'disagree' to a greater or lesser extent. Lutosławski sidesteps the notion of such a hierarchy and the related issue of dissonance resolution:

Consonance and dissonance are just quantitative notions; something is just good or bad, ugly or beautiful, so it could be shown on one single line, as in geometry... The old notion of consonance and dissonance is not sensible to apply to such harmony [twelve-note chords], because from the point of view of tonal harmony both are dissonant... Here there's no question of more or less, plus or minus, as it is with consonance and dissonance in traditional harmony. It is multi-dimensional space... that is the crucial point in the harmony, because there are many qualities that don't exist on the principle of contradicting each other. They are independent. They are just like they are, and nothing else. They don't need to be resolved, to lead to somewhere and to be followed by a solution. 8

This attitude to consonance and dissonance has to be borne in mind when considering how he moves from one chord to another. In conventional terms one would normally regard this as harmonic 'progression'. In the absence of the established conventions of functional harmony, however, it is more appropriate to regard the change from one chord to another as harmonic 'succession'. Chords precede and succeed each other without being governed by tonal functions. In this context, it might be argued that the word 'chord' is inappropriate in referring to complex 12-note vertical pitch collections, as this may imply the operation of chord functions and chord relationships (which do not apply). For this reason Lutosławski tends to use the French term 'agrégation', when referring to his 12-note chords. In the present study, however, the word 'chord' will be used to refer to vertical pitch collections up to and including all twelve notes, and the term 'chord-aggregate' will be used for vertical pitch collections consisting of two or more distinct and identifiable component chords.

CLASSIFICATION OF TWELVE-NOTE CHORDS

Lutosławski's 12-note chords fall into two main categories: those classified according to the number and types of intervals they contain; and those which will be classified here as chord-aggregates, according to the particular combination of complementary chords they contain. Both of these broad categories can be subdivided into more precise groups; in the former, the classification depends primarily on the number of different interval types (interval-classes) present:

One rule which it is possible to formulate about my experiments with 12-note chords is that the fewer different intervals between neighbour notes the chord contains, the more characteristic the result is. If, for instance, you use all possible intervals in one chord, the final result is, in a way, faceless, something which has no character, which in colour is grey. ...I began with the elementary ones containing only one kind of interval between neighbour [adjacent] notes.. Then I tried to find some simple but not elementary chords which would contain only two different intervals. »

One can add to the composer's terms of 'elementary' and 'simple', those more 'complex' chords which contain three or more different types of interval. It is helpful in analysing these chords to use the numbering of interval-classes developed by Milton Babbitt, which treats intervals and their inversions as equivalent, and labels all those of a given type with a single digit representing the distance between notes expressed as the notional number of semitones. Normally, this labelling is not extended beyond interval-class 6; but in some contexts Lutosławski uses perfect fifths as distinct from perfect fourths, particularly when combined with minor thirds. In such cases, therefore, perfect fifths will be shown as interval-class 7, and the pairing with minor thirds as 3+7.

Elementary 12-note chords can be generated only by interval-classes 1 or 5. Lutosławski has often used eleven adjacent semitones clustered together within one octave; the earliest examples occur fleetingly in the second of the Five Songs, *Wiatr*; the earliest emphatic examples are in the Apogee of *Muzyka żałobna* (Ex. 3:1a). One of Lutosławski's most dense harmonic effects is at Figs. 44 and 45 in the Second Symphony (*Hésitant*), where *pizzicato* strings play a chord of 39 adjacent semitones covering 40 notes across a

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range of just over three octaves.¹⁰ Even more dense is the harmonic texture between Figs. 41-44 of *Chain 3*. There a chord of 55 adjacent semitones covering 56 notes spans $4\frac{1}{2}$ octaves. Chords of minor seconds need not always appear as clusters. In Example 3:1b a slightly different sonority is shown taken from the fourth movement of *Jeux vénitiens*, occurring immediately before the overall climax of the work at rehearsal letter G. Here the semitones are grouped in four layers of tightly packed three-note cells, with the layers separated by minor ninths (also interval-class 1). It is worth noting that the composer does not use the term 'cluster' for these or other chords, recalling with dismay its indiscriminate use by critics, particularly in the 1960s, to describe any harmonic effect containing many different notes. Clearly, it is valid to describe a 12-note chord of eleven adjacent semitones as a cluster; but the term is crude and misleading if misapplied to other kinds of interval structure.

Ex. 3: 1

a)
b)

Muzyka bar 236
Jeux vénitiens II, letter F

I began work with the elementary ones [12-note chord]... containing only one kind of interval between neighbour [adjacent] notes... Then I tried to find some simple but not elementary chords which would only contain two different intervals. There are many possibilities of creating such chords. ¹¹

Table 3:1 presents a classification of these possibilities, divided into six groups according to the interval-class which will predominate. As most 12-note chords contain only eleven intervals between adjacent notes, one of the two interval-classes present will govern the 'physiognomy', albeit only slightly with six (primary) against five (secondary). The integer code in the left-hand column refers to the constituent interval-classes. In order

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to give a complete picture, both elementary and simple interval structures are listed. Not all intervals or interval combinations can give rise to a full 12-note chord; the right-hand column shows which do and which do not. Although there is duplication between the categories (for example, neither the 2+4 nor the 4+2 interval-pairing produces a 12-note chord, but both the 2+5 and 5+2 interval-pairings do), it is necessary to show all the various permutations in order to reveal the curious anomaly which occurs between the 5+6 and the 6+5 interval-pairings.

TABLE 3: 1, Classification of Elementary and Simple 12-Note Chords

GROUP	Intervals adjacent			Interval structure	
	Classes	Primary	Secondary	Type	12 notes ?
GROUP 1		MINOR SECOND		Elementary	Yes
	1+2	Minor second	+ Major second	Simple	Yes
	1+3	Minor second	+ Minor third	Simple	Yes
	1+4	Minor second	+ Major third	Simple	Yes
	1+5	Minor second	+ Perfect fourth	Simple	Yes
	1+6	Minor second	+ Tritone	Simple	Yes
GROUP 2		MAJOR SECOND			No
	2+1	Major second	+ Minor second	Simple	Yes
	2+3	Major second	+ Minor third	Simple	Yes
	2+4	Major second	+ Major third	Simple	No
	2+5	Major second	+ Perfect fourth	Simple	Yes
	2+6	Major second	+ Tritone		No
GROUP 3		MINOR THIRD			No
	3+1	Minor third	+ Minor second	Simple	Yes
	3+2	Minor third	+ Major second	Simple	Yes
	3+4	Minor third	+ Major third	Simple	Yes
	3+5	Minor third	+ Perfect fourth	Simple	Yes
	3+6	Minor third	+ Tritone		No
GROUP 4		MAJOR THIRD			No
	4+1	Major third	+ Minor second	Simple	Yes
	4+2	Major third	+ Major second		No
	4+3	Major third	+ Minor third	Simple	Yes
	4+5	Major third	+ Perfect fourth	Simple	Yes
	4+6	Major third	+ Tritone		No
GROUP 5		PERFECT FOURTH		Elementary	Yes
	5+1	Perfect fourth	+ Minor second	Simple	Yes
	5+2	Perfect fourth	+ Major second	Simple	Yes
	5+3	Perfect fourth	+ Minor third	Simple	Yes
	5+4	Perfect fourth	+ Major third	Simple	Yes
	5+6	Perfect fourth	+ Tritone		No
GROUP 6		TRITONE			No
	6+1	Tritone	+ Minor second	Simple	Yes
	6+2	Tritone	+ Major second		No
	6+3	Tritone	+ Minor third		No
	6+4	Tritone	+ Major third		No
	6+5	Tritone	+ Perfect fourth	Simple	Yes

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It has already been noted that an Elementary 12-note chord can be generated only by projection of either interval-classes 1 or 5. Table 3:1 shows that Simple 12-note chords can be generated by only eleven of the fifteen possible pairings of interval-classes 1-6: 1+2, 1+3, 1+4, 1+5, 1+6; 2+3, 2+5; 3+4, 3+5; 4+5; and 6+5.

Examples of Simple 12-note chords generated by vertical interval-class pairing will be given below, selected from many of Lutosławski's works composed since 1957. The examples are illustrative rather than exhaustive, and are arranged in groups corresponding to the classification given in Table 3:1. The numbering of these groups is determined by the 'primary' interval-class, i.e. the one which predominates in a given pitch collection. In some cases the number of primary interval-classes is almost equally balanced by the secondary interval type. In others, the primary interval-class within the pairing is overwhelmingly predominant. Naturally, the resulting intervallic physiognomy will depend on the relative strengths of the interval-classes which are paired.

Many of Lutosławski's Elementary and Simple 12-note chords shown in the following examples are vertically symmetrical, around either an axis note, or an axis interval. Vertical interval symmetry is typical of his music composed during the 1960s, but is found less in the later works, which tend to use 12-note chord-aggregates. As the principles of symmetry in music are often discussed, particularly in relation to the work of Berg and Bartók, it is worthwhile considering here some of the properties of Lutosławski's chord symmetry. The symmetry occurs as a by-product of the chosen interval types and does not appear to have been sought as a property in itself. When questioned about symmetry in vertical pitch collections, Lutosławski tends to dismiss the idea as not perceivable. He appears to be guided in this respect by his ear (and perfect pitch) which detects the ascending intervallic relationships between lower notes and their upper partials or harmonics. This acoustic principle governing the perception of higher notes in relation to lower ones (but not lower in relation to higher) can be found throughout Lutosławski's work, particularly in intervallically complex 12-note chord-aggregates.

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GROUP 1 Example 3:2a shows a semitone cluster from the climax between rehearsal figures 55 and 56 of 'Le Grand Combat' from *Trois poèmes d'Henri Michaux*, but with whole-tones symmetrically at the top and bottom (1+2). The overall effect is thus merely a very slight variant of the full semitone cluster shown in Ex.3:1a. (For ease of notation, and clarity of reading, the chord is shown laid out horizontally; but this is not meant to imply that the chord is anything other than vertically conceived and played). A similar construction, but with whole tones symmetrically at the top and the bottom (1+2), can be found in the fourth movement of *Jeux vénitiens* as the first of eight 12-note chords leading to the overall climax of the work (Ex.3:2b-i). This chord is scored as two overlapping whole-tone scales (Ex.3:2b-1) which then diverge by glissandi and arrive at a wider layout exposing the predominating major seconds (see Ex.3:3). Example 3:2c shows the fourth chord of the same succession from *Jeux vénitiens* (also repeated as the sixth chord), which is divided into four layers of semitones arranged symmetrically with two major thirds as connecting intervals (1+4). This chord has also been presented here in two ways: laid out horizontally with the interval-class symmetry shown (Ex.3:2c-1); and with the notes stacked vertically (Ex.3:2c-ii). The arrangement of adjacent semitones in distinct groups of three is a similar construction to Example 3:1b, above. Both examples reveal Lutosławski's predilection for such three-note cells whose melodic properties will be discussed at some length in Chapter Four.

Ex. 3: 2

The image contains handwritten musical notation for Example 3:2. It is divided into two main sections, (a) and (b).
 Section (a) shows a single staff with a treble clef and a key signature of one sharp (F#). The notes are: G#4, A4, Bb4, B4, C5, D5, Eb5, E5, F5, G5. Below the staff is the text: "Trois Poèmes d'Henri Michaux, Le Grand Combat, Figs. 55-56".
 Section (b) is divided into three parts:
 - (b)i: Two staves. The upper staff has a treble clef and the lower staff has a bass clef. Both have a key signature of one sharp. The notes are: G#4, A4, Bb4, B4, C5, D5, Eb5, E5, F5, G5. Above the upper staff is the text: "Jeux vénitiens, IV movement, p. 42, letter c".
 - (b)ii: Two staves. The upper staff has a treble clef and the lower staff has a bass clef. Both have a key signature of one sharp. The notes are: G#4, A4, Bb4, B4, C5, D5, Eb5, E5, F5, G5. Below the upper staff is the text: "Jeux vénitiens, IV, c".
 - (c)i: Two staves. The upper staff has a treble clef and the lower staff has a bass clef. Both have a key signature of one sharp. The notes are: G#4, A4, Bb4, B4, C5, D5, Eb5, E5, F5, G5. Above the upper staff is the text: "Jeux vénitiens, IV, letter d".
 - (c)ii: Two staves. The upper staff has a treble clef and the lower staff has a bass clef. Both have a key signature of one sharp. The notes are: G#4, A4, Bb4, B4, C5, D5, Eb5, E5, F5, G5. Above the upper staff is the text: "Jeux vénitiens, IV, c".
 There is a dynamic marking "min 9/16" between (b)ii and (c)i.

Vertical Pitch Organisation: Harmony

GROUP 2 Example 3:3a, from the same passage in *Jeux vénitiens*, illustrates Lutosławski's practice of interlocking two whole-tone chords. The two segments of this pattern for strings then diverge by glissando to a wider position separated by a major seventh. The symmetrical balance of the original layout is maintained, although with two notes exchanged between segments, introducing minor third intervals (no longer strictly 'simple').

An example of whole-tone groups linked by minor thirds (interval-pairing 2+3) occurs in Preludes and Fugue at Fig.60 (Ex.3:3b). A more extended 2+3 chord of seventeen notes covering a span of three octaves is used at Fig.97 in *Les espaces du sommeil*, at a dramatically decisive point of the work where the strings play, *pianissimo*, in the immediate aftermath of the massive *ad libitum* orchestral climax at Fig.96. The chord is arranged symmetrically around an axis note, F#, with six notes in both the high and low strands and five notes in the middle strand. The extreme intervals of the high and low strands are both minor thirds and the three strands are linked by a further two minor thirds. An interesting point to observe in this case is that the overall symmetrical pattern based on the 2+3 pairing does not preclude octave doublings where the composer wishes to maintain the predominating intervallic character of the chord but also wishes to extend its compass (Ex.3:3c).

Example 3:3d shows a 12-note chord generated by vertical interval-pairing 2+5, taken from the second movement of Symphony No.2, *Direct*, appearing at rehearsal figure 124. Here the six whole-tone pairs of notes are linked, symmetrically, by three perfect fifths and two perfect fourths. Similar chords of the 2+5 interval-pairing can be found in the same work at Figs.104 and 112.

Ex. 3: 3

The image contains four handwritten musical diagrams labeled a) through d).
 a) *Jeux Vénitiens*, II, letter C. Shows two whole-tone chords in G major. The first chord has notes G, A, B, C, D, E. The second chord has notes G, A, B, C, D, E, with some notes shifted. Glissando lines connect the chords. Intervals are labeled: 'Maj. 7th' and 'min 3rd'.
 b) *Preludes and Fugue*, Fig. 60. Shows a 17-note chord with notes G, A, B, C, D, E, F, G, A, B, C, D, E, F, G. Intervals are labeled 'min 3'.
 c) *Les espaces du sommeil*, Fig. 97. Shows a 17-note chord symmetric around an axis note F#. Notes are G, A, B, C, D, E, F, G, A, B, C, D, E, F, G. Intervals are labeled 'min 3'.
 d) *Symphony No. 2*, Fig. 124. Shows a 12-note chord with notes G, A, B, C, D, E, F, G, A, B, C, D. Intervals are labeled '2 5'.

Vertical Pitch Organisation: Harmony

GROUP 3 One of the most distinctive and often used of the simple 12-note chord structures is that made from minor thirds grouped symmetrically as superimposed diminished-seventh chords. The earliest examples of their use are in the Five Iliakowicz Songs: the first and third chords in *Morze*; and at the end of *Rycerze* (Ex. 3:4a, b, c). Here one can observe the principle of three distinct pitch layers, which Lutosławski refers to as harmonic 'strands'. Here the secondary interval in each case is used to link the strands, thus the interval-pairings for these three chords are 3+4, 3+5, and 3+2, respectively. Not only does each component chord establish a distinctive sonority in its own register, but each strand has a different part to play in the progression from one chord to another. In this case the chords converge: the low strand ascends by semitones; the middle descends by tones; whilst the upper strand descends by perfect fourths. The process continues until they overlap, resulting in other intervals which transform the simple pattern into an intervallically more complex structure (see also Ex. 3:16 for a harmonic reduction of all the chords in all Five Songs).

Apart from *Rycerze*, the work most obviously coloured by these chord types is *Paroles tissées*. Two chords from the third movement are shown below (Exx. 3:4d and 4e) in which the connecting intervals are the major third (3+4) and the minor second (3+1), respectively. *Muzyka żałobna* also uses many of these diminished-seventh chord patterns in the Apogeeum; because the overlapping of strands gives rise to more than two interval types they will be discussed below as chord-aggregates (see Exx. 3:11 and 3:15).

Ex. 3: 4

The image shows five examples of chord progressions, labeled a) through e). Each example is written on a three-staff system (treble, alto, and bass clefs). Above each system, there are interval labels indicating the relationship between the strands of the chords. Example a) shows a progression from a diminished-seventh chord to another, with intervals of Aug. 5, Perfect 4, and Perf. 4. Example b) shows a similar progression with intervals of Perf. 4, maj. 9, and tone. Example c) shows a progression with intervals of tone, maj. 7, and Perf. 4. Example d) shows a progression with intervals of maj. 3, min. 9, and min. 2. Example e) shows a progression with intervals of min. 2, min. 7, and min. 9. The notation includes various accidentals (sharps, flats, naturals) and stems for the notes.

Rycerze bars 194-197
Paroles tissées. III. p.17

Vertical Pitch Organisation: Harmony

In addition to illustrating Lutosławski's way of combining two interval-classes, two of the chords in the above example show the important difference of sonority produced by the presence of either minor ninths or major sevenths occurring between strands (as opposed to linking them).

If you superimpose three diminished-seventh chords, you can do it in two ways. Between the neighbouring strands (the neighbour chords of four notes), there are major sevenths, or there are minor ninths. A very important distinction, because later on I established for myself a certain 'rule', saying that a decisive role in the (not only construction but also the working-on and reacting-to) 12-note chords, depends mainly on the presence of the interval of minor ninth or major seventh in the neighbour strands. Roughly one can say that the 12-note chords which I constructed were made up of three strands (three times four), and if between the strands there are major sevenths between particular notes of the chord it has one kind of effect, and the entirely different effect is when you use minor ninths. That's important for the whole of my work (which is not exclusively connected with 12-note harmony), because I use this little principle for many other situations without even using all twelve notes. ¹²

It is important to note that Lutosławski here distinguishes between the different aural properties of the major seventh and the minor ninth, even though they are of the same interval-class. One would be wrong to assume that the principle of inversional equivalence (of intervals) always applies. Attention will be drawn in the next chapter to other cases where it is important to maintain the distinction between the two intervals of one interval-class. The difference in effect which Lutosławski attributes to these intervals is analogous to the operation of magnetic poles in either attracting or repelling. To his ear, the major seventh tends to attract, pulling the interval within itself (Ex. 3:5a), whilst the minor ninth tends to repel, pushing outwards (Ex. 3:5b). ¹³

Ex. 3: 5

The diagram consists of two parts, a) and b), each showing a three-strand vertical structure. In part a), three strands are shown with notes connected by lines representing major seventh intervals. The text 'MAJOR SEVENTHS BETWEEN STRANDS' is written vertically between the strands. In part b), the same three-strand structure is shown, but the notes are connected by lines representing minor ninth intervals. The text 'MINOR NINTHS BETWEEN STRANDS' is written vertically between the strands. Below part a) is the citation 'RYCERZKA, bar 197' and below part b) is 'PAROLES TISSÉES, III, p.17'.

Vertical Pitch Organisation: Harmony

GROUP 4 In some cases, although the projected pairing of two interval-classes would yield a full 12-note chord, Lutosławski nevertheless uses a smaller number of intervals (less than eleven) where he wishes a less dense effect but still with a characteristic interval sound. A passage containing fourteen symmetrical chords of this sort occurs in the second of the *Trois poèmes d'Henri Michaux*, 'Le Grand Combat'. In the passage from Fig.52 which forms the last part of the approach to the climax, there is a harmonic succession which alternates seven 8-note chords based on major thirds (Ex. 3:6a i, iii, v, vii, ix, xi, xiii, xv), played by woodwind, with seven 6-note chords based on minor thirds (Ex. 3:6b ii, iv, vi, viii, x, xii, xiv), played by brass. Table 3:2 shows the alternation of chords together with integer codes representing the pairing of interval-classes present in each chord. (For examples of the 3+4 interval-class pairing used to generate 12-note chords see the harmonic reduction of 'Zima' in Ex. 3:16c).

TABLE 3:2. *Trois poèmes*: chords from 'Le grand combat'

Woodwind (a):	1	iii	v	vii	ix	xi	xiii	xv
Brass (b):	ii	iv	vi	viii	x	xii	xiv	
Interval-class pairing	1+4	1+3	3+4	1+3	4+5	2+3	4+5	
Woodwind (a);		ix		xi		xiii		xv
Brass (b):	viii		x		xii		xiv	
Interval-class pairing	3+5	4+5	3+5	3+4	3+4	4+5	2+3	

Ex. 3: 6

The musical score consists of two systems of chords. The first system has seven measures, each with a chord labeled a) i, b) ii, a) iii, b) iv, a) v, b) vi, and a) vii. The second system has seven measures, each with a chord labeled b) viii, a) ix, b) x, a) xi, b) xii, a) xiii, and b) xiv. The chords are written on a grand staff (treble and bass clefs). The notes are represented by stems and circles, with some having accidentals. The chords are arranged in an alternating pattern of major and minor thirds.

Trois Poèmes d'Henri Michaux: Le Grand Combat fig. 52 to climax

Vertical Pitch Organisation: Harmony

GROUP 5 Pitch collections in which perfect fourths or perfect fifths predominate are closely related to Group 6, as fifths are often found used in alternation with tritones in order to generate a full 12-note chord. In the cases where this occurs, however, there is always a larger number of tritones than perfect fifths (six as opposed to five), hence the former predominate, albeit only slightly. Chords of this kind are shown in Example 3:8a/b. Also used to produce type 5 is the major second interval. The very last chord of Preludes and Fugue (very short, but also loud and very final) is of this type (Ex. 3:7a), and consists of six perfect fifths, one perfect fourth and four major seconds. It is shown in context with the two preceding chords which also consist of the same interval pairing. It is interesting how Lutosławski manages the explosive quality of this ending, by increasing the number of notes from six to eight, then to all twelve, at the same time fanning-out from a close, central register to a very widely spaced sonority. Just before this final succession of chords, the last sustained harmony is that already shown in Example 3:3b. Near the beginning of *Livre pour orchestre* there is a succession of five chords (Ex. 3:7b) which alternates three 10-note chords of interval pairing 4+5 with two other chords; only the second is not symmetrical.

Ex. 3: 7a

Preludes and Fugue

The image shows three chords from the piece 'Preludes and Fugue'. Each chord is represented by a pair of staves (treble and bass clef). The first chord has interval markings of 2, 5, 2, 5, 2, 5. The second chord has markings of 2, 5, 2, 5, 2, 5. The third chord has markings of 2, 5, 2, 5, 2, 5. Below the third chord, there is a handwritten note '(11/12)'.

Ex. 3: 7b

Livre pour orchestre

The image shows five chords from the piece 'Livre pour orchestre'. Each chord is represented by a pair of staves (treble and bass clef). The first chord has interval markings of 4, 5, 4, 5, 4, 5. The second chord has markings of 4, 5, 4, 5, 4, 5. The third chord has markings of 4, 5, 4, 5, 4, 5. The fourth chord has markings of 3, 4, 3, 4, 3, 4. The fifth chord has markings of 4, 5, 4, 5, 4, 5.

Vertical Pitch Organisation: Harmony

GROUP 6 The last category of simple 12-note chord is the interval structure in which the tritone (either as augmented fourth or diminished fifth) is paired with one other interval. Two permutations occur regularly in the scores of the 1960s for which the connecting interval is either the perfect fifth or the minor second. The second of the *Trois poèmes* and the final movement of *Jeux vénitiens* contain the former (Exx. 3:8a and 3:8b respectively), whilst the third movement of *Jeux vénitiens* contains the latter (Ex. 3:8d). The intervallic structure of this last chord can be seen in context later in this chapter (in Table 3:4), where it appears as the fourteenth chord in a succession of sixteen played by the string section in the third movement of *Jeux vénitiens*. The most outstanding example of a 12-note chord generated by the vertical pairing of interval-classes 6+5 is the climactic chord of the Second Symphony (Ex. 3:8c).

Ex. 3: 8

The image displays four musical examples (a, b, c, d) of 12-note chords. Each example is presented on two staves. Example (a) is from 'Trois poèmes II, fig. 39'. Example (b) is from 'Jeux vénitiens II, fig. 1-7'. Example (c) is from 'Second Symphony Climax at fig. 153'. Example (d) is from 'Jeux vénitiens III, letter G'. Handwritten annotations '8va' and '8vb' indicate octave transpositions.

All the above are symmetrical patterns built on the symmetrical tritone; symmetrical in the sense that it is the only interval which remains the same when inverted, and because it marks the division of the octave at its midpoint. Attention has already been drawn to the use of symmetrical chord structures and their identification with Lutosławski's works of the 1960s. The four examples above illustrate this connection: *Jeux vénitiens* dates from 1960, *Trois poèmes* from 1963 and the Second Symphony from 1967. There are also many other examples from these, and other works of this period, of vertical intervallic symmetry using more than two interval types.

CLASSIFICATION OF CHORD-AGGREGATES

It has already been noted that Lutosławski has a predilection for grouping the pitches of some 12-note chords in 'strands' and that one of the constituent chords most frequently used to build chord-aggregates is the 4-note diminished-seventh chord. In addition to the latter, which appears both in 'simple' and more complex intervallic constructions, there are other types of 4-note chord which determine the interval patterns of the 12-note chord-aggregates in which they appear. It is particularly interesting to observe that most of these 4-note chord types are conceived as extended triads being made up of major and minor thirds in various combinations. For the composer, each has a particular kind of 'physiognomy' (his term) which can be used to determine a particular type of sonority in the strand to which it is assigned. In the orchestral works, these strands are often scored so as to associate the character of the chord type with instrumental tone colours and orchestral timbre.

One sonority to be found very often in my scores is a 12-note chord which is built mainly on thirds, but different kinds of thirds. If you consider only the four lowest notes of a 12-note chord, according to my principle of minor ninths and major sevenths, it already determines the rest if you decide about one of the strands, middle, high or low. I use three kinds of 4-note chord in the low strand, built on thirds. The first is, from low to high two minor thirds and a major third. There is another where the major third is in the middle. Add the dominant-seventh chord. ...Of course there are others where there is only one minor third. That's another family which I use quite often. 14

The principle of constructing chord-aggregates by superimposing chords can be traced back to Stravinsky; for example, the tritonal triad contradiction (C/F#) associated with psychological conflict inherent to the character of *Petrushka*; and the repeated 7-note aggregate of Fb and Eb7 chords in 'The Augurs of Spring: Dances of the Young Girls' from the first part of *Le sacre du printemps*. Lutosławski takes the principle further and makes 12-note chord-aggregates by superimposing three complementary four-note chords in separate harmonic strands.

Vertical Pitch Organisation: Harmony

Example 3:9 shows a page from the early sketches for the Third Symphony (reproduced at its actual size), illustrating Lutosławski's techniques of 12-note pitch organisation. These early sketches were made in the 1970s, and it is significant to note that the 12-note chords shown here were not amongst those deployed in the final work (dating from 1981-3). Such pre-compositional sketches of pitch collections are usually labelled by him as 'OWD', an abbreviation of the Polish expression for pitch organisation (Organizacja Wysokości Dźwięku). In this case, seven of the 4-note chord types he uses to build 12-note chord-aggregates can be seen in the lower of the three harmonic strands. Four of them bear letters of identification which correspond to the composer's private method of labelling, although these are purely informal mnemonic devices and will not be pursued here.¹⁵

Reading from left to right along the low harmonic strand of the top system, one can identify the following 4-note chords: a half-diminished-seventh chord, A-C-Eb-G ("W"); a dominant-seventh chord, A-C-D-F# ("D"); and a minor-seventh chord, A-C-E-G ("R"). At the end of this system Lutosławski has also notated the basic 'root position' form of these three chords. Each of the chord-aggregates on the top system has an equal allocation of pitch-classes to the three harmonic strands. In each case, the resulting chord-aggregate is of a distinctive, quasi-symmetrical type which has the same chord type in the top and bottom strands.¹⁶ On the second system, also reading from left to right in the low harmonic strand, one can identify four other 4-note chord types: a major-seventh chord, Eb-G-Bb-D; an intervallically symmetrical 'major/minor' chord, D#-F#-B-D (also present in the middle strand of the third chord-aggregate in the top system); a chord he labels as "Ro", which is a diminished triad with an added perfect fourth above (giving a major seventh above the root), Eb-F#-A-D (also present in the middle strand of the second chord-aggregate in the top system); and, finally, a diminished triad with an added perfect fourth below, Eb-Ab-B-D (also present in the middle strand of the first chord-aggregate in the top system). Each of the chord-aggregates sketched on the second system has an unequal allocation of notes to the three harmonic strands: four pitch-classes in the low strand; five in the middle strand; and only three in the upper strand. The composer has written himself a verbal note (in Polish) to this effect.

Vertical Pitch Organisation: Harmony

Ten 4-note chord configurations, occurring as constituent elements of Lutosławski's complex chord-aggregates, are here identified for the first time.¹⁷ They are classified below according to the intervals they contain when in close position. Table 3:3 shows them labelled from A-K in four groups according to the intervals they contain.

TABLE 3:3, Classification of 4-note chord types

1		2		3			4		
min 3	maj 3	min 3	min 3	maj 3	maj 3	min 3	min 3	per 4	min 3
min 3	min 3	maj 3	min 3	maj 3	min 3	maj 3	per 4	min 3	min 3
min 3	min 3	min 3	maj 3	min 3	maj 3	maj 3	min 3	min 3	per 4
----	----	----	----	----	----	----	----	----	----
A	B	C	D	E	F	G	H	J	K

Group 1 contains only one interval-class, consisting of three minor thirds which give the diminished-seventh chord (Type A). Group 2 contains the family with two minor thirds and only one major third (Types B, C, and D) spanning a minor seventh overall. The three chords of Group 3 form the family which has two major thirds and only one minor third (Types E, F, and G) spanning a major seventh overall.

In Group 4 there are three chords each consisting of two minor thirds with a perfect fourth. The first of these (Type H) may be termed a 'major/minor' chord, as the upper three notes give a minor triad whilst the lower three give a major triad of the same root. The second chord of the fourth group (Type J) occurs as a diminished triad of two minor thirds with a perfect fourth at the top adding the diminished octave (or major seventh) above the root. This type of chord also appears with the outer notes exchanged, giving the sonority of a major triad with an augmented fourth at the top, thus adding the augmented octave (or minor ninth) above the root. A comparison of these two versions of Type J also provides a good illustration of the major seventh/minor ninth principle (see Ex.3:5). The third chord of this group (Type K) is a similar kind of intervallic construction but with the perfect fourth placed beneath a diminished triad.

Vertical Pitch Organisation: Harmony

Example 3:10 shows the same ten 4-note chord types expressed in staff notation, each 'rooted' to the same note, E (an arbitrary choice), merely for convenience of comparison. As most of these chords are familiar in tonal contexts, as extended triads, concise verbal labels are also given below, although these should not be taken as implying tonal functions.¹⁸

Ex. 3: 10

The image shows a musical staff with ten chords, each rooted on the note E. The chords are labeled A through K. The staff is in treble clef and has a key signature of one flat (B-flat). The chords are: A (diminished-seventh), B (half-diminished-seventh), C (minor-seventh), D (dominant-seventh), E (minor triad with major seventh), F (major-seventh), G (major-seventh with augmented fifth), H (major/minor), J (diminished triad with fourth above), and K (diminished triad with fourth below).

- Group 1 Type A : diminished-seventh chord
- Group 2 Type B : half-diminished-seventh chord
- Type C : minor-seventh chord
- Type D : dominant-seventh chord
- Group 3 Type E : minor triad with major seventh
- Type F : major-seventh chord
- Type G : major-seventh chord with augmented fifth
- Group 4 Type H : major/minor chord
- Type J : diminished triad with fourth above
- Type K : diminished triad with fourth below

This information can also be expressed in terms of the integer system of pitch-class set classification used by Allen Forte.¹⁹ The application of Forte's integer notation in this case, however, presents a considerable disadvantage which acts as a barrier rather than an aid to understanding. In reducing each pitch-class set to its most compact position ('normal order'), determined by establishing the smallest outer interval within which all the notes of the set may be contained, the important intervallic construction which is Lutosławski's starting point becomes obscured. If one pursues the Forte method it should be borne in mind that what he regards as the 'normal order' is in fact only one of the various intervallic permutations available from inversion or rotation of Lutosławski's 4-note chord types. Table 3:4 translates the intervallic data of the ten chord types into the equivalent in Forte's terminology of pitch-class sets, not in order to pursue such analysis here, but as a cross-referential aid for future investigators who may wish to compare Lutosławski's chords with those of other composers.²⁰

Vertical Pitch Organisation: Harmony

TABLE 3: 4, Ten 4-note chords shown as pitch-class sets

Intervals :	min 3 (3)	maj 3 (4)	min 3 (3)	min 3 (3)	maj 3 (4)
(interval	min 3 (3)	min 3 (3)	maj 3 (4)	min 3 (3)	maj 3 (4)
-classes)	min 3 (3)	min 3 (3)	min 3 (3)	maj 3 (4)	min 3 (3)
Chord type:	1. A.	2. B.	2. C.	2. D.	3. E.
pc-set :	0369	0258	0358	0258 (0368)	0148
set name :	4-28(3)	4-27	4-26(12)	4-27	4-19
ic.vector :	004002	012111	012120	012111	101310
Intervals :	maj 3 (4)	min 3 (3)	min 3 (3)	per 4 (5)	min 3 (3)
(interval	min 3 (3)	maj 3 (4)	per 4 (5)	min 3 (3)	min 3 (3)
-classes)	maj 3 (4)	maj 3 (4)	min 3 (3)	min 3 (3)	per 4 (5)
Chord type:	3. F.	3. G.	4. H.	4. J.	4. K.
pc-set :	0158	0148 (0348)	0347	0147	0147 (0367)
set name :	4-20(12)	4-19	4-17(12)	4-18	4-18
ic.vector :	101220	101310	102210	102111	102111

In addition to the disadvantage already noted above, the Forte method also has a severe limitation in being unable to express in integer notation the significant intervallic difference between chord types B and D, E and G, J and K. Obviously, these pairs of chords are close cousins in that they (as pairs) share the same interval vector. But chord type D is only reducible to pc-set 0258 by intervallic inversion (as opposed to the term 'inversion' used in the context of tonal harmony, in which case it actually means rotation of the chord notes by successive octave displacement). Chord type G can only be reduced to pc-set 0148 by the same means; similarly, chord type K in relation to pc-set 0147. In each case, therefore, the 'true' pc-set (calculated within the smallest outer interval, but without the application of intervallic inversion) is shown in brackets, representing the musical reality as opposed to the abstract, theoretical identity of these three chords.²¹ Naturally, these 'true' sets will not be found to correspond with Forte's list of Prime Forms. This severe limitation of the Forte method which, if applied here, would result in the suppression of information of material significance, means that it is inappropriate to pursue such methods in this study.

Vertical Pitch Organisation: Harmony

The approach of Forte is also problematic in other respects. His designation of the much discussed 7-note harmony in *Le sacre du printemps* ('The Augurs of Spring'), as pc-set 7-32 must be regarded as highly controversial.²² It is well known that Stravinsky (like Mussorgsky, Ravel, Debussy and many other composers) habitually originated his harmonic material directly at the keyboard. In many cases, particularly here, it is obvious to even the most casual observer with some knowledge of chords that the 7-note harmony is, in fact, an aggregate of two chords, kept registrally distinct - Eb⁷ over an Fb triad. To classify this harmony as a single 7-note set entirely obscures the actual musical effect which is superimposition of separate, conflicting chords whose roots are a semitone apart. Forte compounds his error by stating that the harmony in question is preceded by its set-complement: pc-set 5-32.²³ He adds a footnote to this false observation, no doubt aiming to sidestep criticism, but his proposition is no less contentious: "Set 7-32 in Ex. 17b is not the literal complement of 5-32 in Ex. 17a but is a transposition of the complement of the latter (t=10)." It is nonsensical to claim that these two chords are set-complements, as they share four of the same pitch-classes (E, G, G#, B,). In the present study, the term 'set-complement' is used more strictly than by Forte, and refers only to pitch collections which do not share any of the same pitch-classes and which provide all twelve notes when combined.

Forte's analysis of the well-known Petrushka harmony (of superimposed major triads of C and F#) is equally controversial.²⁴ He labels this 6-note harmony as pc-set 6-30; again, his designation obscures the true identity of the Stravinskian harmony as the superimposition of two distinct triads, in this case whose roots are a tritone apart. He also claims that "...the prototype of this harmony is found in the Prologue, Second Tableau, of Mussorgsky's *Boris Godunov*, notated as a combination of an A-flat-7 and D-7 chord."²⁵ But his reading of Mussorgsky's score is incorrect. At no point do the two dominant-seventh chords (representing the dissonant *zvonn*-ringing of Russian-Orthodox bells in the Moscow Kremlin) sound simultaneously, and he is misguided in regarding the effect as "...a combination of..." these chords; they are alternated, not combined.²⁶

Vertical Pitch Organisation: Harmony

Using the classification of ten 4-note chord types given in Example 3:10, many of Lutosławski's intervallically complex pitch collections can be analysed and classified as particular types of chord-aggregate. Within each strand, or register, the chord types often appear in a layout which is the result of re-ordering or of inversion (in the traditional chordal sense of applying the principle of octave transfer, rather than the sense of intervallic inversion which would result in transforming the chord types and changing them into each other). This re-ordering occurs particularly in the lower strand where Lutosławski also tends to make the resonance clearer by opening out the intervals, often (particularly in later works) using low octave doubling to reinforce one or more perfect fifths at the bottom. This practice of 'stretching' the chord in the low strand acknowledges the acoustic properties of the natural overtone series by which intervallic distances are greater in the lower register and become progressively smaller through the ascent to a high register. Recognition of this principle of vertical intervallic foreshortening may well have been one of the decisive factors which led Lutosławski away from the symmetrical constructions and patterning used so often in the 1960s.

Hierarchy between the four groups is determined by the ways of combining them, with themselves or each other, to make 12-note chord-aggregates. The diminished-seventh chord is the only one which can provide a 12-note chord-aggregate on its own, by complementation in all three harmonic strands. The three chords of group 2 are the only ones which can be used at the same time in two strands (The diminished-seventh chord can be used in either all three strands or in only one, but not in only two, because the principle of complementation would automatically reproduce the chord in the remaining strand). The chords of group 3 occur when a different chord is used in each strand. Those of group 4 occur primarily by set-complementation when using a chord from group 2 in two strands. Chord-aggregates with two or three of the same 4-note chord are summarised in Table 3:5 and a selection of such pitch collections is given in Example 3:13.

TABLE 3:5. Symmetrical and other layouts of chord-aggregates

High strand:	A		B	C	D		K	B	H	C	J	D
Middle strand:	A		K	H	J		B	B	C	C	D	D
Low strand:	A		B	C	D		B	K	C	H	D	J

Vertical Pitch Organisation: Harmony

Example 3:11 shows eight 12-note chord-aggregates with the same chord type used in all three strands. This can occur only with three diminished-seventh chords (A-A-A). The first three are from the *Apogeuum* of *Muzyka żalobna* (Ex.3:11a). The next two are from the third movement of *Paroles tissées* (Ex.3:11b), where they occur as part of a progression of sixteen similar chords (some 'simple', others more 'complex') occupying the first eight bars. This progression is determined by an ascending sequence in the lower strand, which starts with the aggregate already shown in Example 3:4d and proceeds via that in Example 3:4e.

Three more examples of this kind of chord-aggregate are shown taken from the first section of *Mi-Parti* (Ex.3:11c), where they appear after rehearsal figures 8, 15 and 19 respectively (see also Ex.3:18 where they are shown in the context of the whole section). These figures also indicate the chords' positioning in the overall harmonic succession, which is stretched over a period of six minutes with phrases consisting first of seven, then six, then five aggregates. The first stage has E as its lowest pitch, this rises to F for the second stage, F# for the third stage, and eventually reaching G at figure 19. This gradual upward semitone transposition is of great importance to the overall dramatic shape of the work as, some seventeen pages and three minutes later, Lutosławski returns to chord-aggregates strongly rooted on G for a continuation of the same cycle of harmonic succession which drives to the climactic harmony at rehearsal figure 39, rooted on G# (quoted in Ex.3:13c).

Ex. 3: 11

The image displays three staves of musical notation, each labeled 'A' at the beginning. The notation consists of circles representing notes on a five-line staff, with various accidentals (sharps, flats, naturals) and stems. The notation is organized into three sections:

- a)** Labeled '8vc' with a bracket. It contains three measures of chords. The first measure is marked 'Apogeuum b.236', the second 'b.240', and the third 'b.240'.
- b)** Labeled 'Paroles tissées III, bar 5'. It contains two measures of chords.
- c)** Labeled 'Mi-Parti chord 8; fig. 9', 'chord 15; fig. 15', and 'fig. 19 with 8vc doublings'. It contains three measures of chords.

 The chords are 12-note aggregates, and the notation shows how they are distributed across the three strands.

Vertical Pitch Organisation: Harmony

Example 3:12 illustrates Lutosławski's treatment of chord-aggregates of the A-A-A type used in horizontal progression. This passage occurs in the Second Symphony from Fig.147 in the second movement, *Direct*. The strings play in two, distinct harmonic strands, each comprising a progression of 4-note diminished-seventh chords: the upper strand initially ascends in whole-tone scale patterns, then descends chromatically; the lower strand initially descends in sequential chromatic scale segments. Superimposed on the strings is a third harmonic strand, played first by four horns (shown at concert pitch), then transferring to woodwinds. This strand contains the 4-note diminished-seventh chords which complement the other two strands. The first five bars, in which each of the three complementary 4-note chords is transferred between strands, are summarised in the following chart. Letters a b c denote the three configurations of diminished-seventh chord: F#, A, C, Eb; G, Bb, C#, E; and F, G#, B, D, respectively.

Horns	:	a c b	a c b	a c b	a c b	a c b
Upper strings:		b a c	b a c	b a c	b a c	b a c
Lower strings:		c b a	c b a	c b a	c b a	c b a

Ex. 3: 12

The musical score for Example 3:12 is divided into three sections. The top section is for four horns (COR. 1-4), showing a sequence of four diminished-seventh chords in concert pitch. The middle section is for strings (vn, vln, vc) with a tempo marking of *d. = ca 110*. Each string part has a series of chord diagrams (fingerings) and dynamic markings. The horn part is marked *simile* and *ff*. The string parts are marked *simile* and *ff*. The score shows the transfer of the three chord configurations (a, b, c) between the horns and strings over five bars.

Vertical Pitch Organisation: Harmony

Example 3:13 shows aggregates which have the same chord type in each of the outer strands, a very characteristic sonority for Lutosławski's later work, but occurring only with types B, C and D used twice.²⁷ By far the most frequently used complex chord of this sort is one which has the minor seventh chord in the outer strands (type C) and the major/minor chord in the middle strand (type H). Nine C-H-C aggregates are shown in Example 3:13a, including the climactic harmonies of both *Livre pour orchestre* and *Chain 2*. Three D-J-D aggregates with the dominant-seventh chord in the outer strands are shown in Example 3:13b; they each give rise to chord type J in the middle strand. Example 3:13c shows three B-K-B aggregates with the half-diminished-seventh chord in the outer strands giving rise to type K in the middle strand: the first is the climactic harmony of *Mi-Parti*; the second is from *Chain 2*; whilst the third is one of only a few clear examples of a full 12-note chord-aggregate to be found in *Partita*.

Ex. 3: 13

Example 3:13a shows nine C-H-C aggregates. The outer strands (C) contain minor seventh chords, and the middle strand (H) contains major/minor chords. The aggregates are:

- Five Songs; IV; *Rycerze* b.170-2
- Rycerze* b.174
- Livre*; IV; fig. 445; climax
- Les espaces*; fig. 95
- Mi-Parti*; fig. 2
- Mi-Parti*; fig. 2
- Novelette*; fig. 52
- Chain 2*; fig. 115; climax
- Mi-Parti*; fig. 48

Example 3:13b shows three D-J-D aggregates. The outer strands (D) contain dominant-seventh chords, and the middle strand (J) contains dominant-seventh chords. The aggregates are:

- Les espaces*; fig. 105; final chord
- Mi-Parti*; opening chord
- Mi-Parti*; chord 9; fig. 9

Example 3:13c shows three B-K-B aggregates. The outer strands (B) contain half-diminished-seventh chords, and the middle strand (K) contains half-diminished-seventh chords. The aggregates are:

- Mi-Parti*; climax; fig. 39
- Chain 2*; IV; bar 2
- Partita*; I; bar 103

Vertical Pitch Organisation: Harmony

Closely related to the pitch collections in the previous example are chord-aggregates containing the same chord type in either the upper and middle strands or the middle and lower strands. Example 3:14a has three of the former (drawn from Preludes and Fugue, the Double Concerto and *Chain 2*, respectively), whilst Example 3:14b has three of the latter (drawn from the first of the Five Songs, 'Morze', and from *Muzyka żałobna*).

In chord-aggregates which use type D at both the lower and middle levels, a distinctive sonority appears in the upper strand. This is a variant of type J where the outer pitches of the 4-note chord have been 'exchanged' by octave transfer, thus altering its intervallic character from a diminished triad with a major seventh (or diminished octave) above the root into a major triad with a minor ninth above the root. Attention has already been drawn to the distinction Lutosławski makes between the properties of the major seventh and minor ninth intervals even though they are both of the same interval-class (see Ex.3:5), and that he does not recognise in all cases the principle of complete inversional equivalence of intervals. In the case of such chords with the variant of type J exposed in the high strand, the minor ninth property is an important aspect of the chosen sonority.

Ex. 3: 14

Handwritten musical notation for Example 3:14, showing two parts (a) and (b) with chord aggregates in treble and bass clefs. Part (a) shows three examples of chord aggregates in treble clef, each with an 8va label above it. The first is from 'Preludes + Fugue Fugue fig. 27', the second from 'Double Concerto I; fig. 21', and the third from 'Chain 2; II fig. 59'. Part (b) shows three examples of chord aggregates in treble clef, each with an 8va label above it. The first is from 'Five Songs: Morze bars 21-27', the second from 'Morze bars 32-39', and the third from 'Muzyka Żałobna Apogeeum b. 238'. The bass clef part in both (a) and (b) shows corresponding chord aggregates in the lower register.

Vertical Pitch Organisation: Harmony

The last of these examples showing 12-note pitch collections taken out of their contexts shows a selection of all ten chord types in chord-aggregates comprising different types in each of the three strands (Ex. 3:15). Sixteen pitch collections are arranged alphabetically according to the chord type assigned to the low strand, starting with type B (type A occurs in the low strand only in chords such as already shown in Ex. 3:11). An 'odd man out' in this group is the chord from the Third Symphony which has fourteen rather than twelve notes, as pitches have been duplicated at the top of the high strand and the bottom of the low strand (G#-Ab and F); this isolates the remaining pitches, G and B, which thus do not correspond to the separation into strands. The inclusion of this chord as an exception not only assists in proving the rule, but also illustrates the use of selective octave doublings which is typical of the Third Symphony.

Ex. 3: 15

The musical score for Ex. 3: 15 consists of two systems of three staves each (Soprano, Alto, Bass). Each staff contains 16 chord aggregates, with source references written below them. Above the first staff, '8va' markings indicate octave doublings. A handwritten note below the first system states: 'nb. 11 pitches. (E doubled, F missing)'. The chord types are arranged alphabetically by their low strand notes: B, B, A, B, B, B, H, H, G, H, B, F, F, F, G, G, B, K, K, B, H, H, H, A, E.

System 1:

- Double Concerto fig. 34
- Double Concerto fig. 48
- Five Songs: V Dostoyevsky cantata b. 200-224
- Symphony N° 2 before fig. 153
- Line: II fig. 212
- Preludes + Fugue Fugue p. 36
- Mi-Parti fig. 16
- Mi-Parti fig. 5

System 2:

- Mi-Parti before climax
- Mi-Parti fig. 13
- Mi-Parti chord preceding climax fig. 39
- Preludes + Fugue Fugue p. 42
- Double Concerto figs. 23-24
- Mi-Parti before fig. 16
- Symphony N° 3 figs. 70-72
- Double Concerto fig. 25

Vertical Pitch Organisation: Harmony

Thus far, the classification of 12-note chord and chord-aggregate has been illustrated only with very brief examples, mostly extracted from their proper context in the individual works where they occur. In order to redress the balance in favour of musical context, longer examples will now be given, showing chords and chord-aggregates within passages which illustrate both harmonic succession and progression (the latter term is appropriate in cases where there are distinct horizontal connections between successive harmonies, particularly where such connections are sequential). The four works from which such longer examples are given below are the *Five Songs* (1957), *Muzyka żałobna* (1954-8), *Jeux vénitiens* (1960-1) and *Mi-Parti* (1976). The set of *Five Songs* to poems of Kazimiera Iłłakowicz, was the first work in which Lutosławski employed his newly evolved harmonic vocabulary of 12-note chords and chord-aggregates. A harmonic reduction is given in Example 3:16. Stucky's account of 12-note harmony in this work is generally good, in relation to the second, third and fourth songs, but overlooks the important feature of chord-aggregate constructions in the first and final songs. 20

Morze (The Sea) gradually works through a succession of ten chords (Ex. 3:16a). Apart from no.9 (which has only five notes), they are all 12-note chords. Chords 1 and 10 have the same type of vertical layout, made up almost entirely of superimposed semitones and minor thirds (1+3); a perfect fifth at the bottom of both chords breaks the vertical symmetry. Both exploit opposition between white and black keys (a feature obscured in the orchestral version); for chord 1 the left hand plays all five black keys, whilst the right hand plays all seven white keys; for chord 10 the roles are reversed. Such chord opposition is clearly related to the Stravinskian pianistic effects in *Petrushka*. The vocal line corresponds closely to the supporting harmony, from which it takes its interval patterns; whilst the first chord sounds, the vocal line uses only semitones and minor thirds when rising through the corresponding notes of the harmony. Chords 2 and 4 are both 12-note chord-aggregates containing dominant-seventh chords in the low and middle strands, complemented by a major triad with added minor ninth in the high strand (thus J-D-D). This type of chord-aggregate plays a very important role in *Muzyka żałobna*, occurring at its overall climax.

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Ex. 3: 16

MORZE

a)

WIATR

b)

ZIMA

c)

RYCERZE

d)

DZWONY CERKIEWNE

e)

soave made

Vertical Pitch Organisation: Harmony

The remaining six chord-aggregates in *Morze* (nos. 3, 5, 6, 7, 8 and 9) are all of the same type, albeit that one is incomplete. Although not strictly symmetrical, they have a slightly modified symmetrical layout which would have the following interval structure if the low strand had not been adjusted to sound a tritone at the bottom: 3-2-1(3)2-3-2(3)1-2-3; this layout can be produced simply by moving the lowest note up an octave. Similar adjustment of the lowest note can be observed in the other chord-aggregates used in this song: in chord 1 only the low perfect fifth denies vertical symmetry of interval-classes 1+3; in chord 2 the dominant-seventh chord in the low strand is opened out by displacing the fifth (B) down an octave. Chords 5-9 form a progression chromatically descending by semitones until reaching the A contained within chord 10. The ninth chord is incomplete because the upper parts have, by this point, been discontinued.

Wiatr (The Wind), uses 12-note harmony based on four different subdivisions of the chromatic whole (Ex. 3:16b). The first three consist of complementary tetrachords (2-1-2, 2-3-2, and 1-1-1, respectively), used as chords rather than linear modal segments. At the highpoint of the song, where the singer reaches and holds her high G for seven bars, *fortissimo*, the harmonic support comes from a 12-note chord-aggregate of three complementary and interlocking diminished-seventh chords (A-A-A). *Wiatr* and *Rycerze*, the fourth song, show the earliest examples in Lutosławski's published work of this harmonic technique which he was later to use in other works, particularly the Apogee of *Musique funèbre* and in *Paroles tissées*. Here, overlapping all three chords in the low register gives a textural rather than harmonic effect. The final chord has a symmetrical pattern of minor thirds, tones and semitones.

Zima (Winter) uses seven 12-note chord-aggregates, each consisting of complementary augmented triads in four harmonic strands (Ex. 3:16c). All are vertically symmetrical structures using only interval-classes 4 and 3: four pairs of major thirds (the four augmented triads) linked by minor thirds. Chord 5 has a similar pattern but covers a much wider range, using augmented triads spaced as minor sixths instead of major thirds.

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The title of the fourth song, *Rycerze*, is usually translated into English as 'Knights'. Although accurate, it is not the most suitable musical solution for either the singer or the listener, due to the unfortunate disruption of text underlay caused by a mismatch between the number of Polish and English syllables; 'Crusaders' would correspond more closely. *Rycerze* has fourteen 12-note chord-aggregates (Ex. 3: 16d); eight of one type followed by six of another, the change corresponding to contrast between the poem's two stanzas. The first verse is optimistic, depicting the knights and their chargers setting out for battle. The second relates their homecoming, not in glory, but *wounded and dejected*. The *more sombre* interval disposition of chord 9 marks this change of mood.

Chords 2-8 are all symmetrical constructions made from two complementary six-note patterns of major and minor thirds, linked by a semitone. Chord 1 is essentially of the same type, although its interval structure differs due to displacement of a central note (A natural) to the low register. Chords 7 duplicates chord 2; chords 3-6 form a progression rising by semitones, counterbalanced by chords 6-8 which fall by perfect fifths. Chords 9-14 are all 12-note aggregates containing three diminished-seventh chords in distinct harmonic strands. The last five form a progression which converges until the strands overlap: the low strand rises by semitones; the middle strand falls by tones; the high strand falls by perfect fourths. All five chord-aggregates are vertically symmetrical.

The title of the last song, *Dzwony Cerkiewne*, has continually been mistranslated as 'Church Bells', 'Cloches d'église', or 'Glocken'. Even the published scores printed in Poland and Germany show the title, simply and incorrectly, as 'Church Bells'. Yet the Polish adjective *cerkiewne*, stemming from the noun *cerkiew* (meaning 'onion dome'), refers specifically to the distinctive tradition of rhythmically coordinated and highly dissonant *zvon*-ringing, as practiced in the Russian Orthodox Church. The consequence of this mistranslation is that the true character of these bells has been overlooked and misunderstood.²⁹ Lutosławski's early childhood (1915-18) was spent in Moscow, and he is probably the only composer living today who has heard the pre-revolutionary *zvon*-ringing of that city. ³⁰

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He uses two 12-note chord-aggregates (Ex. 3:16e) to evoke the contrasting bell sounds described by Illakowicz. In the first verse the bells are sweetly singing: *Lubimy dzwony cerkiewne, kiedy są śpiewne...* (We like the orthodox bells when they are singing...). The sonic image of the second verse is quite different: *Ale lubimy także dzwony cerkiewne, kiedy są gniewne...* (But we also like the orthodox bells when they are angry...). 'Singing' bells are represented by a chord-aggregate in which thirds predominate: a diminished-seventh chord played in the high strand as two interlocking and alternating tritones; a minor-seventh chord with diminished fifth (enharmonically) in the middle strand; and a dominant-seventh chord in the low strand. There is also rhythmic layering to represent the controlled striking of each bell: four small ones (corresponding to the notes in the high strand); three in the middle (B, C and Eb-F-Ab); and one large bell in the low register (A-D-F#).

Two Italian words appear in the score, stressing the change of character and mood: *soave* suggests the euphony of 'singing' bells; *rude* marks the change to 'angry' bells. At the point of division the interval content is abruptly and entirely transformed. Replacing third-based harmony, he uses a symmetrical construction in four harmonic layers, each containing a three-note cell, laid out to maximise the dissonance of major sevenths and minor ninths. The same Italian terms were later used in the second movement of *Chain 2*, where they are associated with the strongest contrast of interval pairings: major seconds and perfect fourths/fifths (2+5), *soave*; against minor seconds, major sevenths and tritones (1+6), *rude* (see Table 4:3). The vocal line also matches the contrast between the two verses. As the first chord-aggregate sounds, the melodic line curls chromatically, initially using only semitones and tones, then extending to include minor thirds. Interval-classes 1-2-3 are also used for the beginning of the second verse, but opened out to produce wide, angular interval leaps.

The original version of the Five Songs did not receive its première until 25 November 1959, at Katowice, whilst the orchestral version was not performed until 12 February 1960. Before either was heard, Lutosławski had already received international recognition for the other outstanding work of the transitional years, *Muzyka żałobna*.²¹ It is partly due to the

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peculiar chronology of these two works that the significance of the Five Songs has frequently been overlooked, overshadowed by its successor. Stucky has rightly stressed the importance of the Iliakowicz Songs as a milestone in the development of Lutosławski's harmonic language, but infrequent performance of the songs (outside Poland) continues to give a misleading impression that 12-note pitch organisation came first in *Muzyka żałobna*.

In *Muzyka żałobna*, although the melodic material of the outer sections is generated by a 12-note row (see Exx. 4:24 and 4:25), the full chromatic density of 12-note harmony is reserved for arrival at the climactic point, at the beginning of the Apogee. Here there is a progression of 32 chords which drive towards the beginning of the Epilogue (Ex. 3:17). ³²

In the extreme outer parts this progression is determined by a sequential alternation of minor thirds and minor seconds operating by contrary motion in order to achieve the overall effect of contraction. Most of the chords are constructed in three strands corresponding to three groups of parts: Violins I-II-III-IV (high); Violas I-II (middle); Cellos I-II and Basses I-II (low). Chords 1 and 5 are both 12-note chord-aggregates comprising chord type D in both the middle and low strands and chord type J in the high strand (J-D-D). Chords 3 and 4 are both of the elementary type, being clusters of semitones (12 notes and 10 notes, respectively). Chord 3 is the only fully chromatic cluster of all 12 notes used in this passage.

Although chords 25-32 all result in clustered semitones they contain only 8, 11, 5, 8, 7, 5, 4 and 2 notes, respectively. The remaining pitch collections consist of complementary 4-note diminished-seventh chords in each of the three strands. From chord 6 onwards, these have been labelled in Example 3:17 as A¹, A² and A³, to clarify the way Lutosławski exchanges chords between strands as the progression proceeds (not so much 'unfolding' as 'folding inwards'). The interval structure of chord type A, although primarily consisting of adjacent minor thirds, may also be regarded as pairs of interlocking tritones. The layout in the outer strands of chords 6, 8, 10 and 12 emphasises this feature.

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Ex. 3: 17

1 2 3 4 5 6 7 8

Musical score for measures 1-8, three staves. The notation includes treble, alto, and bass clefs, a key signature of one sharp (F#), and a common time signature. The music features complex vertical pitch organization with various chords and intervals. Measure 1 starts with a treble clef and a common time signature. The first staff has a treble clef, the second an alto clef, and the third a bass clef. The music is written in a style that emphasizes vertical pitch organization, with various chords and intervals. The key signature is one sharp (F#) and the time signature is common time. The notation includes various clefs, accidentals, and note values.

9 10 11 12 13 14 15 16

Musical score for measures 9-16, three staves. The notation continues from the previous system, maintaining the same key signature and time signature. The music features complex vertical pitch organization with various chords and intervals. The notation includes various clefs, accidentals, and note values.

17 18 19 20 21 22 23 24

Musical score for measures 17-24, three staves. The notation continues from the previous system, maintaining the same key signature and time signature. The music features complex vertical pitch organization with various chords and intervals. The notation includes various clefs, accidentals, and note values.

25 26 27 28 29 30 31 32

Musical score for measures 25-32, three staves. The notation continues from the previous system, maintaining the same key signature and time signature. The music features complex vertical pitch organization with various chords and intervals. The notation includes various clefs, accidentals, and note values.

Vertical Pitch Organisation: Harmony

The passage as a whole illustrates the principle of selective octave transfer which Lutosławski has often used in the past as a means of progressing from one chord to another. In this case the application of octave transfer is one of the means he uses to achieve a particular result: an overall shape outlining the gradual move from the widely-spaced, expansive chord-aggregate beginning the section (the first 12-note chord of the work); collapsing inwards towards the unison A beginning a powerful statement of the 12-note row at the opening of the Epilogue (see Ex. 4:25). This gestural effect moves from harmonic density to melodic intensity.

Chords 6-13 show a simple process in the high and low strands whereby the outer notes of each 4-note diminished-seventh chord are crossed-over or 'exchanged' by octave transfer. These eight chords are arranged as four pairs in which the pitches within each strand remain the same for each pair. The span of the chords in the high and low strands is contracted from being greater than an octave to being contained within the octave. Thus there is a scheme of alternate expansion and contraction. In the middle strand from chord 6-19 there is an even simpler pattern with only one note transferred down an octave between certain pairs of similar chords.

As the diminished-seventh chords progress they overlap and interlock to such an extent that their separate identities become less and less clear. In the later stages of the passage the sub-division into these 4-note chords becomes purely notional as they result eventually in clustered semitones. This transformation in intervallic character, from widely-spaced and third-based harmony to a densely clustered sound-mass, is all part of the composer's intent in driving towards the powerful unison at bar 246.

Table 3:6 shows the intervallic structure of each of the sixteen vertical pitch collections played by the string section in the third movement of *Jeux vénitiens*. The succession of dynamic levels assigned to each chord shows clearly how the movement is planned so that it will build up towards a climax at rehearsal letter Q from which it then subsides gradually until the end. The integers stacked vertically represent the interval-classes occurring between adjacent notes of each chord.

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TABLE 3: 6 *Jeux vénitiens*, string chords in third movement

Letter:	D	G	J	L	M	N	O	P	P	Q	Q	R	R	S	T	W
Dynamic:	<i>p</i>	<i>mp</i>	<i>mf</i>	<i>f</i>	<i>f</i>	<i>f</i>	<i>+f</i>	<i>ff</i>	<i>ff</i>	<i>sff</i>	<i>fffp</i>	<i>mf</i>	<i>mp</i>	<i>p</i>	<i>-p</i>	<i>pp</i>
Chord:	1	2	3	4	5	6	7	8/9	8/9	10	11	12	13	14	15	16
Interval	6	3	2	1	1	1	1	1	1	2	6	6	6	6	6	6
Classes:	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	5
	5	1	1	1	1	1	1	1	1	1	1	1	6	6	6	6
	3	3	1	1	1	1	1	1	1	1	1	5	1	1	1	1
	3	2	2	1	1	1	1	1	1	1	1	1	1	6	6	6
	2	3	1	1	1	1	1	1	1	1	3	1	5	1	5	1
	3	2	1	1	1	1	1	1	1	1	1	1	1	6	6	6
	6	3	1	1	1	1	1	1	1	1	1	5	1	1	1	1
	4	3	1	1	1	1	1	1	1	1	1	1	6	6	6	6
	5	3	2		1		1			1	1	1	1	1	1	5
	1	5	5							2	6	6	6	6	6	6
Elementary				E	E	E	E	E	E							
Simple or										S				S		
Complex	C	C	C								C	C	C		C	C

Not all these chords contain all twelve notes. Chords 4, 6, 8 and 9 have only ten pitches, whilst chords 5 and 7 have only eleven. Chords 4-9 are obviously of the elementary type being minor second clusters. Chords 10 and 14 are of the simple type containing only two interval classes, (1+2 and 1+6, respectively). The remaining eight chords are all types of intervallically complex structure. The first is a 12-note chord-aggregate with the following chord types in three strands: B, high; C, middle; G, low. All except the first three chords are intervallically symmetrical. It has already been noted that such symmetrical constructions are typical of Lutosławski's pieces of the 1960s, but are less common in the later works. The above chord succession provides only one component of the whole texture, delivering moments of punctuation which gradually telescope together to assist the move towards a point of culmination. In the melodic foreground there is a flute solo against several supporting layers. One of these, played by the piano, contains a simple 12-note row consisting only of perfect fourths and perfect fifths horizontally, thus contrasting against the predominant semitone/tritone sound of the string chords. The whole of this piano part is shown, albeit condensed, in Example 4:32.

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Table 3:7 shows the succession of eight 12-note chord-aggregates which occupies the three stages of the first section of *Mi-Parti*. The chords are repeated as a cycle with a simple upward transposition of a semitone between cycles. Some of these aggregates have the same 4-note chord type in both the outer strands (nos. 1,2, and 7), others have a different chord type in each of the three strands (nos. 3,5 and 6), whilst only one has the same chord type in all three strands (no. 8). Only the fourth aggregate contains chords which do not correspond to one of the ten classified chord types (shown as extra - 'x').

TABLE 3:7 *Mi-Parti*, Chord succession from Figs.1-20

<u>STAGE 1</u>								
Bar No.	: 10	17	23	28	32	35	37	
Fig.No.	: 1	2	3	4	5	6	7	
Phrase length:	-----						<u>ad lib</u>	
High strand	: D	C	E	E	H	J	B	
Middle strand:	J	H	H	x	G	K	K	
Low strand	: D	C	G	x	E	F	B	
Succession	: 1	2	3	4	5	6	7	
<hr/>								
<u>STAGE 2</u>								
Bar No.	: 38	42	48	52	55	59		
Fig.No.	: 8	9	10	11	12	13		
Phrase length:	-----						<u>ad lib</u>	
High strand	:	A	D	C	E	E H J		
Middle strand:		A	J	H	H	x G K		
Low strand	:	A	D	C	G	x E F		
Succession	:	8	1 ^a	2 ^a	3 ^a	4 ^a 5 ^a 6 ^a		
<hr/>								
<u>STAGE 3</u>								
Bar No.	: 60	64	70					
Fig.No.	: 14	15	16	17	18	19	(20)	
Phrase length:	-----		<u>ad lib</u>		<u>ad lib</u>		<u>ad lib</u>	
High strand	: B	A	D C E E H	J	B	A D		
Middle strand:	K	A	J H H x G	K	K	A J		
Low strand	: B	A	D C G x E	F	B	A D		
Succession	: 7 ^a	8 ^a	1 ^b 2 ^b 3 ^b 4 ^b 5 ^b	6 ^b	7 ^b	8 ^b 1 ^c		

Vertical Pitch Organisation: Harmony

From the above table one can see how Lutosławski overlaps the repetitions of the eight-chord succession with the separation into three distinct formal stages. Each of these three stages establishes its own pattern of foreshortening, the chords coming closer together as the rate of harmonic rhythm increases. In each case this foreshortening has the effect of pushing towards the *ad libitum* section which follows. Comparing the three stages with each other, one can also see another process of foreshortening as they take, respectively, 36 bars, 21 bars, and 10 bars of metred playing before reaching an *ad libitum* section. The last of these is then extended by addition, still working through the chord succession, thus forming a link to the fourth stage of the form which begins the second main section overall.

The process governing the gradual change from one chord to another, as Stucky has already shown,²² is the principle of selective octave transfer already observed here in the Apogee of *Muzyka żałobna*. Whereas in the latter case the transfers were localised to particular strands (although the chords themselves were exchanged between strands), in *Mi-Parti* the transfers are made freely between strands. This is shown in Example 3:18, below, with black notes marking the pitches which will be displaced to a different register in the following chord.

From Figs. 16 to 19 the *ad libitum* treatment introduces many other notes as melodic decoration to the individual lines (auxiliary or 'neighbour' notes). Significantly, in view of Lutosławski's tendency to treat the harmonic sonority of the low register differently to the upper registers, the chord type in the low strand of each chord-aggregate remains distinct but the harmonies in the middle and high strands are blurred by these embellishments. The last two chords of this part of the cycle (8b and 1c), occurring just after Fig. 19, also have additional notes in the middle and high registers but as sustained pitches produced by extensive octave doubling. Thus the 4-note chord types shown at these points are only notional and are unlikely to be perceived. The overall transformation in the character of the harmonic background has the effect of gradually changing one's aural focus away from the chord succession and onto the independent layers which lead into stage 4.

Vertical Pitch Organisation: Harmony

Ex. 3: 18

STAGE 1

Musical score for Stage 1, measures 1-7. The score is written on three staves: Treble, Alto, and Bass. Each measure contains a vertical chord with notes and accidentals. The notes are: 1. Treble: Bb, Alto: G#, Bass: G; 2. Treble: Ab, Alto: F#, Bass: F; 3. Treble: Gb, Alto: E#, Bass: E; 4. Treble: Fb, Alto: D#, Bass: D; 5. Treble: Eb, Alto: C#, Bass: C; 6. Treble: Db, Alto: B#, Bass: B; 7. Treble: Cb, Alto: A#, Bass: A. The notes are arranged in a descending sequence across the staves.

STAGE 2

Musical score for Stage 2, measures 8-6a. The score is written on three staves: Treble, Alto, and Bass. Each measure contains a vertical chord with notes and accidentals. The notes are: 8. Treble: A, Alto: G#, Bass: G; 1a. Treble: Ab, Alto: F#, Bass: F; 2a. Treble: Gb, Alto: E#, Bass: E; 3a. Treble: Fb, Alto: D#, Bass: D; 4a. Treble: Eb, Alto: C#, Bass: C; 5a. Treble: Db, Alto: B#, Bass: B; 6a. Treble: Cb, Alto: A#, Bass: A. The notes are arranged in a descending sequence across the staves.

STAGE 3

Musical score for Stage 3, measures 7a-5b. The score is written on three staves: Treble, Alto, and Bass. Each measure contains a vertical chord with notes and accidentals. The notes are: 7a. Treble: B, Alto: A#, Bass: A; 8a. Treble: Ab, Alto: G#, Bass: G; 1b. Treble: Gb, Alto: F#, Bass: F; 2b. Treble: Fb, Alto: E#, Bass: E; 3b. Treble: Eb, Alto: D#, Bass: D; 4b. Treble: Db, Alto: C#, Bass: C; 5b. Treble: Cb, Alto: B#, Bass: B. The notes are arranged in a descending sequence across the staves.

Musical score for Stage 3, measures 6b-1c. The score is written on three staves: Treble, Alto, and Bass. Each measure contains a vertical chord with notes and accidentals. The notes are: 6b. Treble: A, Alto: G#, Bass: G; 7b. Treble: Ab, Alto: F#, Bass: F; 8b. Treble: Gb, Alto: E#, Bass: E; 1c. Treble: Fb, Alto: D#, Bass: D. The notes are arranged in a descending sequence across the staves.

FOREGROUND AND BACKGROUND

It is curious that although *Mi-Parti* remains one of the most highly regarded of all Lutosławski's works, acclaimed by many commentators as a masterpiece of orchestral writing, it engendered considerable dissatisfaction for the composer not long after its first performance. The unease he has experienced concerns the first section in particular and its relationship between the harmony and melody. Reference could be made to ideas of harmonic background and melodic foreground,³⁴ but it is precisely the absence of such differentiation which troubles the composer:

I consider melodies derived from harmonies as rather poor. That's the way I composed ...the beginning of *Mi-Parti*, which I think I will avoid in the future. I am not satisfied with it. ...especially the solo instruments which more or less repeat the sounds of the chords. I find it an unsatisfactory solution. It was a piece that I composed before I discovered the possibilities of composing in another way, and if I were to write this section of *Mi-Parti* again, I should do it in an entirely different way which would be a more accurate realisation of my sound-vision. ³⁵

There is certainly a melodic level supplied by the network of lines which unfold in the wind parts, and there is certainly a background level of harmonic texture from which they emerge, but there is very little differentiation in the pitch organisation between these horizontal and vertical planes. It seems inevitable that this will be the case when the background harmony contains all twelve notes of the chromatic scale. The solution is obvious: notes omitted from the harmonic background can provide differentiation for a melodic foreground composed from the pitches which remain unused, by set-complementation. The partitioning of chord-aggregates into three strands corresponding with the high, middle and low registers undoubtedly helps the composer greatly in achieving differentiation of timbre between orchestral groups, so characteristic of his writing. The division into layers need not, however, always apply to chords of all twelve notes. In order to achieve a different focus between foreground and background in his later works, Lutosławski tends to reserve certain pitches for a melodic line and assigns perhaps only six or eight of the remaining available notes to one or more harmonic strands.

Vertical Pitch Organisation: Harmony

Subdivision of the chromatic whole into complementary sets is also used to provide more than two levels. In addition to the obvious division between melodic foreground and harmonic background there is sometimes a kind of middleground occupied by what the composer refers to as '*harmonie localne*' (local harmonies). In the *adagio* passage which occupies the central section of *Les espaces*, there is a clear division between the three levels of background, middleground and foreground. This is due to separation between pitches in the background harmony (in the strings) and the pitches used for the decorative embellishments delivered by wind and percussion instruments. The composer considers that, due to the timbral separation of instrumental tone colour and modes of attack, one does not perceive the layer of '*harmonia localna*' as belonging to the same block of sound as the strings, but as a separate harmonic strand. Example 3:19 shows the passage between rehearsal figures 33 and 38. Here the melodic foreground is supplied by the baritone line which uses pitches in common with the string background.

Ex. 3: 19

molto tranquillo

The score is divided into three rehearsal figures: 33, 34, and 35. The oboe (ob.) and percussion (pf.) parts are marked with 'f. ca 150' and 'p'. The baritone solo (b. solo) part has the text 'Quand je ferme les'. The string parts (vni I div., vni II, vle div., vc) are marked with 'pp'.

Vertical Pitch Organisation: Harmony

Ex. 3: 19 (continued)

piu mosso

36 37 38

ob. 1. 2.

pf.

b. solo
yeux des fleurs - sons phosphorescents ap - pa - rais - sent et se

vni I div.

vni II div.

vle div.

vc.

At Fig. 33 only two pitches are sustained (F#, G#), the other ten being 'local' to the oboes and piano; there is no pitch duplication between these strands, the chromatic whole being partitioned between them. There is also a clear distinction between vertical and horizontal planes as the strings have no melodic role whilst the oboes and piano play rhythmic variants of a single line. As new notes enter the harmonic background so the number of pitches available to the oboes and piano reduces. Thus, at Fig. 34 there are three pitches in the strings and only nine in the oboes; at Fig. 35 the strings have four pitches, Bb providing a cue for the soloist; at 36 the strings have five pitches with the oboes reduced to seven; at Fig. 37 the instrumental layers have six notes each; at 38 there are seven in the strings and only five in the oboes. The row used to generate pitches for the harmony is generated by horizontal interval-pairing 2+5 (see Ex. 4:34).

EIGHT-NOTE CHORDS

Thus far the discussion has concentrated on the full chromatic density of 12-note harmony. Whilst this approach to the organisation of pitch in vertical pitch collections has largely determined the character of Lutosławski's large-scale works composed since the late 1950s, there has nonetheless been development in the way that these chords are built and employed. Having explored the properties of 'elementary' and 'simple' types of 12-note chord in the 1950s and 60s, in the 1970s he tended to use 12-note chord-aggregates with their constituent 4-note chord types.

Since 1979 the tendency has been for full chromatic density to be reserved for a few moments of special effect. The greater part of these later works has been characterised by more transparent harmonies of less than twelve notes, which allow for increased differentiation between harmonic background and melodic foreground. Chords of ten, eight, six and four notes are used, but of these Lutosławski has shown most interest in the properties of the 8-note chord.

8-note chords interest me because of the important role of the interval of the minor ninth between particular strands of the vertical aggregations. So now I have been working mainly on 8-note chords, because there can be the absence of minor ninths between two strands. And, if you add the ninth, tenth, eleventh or twelfth note to it, it brings the minor ninth. Of course it doesn't mean that I want to avoid minor ninths, it's just to clarify correctly the aggregations in such a way that one group is represented by the 8-note chord with minor ninths and the other group without minor ninths. They play different roles in my music. ³⁶

His new-found interest in the properties of 8-note chords can be interpreted as a sign of him returning to the less dense harmonic world of earlier works such as the First Symphony. The opening chord of the latter (recurring also at Fig.25, where it marks the beginning of the recapitulation), is an extended pattern of superimposed minor and major thirds (vertical interval-pairing 3+4), which can also be regarded as an aggregate of two chords both of type B: C#, E, G, B; and D, F, Ab, C. Lutosławski's deployment of 8-note chords is closely connected with the principle of set-complementation, as will be shown in Chapter Nine in the analysis of *Interlude* (see Ex. 9:16 and Table 9:4).

Vertical Pitch Organisation: Harmony

Example 3:20 shows two examples of 8-note chords constructed in such a way as to avoid the presence of any minor ninth intervals, either within each of the two strands or between them. The first (Ex.3:20a) is taken from the Third Symphony and is one of its most strongly emphasised and dramatically significant chords. It occurs at Fig.40 as the eighth statement of the arresting repeated note motif which both opens and closes the work. All seven previous statements of the motif repeated the note E. Thus the radical change of eliminating the fixed-reference pitch (which helped to establish and maintain a static quality in the earlier part of the Symphony) and replacing it with a chord, establishes this moment as one of the main landmarks of the formal scheme, and acts as a signal that the static music has ended and something else is about to happen. The 8-note chord is rich in major sevenths but contains no minor ninths, due to the exclusion of A^b, Db, E and G . The eight notes are piled up in major and minor thirds with a wider interval used at the bottom, both features fully characteristic of Lutosławski's approach to chord-building. The component 4-note chord types are J in the lower strand and F in the upper strand. The second chord shown (Ex.3:20b) occurs in the Piano Concerto, at the highpoint of its third movement, played *fortissimo* by the whole orchestra and the soloist. It is shown below first with its octave doublings, and then with these removed to reveal an 8-note chord which has no minor ninths either within or between strands due to the elimination, in this case, of the notes E, B, D and G . The component 4-note chord types are C in the lower strand and H in the upper strand.

Ex. 3: 20

The image shows two musical examples of 8-note chords. Example (a) is from 'Symphony no. 3, Fig. 40' and shows a chord with notes F and J. Example (b) is from 'PIANO CONCERTO III, Fig. 177' and shows a chord with notes C and H. The notation includes treble and bass clefs, a key signature of one sharp (F#), and various note heads and stems.

When Lutosławski adds the ninth, tenth, eleventh or twelfth note to one of his 8-note chords, thus producing the minor ninth interval, he does so with a part in a separate strand in the melodic foreground against the given harmonic background. The implications of this as a principle governing melody will be considered in Chapter Four.

Vertical Pitch Organisation: Harmony

The foreground/background potential of this 'minor ninth principle' does not apply to the succession of ten 8-note chords shown in Example 3:21, where several minor ninths are present within each chord. The succession of chords occurs in the last movement (*Chapitre Final*) of the *Livre pour orchestre*, in the passage which leads to the overall climax of the work at Fig. 445. The ten chords are first stated at Figs. 419 to 428, respectively, then they are repeated at Figs. 429 to 438. Each chord is played *fortissimo* by the brass section (including horns) with the distance between them progressively reduced, thus producing an overall effect of unbroken acceleration from Fig. 419 to the metred passage at Fig. 439. The same ten 8-note chords are also used for the first bar of this metred passage, with other permutations of the pattern used thereafter.

The chords comprise three types of interval used vertically (classes 1, 5 and 6; semitone, perfect fourth/fifth and tritone) and two of these same interval-classes used horizontally (1 and 5) for each of the eight pitch layers throughout the whole succession of ten chords. Thus two of these three interval types fulfil a dual function, determining the pitch organisation in both the vertical and horizontal planes. The horizontal progression in the top and bottom layers proceeds in contrary motion with minor seconds and perfect fourths/fifths for chords 1-9. Of the ten chords, four are arranged according to vertical interval symmetry (Nos. 3, 5, 6, and 7), and two of these are of the 'simple' type (Nos. 3 and 6) containing only two interval-classes (5+6 and 1+6, respectively).

Ex. 3: 21

The musical notation displays ten chords, numbered 1 through 10. Each chord is shown on two staves. Above each chord, two circled numbers represent interval classes: (419) (429), (420) (430), (421) (431), (422) (432), (423) (433), (424) (434), (425) (435), (426) (436), (427) (437), (428) (438). The notes are organized into layers, with interval labels like '5' and '6' indicating the relationships between adjacent notes in the layers.

Vertical Pitch Organisation: Harmony

Examples of set-complementation between melodic foreground and harmonic background can be found in *Novelette*. Example 3:22 shows the sequential progression of chords at rehearsal figures 1, 2 and 3, from the opening of the first section, 'Announcement'. In each case there is a harmonic background, *planissimo*, of eight string parts sustaining two 4-note groups of adjacent semitones. Above these backgrounds one hears first a solo violin (Fig.1), then a piccolo (Fig.2), followed by a xylophone (Fig.3) supplying the foreground using the remaining notes (the xylophone uses only three of the available four pitches).

Ex. 3: 22

The image shows a handwritten musical score for three rehearsal figures. It consists of two staves: a treble clef staff on top and a bass clef staff on the bottom. The key signature has one sharp (F#).
- **Fig. 1:** The top staff has notes G4, A4, B4, C5 with a slur and 'pp' above. The bottom staff has notes D4, E4, F4, G4. Labels: 'solo violin foreground' and 'pp' below the bottom staff.
- **Fig. 2:** The top staff has notes D5, E5, F5, G5 with a slur and 'pp' above. The bottom staff has notes A4, B4, C5, D5. Labels: 'piccolo foreground' and 'pp' below the bottom staff.
- **Fig. 3:** The top staff has notes E5, F5, G5, A5 with a slur and 'pp' above. The bottom staff has notes B4, C5, D5, E5. Labels: 'xylophone foreground' and 'pp' below the bottom staff.

In Part Two of the present study, set-complementation between harmonic background and melodic foreground will be examined in relation to the late works. Even in the discussion of 8-note chords it has been necessary to comment on the relationships between the vertical and horizontal planes. Pitch organisation, whether with twelve notes or otherwise, inevitably has these dual functions and need not be treated solely as a means of producing purely vertical pitch collections. The next stage of the present study must therefore be an examination of Lutosławski's methods of horizontal pitch organisation.

CHAPTER FOUR

Horizontal Pitch Organisation: Melody

INTRODUCTION

Although Lutosławski does not regard himself as a 'linear composer', there are certain characteristic features of his methods of organising pitch in the horizontal plane which can be traced throughout much of his career.' It has already been noted in Chapter Three that he considers himself to be 'a composer of harmony'; yet it could be argued that the strong emphasis which he placed on vertical methods of pitch organisation, especially during the 1960s, resulted in the comparative impoverishment of melody. The Second Symphony, for example, displays strength in the powerfully dramatic unfolding of its formal scheme; but this is achieved primarily by harmonic, rhythmic and textural means, through the management of dense sound masses, rather than via the projection of melodic lines. In this respect, there is great difference between the Second and Third Symphonies. In the latter, successive formal stages are characterised by a variety of melodic ideas, some invested with thematic significance. Whereas the Second Symphony progresses through its thirty-minute time-span as a succession of textural and gestural phenomena, the Third Symphony achieves a greater degree of linear coherence through its concentration on line.

It is a significant feature of the late works that they demonstrate Lutosławski's recent concentration on melodic lines. Yet it would be misleading to suggest that his music has never made use of melody as the leading element of his compositional technique. In the years after the completion the First Symphony, when he was privately redefining his harmonic language, the functional music which constituted his public persona was mostly determined by primacy of the melodic line. In the *Melodie Ludowe* (Folk Melodies, 1945) and the *Dwadzieście Kolędy* (20 Carols, 1946) the compositional constraints imposed by the traditional melodies largely determined his settings, which treat the diatonic and modal tunes with chromatic counterpoints that complement rather than destroy the functional implications of the top line. Even though Lutosławski tends to dismiss the notion of artistic worth in these modest pieces, one would be foolish to overlook them, because such sources provide early examples of his method of organising pitch horizontally through a technique which is identified and classified in the present study as 'interval-pairing'. ²

Horizontal Pitch Organisation: Melody

Examples illustrating the technique of interval-pairing will be given below, including early examples drawn from the Carols, the Children's Songs, the Bucolics, and the Dance Preludes. It is worth noting that the major concert work written alongside many of these shorter pieces was the Concerto for Orchestra. This is a work defined by melodic lines, albeit drawn from traditional sources rather than being of Lutosławski's own invention.³ Yet the work is not merely an arrangement of folk tunes, but represents the composer's distillation of traditional melodic material together with aspects of his own harmonic vocabulary, chromatic counterpoints, rhythmic organisation and formal planning. Lutosławski's decision to adopt 12-note methods of pitch organisation after the Concerto for Orchestra, first appearing in the Five Songs and *Muzyka żałobna*, may appear to represent a complete break with his former compositional techniques. Yet there is an important link: the technique of horizontal interval-pairing. It is this technique which invests *Muzyka żałobna* with linear coherence. The most intriguing aspect of Lutosławski's development of methods of horizontal pitch organisation, is the way he appears to have searched for (and perhaps to have found) effective means of establishing a framework for the generation of melodic lines which can operate in place of tonal and modal principles. A dilemma for any thoughtful composer working outside the range of tonal conventions must be how to achieve substitutes for the form-building potential of key centre and key change. Lutosławski's technique of linear interval-pairing, especially the contrast available between different pairings, goes some way to solving this problem.⁴

The present chapter will present a classification of available interval-class pairings, and will then show which of these have been used by Lutosławski, in which works, and to what effect. Examples will be drawn mainly from works composed between 1945 and 1979, although there are also some examples drawn from the works to be discussed in Part Two. Inevitably, as in Chapter Three, most of the examples are brief, and therefore mostly divorced from their actual musical context within individual works. Later in the chapter, however, an attempt has been made to provide slightly longer examples with reference to their context, in some cases with a table showing the work's overall formal scheme and the position of the selected example in relation to other events occurring in the piece.

CLASSIFICATION OF INTERVAL-PAIRING

In order to provide a context for assessing which horizontal interval-pairing combinations are used by Lutosławski, and why others are not, a full list of all possible interval-pairings is given below. Table 4:1 shows a classification of interval-pairings, most of which observe the principle of inversional equivalence between intervals of the same interval-class. The division into groups is similar to that adopted in the classification of vertical interval-pairing (in simple 12-note chords) given in Table 3:1; but the duplications there obtaining between similar interval-pairings in different groups (necessary in order to identify the predominating interval with the pairing) have here been rationalised. Hence the number of interval-pairings within each group shows a simple pattern of reduction, with the exception of Group C which has an additional category identifying the pairing of minor thirds and perfect fifths.

Mention has already been made in Chapter Three of the distinction which must be made, in analysing Lutosławski's music, between the perfect fourth and the perfect fifth, even though they are of the same interval-class.⁵ It would be analytical falsification to classify the specific pairing of minor thirds and perfect fifths (in cases where the perfect fourth does not appear) with the integer code 3+5. Hence, in Table 4:1 and elsewhere in the present study this interval-pairing will be identified as 3+7. It is not necessary to distinguish between perfect fourths and fifths in other interval-pairings. In the pairing 2+5, for example, Lutosławski uses both types of interval-class 5 as freely interchangeable, according to the principle of intervallic inversional equivalence.

In addition to columns showing the verbal terminology of interval types and interval-class integer codes, Table 4:1 also includes a column showing the implied chords which can result from the horizontal projection of some interval-pairings. Reference to 'Types B,C,D' should be interpreted in relation to the chord classification given in Table 3:3. Obviously, the combination of only two intervals gives rise to only three notes, and can therefore only imply a 4-note chord rather than state it explicitly.⁶

Horizontal Pitch Organisation: Melody

TABLE 4: 1, Classification of possible interval-pairings

Group	Interval types	classes	Used ?	Chords implied
Group A	Minor 2nd + Major 2nd	1 + 2	Yes	
	Minor 2nd + Minor 3rd	1 + 3	Yes	
	Minor 2nd + Major 3rd	1 + 4	Yes	
	Minor 2nd + Perfect 4th	1 + 5		
	Minor 2nd + Tritone	1 + 6	Yes	
Group B	Major 2nd + Minor 3rd	2 + 3	Yes	Types B, C
	Major 2nd + Major 3rd	2 + 4		Types B, D
	Major 2nd + Perfect 4th	2 + 5	Yes	
	Major 2nd + Tritone	2 + 6		Types B, D
Group C	Minor 3rd + Major 3rd	3 + 4	Yes	triads (min/maj)
	Minor 3rd + Perfect 4th	3 + 5		triads (maj/min)
	Minor 3rd + Tritone	3 + 6		triads (dim)
	Minor 3rd + Perfect 5th	3 + 7	Yes	Types B, C, D
Group D	Major 3rd + Perfect 4th	4 + 5		triads (min/maj)
	Major 3rd + Tritone	4 + 6		Types B, D
Group E	Perfect 4th + Tritone	5 + 6		

The fourth column in the above table affirms which of the available interval-pairings are found as characteristic elements of Lutosławski's linear technique. The ones which he tends not to use seem mostly to be those which give rise to all three notes of simple major, minor or diminished triads. For example, the pairings 3+5, 3+6 and 4+5 are not characteristic of his horizontal methods of pitch organisation (eg. upward projection of pairing 3+5 would give a major triad in first inversion, and downward projection would give a minor triad in second inversion; whereas interlocking use of 4+5 [as 4+7] can produce major and minor triads in root position).⁷ Although the table confirms his use of pairing 3+4 it is rarely applied, presumably due to its triadic property. This is not to say that there are no major or minor triads in Lutosławski's melodic lines; but when triadic patterns occur melodically they are usually the result of the arpeggiation of chord-aggregates partitioned into the 4-note chords shown in Chapter 3. In such cases the presence of triads in the melodic line results from vertical organisation of pitch rather than the projection of horizontal interval-pairing.

Horizontal Pitch Organisation: Melody

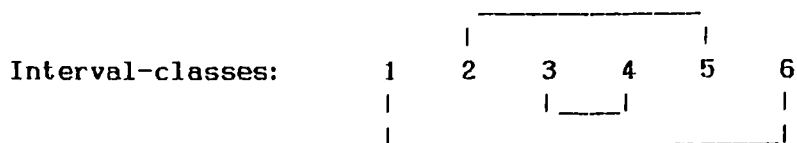
If one deletes from Table 4:1 those interval-pairings which are not typical of Lutosławski's melodic pitch organisation, this leaves only eight. Table 4:2 lists these interval-pairings as integer codes together with the verbal terminology of intervals. The integer codes in particular will be used throughout the rest of this chapter, as well as in each of the chapters on the late works, as a convenient means of reference to the identified categories of melodic interval-pairing.

TABLE 4:2 Horizontal interval-pairings used by Lutosławski

<u>Integer Code</u>	<u>Intervals</u>
1+2	Minor second and major second
1+3	Minor second and minor third
1+4	Minor second and major third
1+6	Minor second and tritone
2+3	Major second and minor third
2+5	Major second and perfect fourth/fifth
3+4	Minor third and major third
3+7	Minor third and perfect fifth

A crucial factor governing Lutosławski's use of interval-pairings is his recognition and exploitation of the intervallic differentiation which occurs between 1+6 and 2+5. In several works, he has adopted a principle of identifying each of these pairings with successive, and contrasting stages in the form: for example, in Preludes and Fugue, *Grave*, and the second movement of *Chain 2*. Table 4:3 shows the theoretical symmetry of such contrasted interval-pairings: opposite ends of the diagram represent the most strongly dissonant intervals, semitone and tritone, typical of the rigorously atonal harmonic language of Webern's later works; consonant intervals which give rise to the tonal vocabulary of triads are in the centre, minor and major thirds (and their inversions); the remaining pair represents the intervallic essence of modal pentatonicism, major seconds and perfect fourths/fifths.^e

TABLE 4:3 Contrastd interval-pairings



Horizontal Pitch Organisation: Melody

In Preludes and Fugue the 1+6 interval-pairing of semitones and tritones is used for the fugue subjects (see Ex.4:26), whereas the 2+5 pairing is used for Prelude no.1, the introductory bridge passage leading into the Fugue and in subsequent episodes (see Ex.4:31). This deployment of contrasted interval-pairings is particularly interesting in view of the work's title. Fugue is explicitly a tonal procedure and normally the title would only be applicable to a genuinely tonal structure defined by key and by key change. Lutosławski uses the term more freely to signify a piece using imitative techniques but without structural definition according to key change. In this case, one can regard his use of contrasted interval-pairings as an attempted substitute for the form-building properties of modulation within a conventional, tonal fugue. In the second movement of *Chain 2* the same interval-pairings, 1+6 and 2+5, are again used for contrasting formal components (see Ex.9:19), although in this case the sectional divisions are not clear-cut, but overlapped in accordance with his concept of 'chain technique' (the latter issue will be discussed fully in Chapter Eight, and is also relevant to Chapters Nine and Ten).

There are other cases where formal development is characterised by successive interval-pairings having one interval-class in common. An example of this effect occurs both at the beginning and the end of 'Repos dans le Malheur', the last of the *Trois poèmes d'Henri Michaux*. After the harp intones the focal pitch Db/C#, two pianos play notes generated only by interval-class 5; these are then combined with tritones (5+6); the tritones are then retained but the fourths/fifths are replaced by semitones (6+1); eventually the tritones are discontinued, leaving a chromatic scale generated by interval-class 1, treated with octave displacements. A similar evolutionary approach is adopted in the Cello Concerto: as a long *cantando* line unfolds, successive phrases are defined by the alternation of interval-pairings 2+3 and 2+5 (see Ex.4:28). This approach also provides a means of gradual progression in the refrains, episodes and coda of *Epitaph* (see Exx. 4:19 and 6:1).

Table 4:4 presents a selection of references to each type of interval-pairing, together with cross-references to the music examples given in this chapter and in the chapters of Part Two.

Horizontal Pitch Organisation: Melody

TABLE 4: 4. Selected examples of each interval-pairing

Melodic interval-pairing			
Pair	Work	Section(s)	Cross-ref.
1+2	Overture for Strings	bass line in bars 45-49.	Ex. 4: 12
	<i>Paroles tissées</i>	second movement	Ex. 4: 14
	Double Concerto	second movement Figs. 28, 32, 45-6	Ex. 6: 6
	Symphony no. 3	w. wind refrains Figs. 10, 18, 29	Ex. 7: 4
	Symphony no. 3	Figs. 81-4.	Ex. 7: 11
	<i>Partita</i>	third movement bars 51-65	Ex. 9: 4
	<i>Chain 2</i>	second movement Figs. 37-39	Ex. 9: 20
	<i>Chain 2</i>	third movement.	Ex. 9: 24
1+3	Children's Song	<i>Piosenka o złotym listku</i>	Ex. 4: 16
	Bukolic no. 2	bars 1-9 and 17-23	Ex. 4: 17
	Dance Prelude no. 4	bass line	Ex. 4: 18
	<i>Epitaph</i>	falling phrase of the Refrain	Ex. 4: 19
	<i>Interlude</i>	underlying bass progression	Ex. 9: 16
1+3+6	Symphony no. 1	third movement, 12-note row	Ex. 4: 21
1+4	Christmas Carol	<i>A cóż z tą dzieciną</i>	Ex. 4: 23
1+6	<i>Muzyka żałobna</i>	Prologue, 12-note row	Ex. 4: 24
	<i>Muzyka żałobna</i>	Epilogue, 12-note row	Ex. 4: 25
	String Quartet	introductory violin solo	Ex. 4: 27
	Preludes and Fugue	fugue subject(s) 12-note row	Ex. 4: 26
	<i>Chain 1</i>	most of stage 1; cello Figs. 33-38	Ex. 8: 2
	<i>Partita</i>	first movement bars 66-70	Ex. 9: 5
	<i>Chain 2</i>	second movement, <i>rude passages</i>	Ex. 9: 19a
2+3	Cello Concerto	<i>dolente cantando</i> , Figs. 63-81	Ex. 4: 28
	<i>Mi-Parti</i>	Figs. 24-5, 28-9, 43-53. (row)	Ex. 4: 29
	<i>Epitaph</i>	rising phrase of Refrain	Ex. 6: 1
2+5	<i>Paroles tissées</i>	second movt, Figs. 70-1 etc	Ex. 4: 33
	Cello Concerto	Figs. 65-77 (alternating with 2+3)	Ex. 4: 28
	Preludes and Fugue	episodes of the fugue	Ex. 4: 31
	<i>Les espaces</i>	Figs. 24-82 (strings), 82-92 (voice)	Ex. 4: 34
	Double Concerto	Coda of third movement Figs. 89-96	Ex. 6: 14
	<i>Partita</i>	first movement bars 84-99	Ex. 9: 6
	<i>Partita</i>	fifth movement bars 9-12 etc	Ex. 9: 12a
	<i>Chain 2</i>	first movement, Fig. 15	Ex. 9: 18
	<i>Chain 2</i>	second movement, <i>soave passages</i>	Ex. 9: 19b
	<i>Chain 2</i>	second movement, Figs. 38-48	Ex. 5: 22
3+4	Symphony no. 3	from Fig. 19	Ex. 7: 7
3+7	<i>Paroles tissées</i>	tenor line, Figs. 49-54, 69-70, 74-79	
	Symphony no. 3	Figs. 86-87	Ex. 4: 35
	<i>Chain 2</i>	third movt, Figs. 67-9, 72-4, 86-90	Ex. 4: 36
	Piano Concerto	third movement, beginning	Ex. 10: 13

As the 3+4 pairing occurs infrequently, and the only example given in the above table is from the Third Symphony, it will be discussed in context in Chapter Seven. The number of examples of each interval-pairing given above is selective rather than exhaustive, but nevertheless reflects the frequency with which they occur in Lutosławski's music.

HORIZONTAL INTERVAL-PAIRING 1+2

One of the most distinctive features of Lutosławski's linear writing is his use of isomorphic three-note cells drawn from the six permutations available in a three-note group of adjacent semitones (this information could also be expressed as pc-set 3-1, [0, 1, 2]).⁹ These cells will be classified here according to the following criteria: a resulting shape which is either curling or straight (ie. non-curling); the order of interval steps, which can result in a shape curling either into itself or outwards; and a rising or falling shape produced by the non-adjacent interval between the first and third notes of the cell.

These six permutations are shown below in Table 4:5. The first four (cells a-b-c-d) are chromatically twisting, curling figures generated by the interval-pairing of adjacent semitone-tone or tone-semitone. The fifth and sixth are slightly different as they comprise adjacent semitones with the major second occurring only as a non-adjacent interval. Nevertheless, they are clearly related to the first four cells and will therefore be considered as a variant within the overall group (cells e-f).

In addition to the six permutations of the cell comprising adjacent semitones (0, 1, 2), there are four others generated by the 1+2 interval-pairing, but which have the intervals moving in the same direction instead of doubling back on themselves (cells g-h-j-k). These four cells all result in the non-adjacent interval of a minor third. It is important to note that all ten of these three-note cells are classified in the present study under the 1+2 interval-pairing, acknowledging the way Lutosławski uses them horizontally. If the orthodox method of pc-set classification were to be adopted here, it would place the last four cells in a separate category (as pc-set 3-2, [0, 1, 3]). The latter designation is not appropriate here as it does not distinguish between adjacent and non-adjacent intervals, and would therefore imply the calculation and consequent classification of the cell as a vertical pitch collection rather than a horizontal projection of particular interval-classes. For this reason, the analytical method based on identification of pitch-class sets is here rejected as unsuited to the task of accounting for horizontal generation of lines.¹⁰

Horizontal Pitch Organisation: Melody

TABLE 4:5 Sub-Classification of Three-Note Cells (1+2)

Curling Three-Note Cells (ie. interlocking)

Adjacent: Minor second + Major second (Non-adjacent: minor second)

- | | | | |
|----|---------------|---|---------------------------|
| a) | eg. Ab, G, A. | $\begin{array}{c} / \\ \backslash \end{array}$ | curling outwards, rising |
| b) | eg. G#, A, G. | $\begin{array}{c} / \backslash \\ \backslash \end{array}$ | curling outwards, falling |

Adjacent: Major second + Minor second (Non-adjacent: minor second)

- | | | | |
|----|---------------|---|--------------------------|
| c) | eg. A, G, G#. | $\begin{array}{c} \backslash \\ \backslash / \end{array}$ | curling inwards, rising |
| d) | eg. G, A, Ab. | $\begin{array}{c} / \backslash \\ / \end{array}$ | curling inwards, falling |

Straight Three-Note Cells (ie. not interlocking)

Adjacent: Minor second + Minor second (Non-adjacent: major second)

- | | | | |
|----|---------------|--|-------------------|
| e) | eg. G, G#, A. | | straight, rising |
| f) | eg. A, Ab, G. | | straight, falling |

Adjacent: Minor second + Major second (Non-adjacent: minor third)

- | | | | |
|----|----------------|--|-------------------|
| g) | eg. G, Ab, Bb. | | straight, rising |
| h) | eg. Bb, A, G. | | straight, falling |

Adjacent: Major second + Minor second (Non-adjacent: minor third)

- | | | | |
|----|----------------|--|-------------------|
| j) | eg. G, A, Bb. | | straight, rising |
| k) | eg. Bb, Ab, G. | | straight, falling |

Lutosławski readily acknowledges that he has not originated these curling chromatic figures, but that he discovered them in the music of Bartók.¹¹ Such intervallic patterns occur frequently, particularly in Bartók's later works. Here, three examples will suffice, drawn from pieces which Lutosławski knows well and admires greatly.¹² The first (Ex. 4:1) is from the beginning of the slow movement of the Divertimento for Strings (1939). The second (Ex. 4:2) is the solo for violas which opens the quasi-fugal

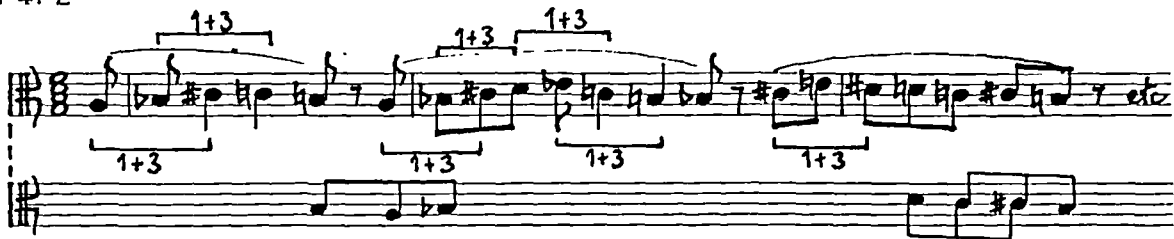
Horizontal Pitch Organisation: Melody

movement of Music for Strings Percussion and Celesta (1936); it also contains many cells of the 1+3 pairing. The third (Ex. 4:3) is the viola solo which opens the Sixth String Quartet (1939). Cells of this kind also form a crucial element of the Fourth String Quartet.¹³

Ex. 4: 1



Ex. 4: 2



Ex. 4: 3



These 3-note groups are of great importance to Lutosławski's style and they permeate most of ^{his} work. They can be observed fulfilling three main functions: as accompanimental figurations to build blocks of texture; as supporting melodic material, such as a chromatic counterpoint; and as melodic material which is of thematic significance. The existence of such intervallic determining characteristics, which pervade all levels of the musical material, is one means by which Lutosławski achieves and maintains an overall stylistic unity in his music. It also places Lutosławski's work clearly in a line of continuation which extends from that of Bartók. These composers may not share the same language, but in the treatment of intervallic cells they at least share some of the same vocabulary.¹⁴

Horizontal Pitch Organisation: Melody

The use of three-note cells as a significant component of textural blocks is characteristic of Lutoslawski's works of the 1960s which create dense sound masses. An early example of this kind of procedure is found in the fourth movement of *Jeux vénitiens*. At rehearsal letters h_1 , h_2 and h_3 (pp. 36-7, 39, 41, respectively) the strings, divided into twelve parts, play *pizzicato* and *fortissimo* producing the textural effect of a densely clustered 12-note chord of adjacent semitones. This is only one of several strongly contrasting textural blocks which are superimposed and overlapped in the passage leading to the overall climax of the work. In Example 4:4 the block which appears at rehearsal figure h_2 is shown. To aid the identification of the 1+2 cells within each part, the first few are marked below with square brackets beneath each staff. Most of the notes in each part belong to at least one permutation of a 1+2 cell, some are shared between two overlapping cell permutations.

Ex. 4: 4

↓ h_2
▼ 2''

J-ca 171

The score consists of 12 staves, labeled on the left as vni I, vni II, vln I, vln II, vc I, vc II, and cb. I, II. Each staff contains a complex rhythmic pattern of eighth and sixteenth notes. The music is marked with *ff* and *pizz*. Above the first staff, there is a rehearsal mark h_2 with a downward arrow, and a measure rest $2''$ with a downward triangle. Below the first few notes of each staff, there are square brackets indicating 1+2 cells.

Horizontal Pitch Organisation: Melody

Table 4:6 provides a simple numerical reduction of some of the information shown in staff notation in Example 4:4.:

TABLE 4:6, *Jeux vénitiens*, textural use of 3-note cells (1+2)

Part	Notes	Notes in 1+2 cells			No. of cells
	Total	curling	straight	others	
Vni I	32	30	2	0	14
Vni II	21	18	3	0	9
Vni III	16	14	0	2	9
Vni IV	11	8	1	2	4
Vle I	32	27	3	2	15
Vle II	21	19	1	1	9
Vle III	16	15	0	1	6
Vlc I	32	24	8	0	12
Vlc II	21	16	5	0	8
Vlc III	15	14	1	0	7
Cb I	10	8	2	0	4
Cb II	8	5	3	0	2
Totals	235	198	29	8	99

One can conclude from the above figures, even without pursuing the numerical analysis further (to the stage of statistics and percentages), that the linear detail of the textural block in question is overwhelmingly determined by the application of three-note cells of the 1+2 pairing.

In the Second Symphony there is a variant of the 1+2 cells, used with the interval of a tone subdivided into quarter-tones.¹⁶ This idea is first introduced at the very beginning of the second movement, *Direct*, appearing initially in the double basses at Fig.101. Gradually the other layers of pitch are introduced in superimposed strands supplying different notes of the 12-note pitch collection. The 'cellos are added at Fig.102, the violas at 103, sixteen violins at 104, and the remaining fourteen violins at Fig.105. Example 4:5 shows the entry of the fourth strand at Fig.104, played by violins 15-30.

Horizontal Pitch Organisation: Melody

Ex. 4: 5

Ex. 4: 5 shows four staves of vocal parts, each labeled "voix ci-dessus". The first staff includes measure numbers 16, 20, 24, and 28. The dynamics are marked as *ppp* and *p*. The notation consists of a series of eighth and sixteenth notes, often beamed together, with some notes marked with a fermata.

Later in the same movement of the Second Symphony, from Fig. 123, the strings change to a more expressive style of playing, *cantando* (Ex. 4: 6), but still with the same type of melodic note groupings as in the above example. This time the strings play as one large group rather than divided into layers. As one might expect, the division into twelve parts is no accident, but chosen in order to supply a 12-note chord (of the 'simple' type, mostly semitones, but with tones at the top and bottom).

Ex. 4: 6

Ex. 4: 6 shows twelve staves of string parts, divided into three groups: *vni* (Violins I), *vle* (Violins II), and *VC* (Violas/Celli). Each staff is marked with *f cantando*. The notation features melodic lines with various note values and rests, often marked with a fermata. Measure numbers are provided for each staff.

Horizontal Pitch Organisation: Melody

The three-note cells of interval-pairing 1+2 are also used to provide the linear aspect of dense textural writing. In the same section of the Second Symphony as Example 4:6, they can be found used in the woodwind and brass parts. Whilst the strings elaborate the *cantando* between Figs.123 and 124 (in the middle pitch register), the wind and brass sections superimpose short outbursts of contrasting intervallic material in the high and low pitch registers, respectively. After Fig.124a these wind passages expand and dominate, whilst the strings gradually fade out. The general process employed here is similar to the 'Chain' technique of contrasting layers which overlap, neither beginning nor ending together. At Fig.125, chromatic scale fragments developed from cells e-f are transferred to the strings. Example 4:7 shows part of the densely textural passage between Figs. 125 and 126 (p.47 in the score). It should be noted that, as the entire passage is subject to *ad libitum* playing, the vertical alignment shown in the score (purely for notational convenience) is deceptive.

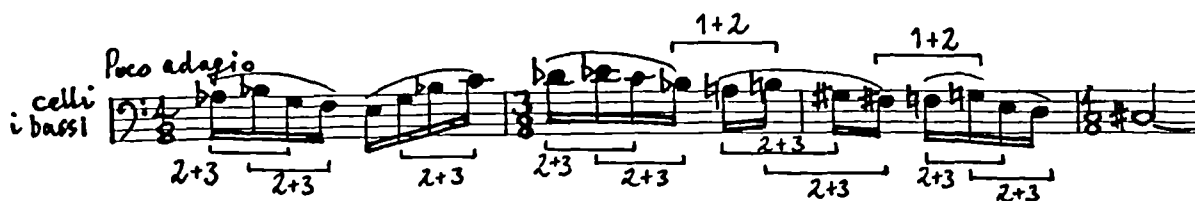
Ex. 4: 7

The musical score for Example 4:7 consists of ten staves of music. The first six staves are labeled 'vni' (Violini) and the last four are labeled 'vle' (Violini). The score is written in a complex, dense style with many overlapping notes and dynamic markings. The dynamics range from *p* (piano) to *ff* (fortissimo). The notation includes various rhythmic values, including eighth and sixteenth notes, and rests. The overall texture is highly intricate and layered.

Horizontal Pitch Organisation: Melody

Example 4:8 shows the use of 1+2 cells in the First Symphony. This is the opening of the second movement, played by the cellos and basses, *pianissimo*. This opening achieves a kind of chromatic stealth akin to the second movement of Bartók's *Divertimento*.¹⁶ Although there are only two examples of the 1+2 cell in the passage quoted, they nevertheless play a significant role in the unfolding of this four-bar phrase. The literal sequence established between bars 1 and 2 (the first five notes being transposed up a perfect fourth) is broken by the chromatic twist of a 1+2 cell resulting in two further sequential transpositions of the initial four-note group. Each of these sequences is linked to the preceding one by a three-note cell. Initially, because these four bars are presented as a solo line (doubled in octaves), they are perceived as thematic. As the movement proceeds, however, other thematic ideas are superimposed on the continuation of this line, which is thus relegated to a subsidiary, accompanimental level; but it is never merely textural.

Ex. 4: 8



Example 4:9 is taken from the last movement of the First Symphony. Between bars 94 and 108 there is a line played by cellos and basses, again doubled in octaves. This line operates as an alternation of repeating cells in two distinct layers. The lower of these is provided by the three-note pattern F#-E-F used as an ostinato motif, being stated nine times altogether. The upper layer is made of similar three-note cells, but with one of the notes, C#, displaced to a higher octave by the violas. This layer is subjected to various changes of a typically Stravinskian nature, whereby notes are added or subtracted, inserted or omitted, making the cells either extended by interlocking them with others, or rendering them incomplete. The rhythmic by-product of this procedure is also typically Stravinskian: the ostinato figure continually changes its position in relation to the metre.

Horizontal Pitch Organisation: Melody

Ex. 4: 9

SYMPHONY N°1, IV, bars 94-108

The musical score for Example 4:9 is presented in two systems. The first system, covering bars 94 to 100, consists of a treble clef staff and a bass clef staff. The treble staff begins with a 'pizz' (pizzicato) marking. The second system, covering bars 101 to 108, also consists of a treble clef staff and a bass clef staff, with an 'arco' (arco) marking in the treble staff. The notation shows a complex interlocking of scale fragments across the staves, creating a thematic foreground.

Other examples can be drawn from the First Symphony to illustrate the use of 1+2 cells in the thematic foreground.¹⁷ Example 4:10 is taken from the final movement (Figs.108 and 109, also repeated at Figs.127 and 128) and shows an ascending line in the violins (doubled in octaves). Here the sequential upward shifts of interlocking scale fragments are achieved via the connection of three-note 1+2 cells.

Ex. 4: 10

The musical score for Example 4:10 is a single staff for Violin I (Vi I) in 4/4 time. It is marked 'espressivo'. The notation shows an ascending line in the violins, achieved through sequential upward shifts of interlocking scale fragments.

Horizontal Pitch Organisation: Melody

Two bars after Fig.110 a distinctive new line appears in a part designated for solo Violin I (Ex.4:11). Here, the presence of grace notes is an important element in the articulation of the line and its 1+2 three-note groupings. This particular kind of expressive effect will be considered later in connection with a *dolente* type of melody.

Ex. 4: 11



Although the modal pitch organisation used in the Overture for Strings (1949) was not a method which the composer was to pursue, the treatment of synthetic modes in this piece nonetheless reveals his liking for intervallic patterns of three-note cells. The mode is made from two tetrachords, each comprising tone-tone-semitone, linked (in its basic form) by the interval of a minor second (ie. E, F#, G#, A, + Bb, C, D, Eb).¹⁰ The tetrachords themselves do not give rise to three-note cells, but the various ways that the composer uses to link the four-note units to each other frequently produces the familiar intervallic patterns of interlocking tone and semitone.

Example 4:12 shows two extracts from the Overture for Strings which illustrate Lutosławski's manner of generating longer phrases out of cellular lines. The first (Ex. 4:12a) is a bass line played in octaves. From only thirty-two notes one can identify as many as twenty-five three-note cells (7 of cell a; 3 of cell b; 6 of cell c; and 9 of cell d). The second passage (Ex. 4:12b), played by violas, *fortissimo*, contains a statement of the complete eight-note synthetic mode included in a line where three-note cells still predominate.

Horizontal Pitch Organisation: Melody

Ex. 4: 12a

Ex. 4: 12b

The opening of the Overture (Ex. 4:13) shows four examples of a chromatically twisting 4-note motif each containing the 1+2 isomorphic cells. Discounting octave and unison doublings, this motif appears 132 times in 188 bars, during the Overture's brief, five-minute time-span. Not only does it open the piece but it concludes it as well. Thus the listener inevitably perceives this motif (rather than the underlying 8-note synthetic scale) as the prime material.

Ex. 4: 13

Allegro moderato

Horizontal Pitch Organisation: Melody

Example 4:14 shows the application of interval-pairing 1+2 in the tenor line of *Paroles tissées*. The second movement opens with the soloist singing, unaccompanied, a memorably expressive phrase to the words 'Quand le jour a rouvert les branches du jardin' (Ex. 4:14a). The phrase begins simply with a rising tone which then contracts with a falling semitone. The middle of the phrase extends to project a whole-tone scale segment of four notes ending with two cells, the first falling as before, but the second rising. The third part of the phrase extends further, interlocking two whole-tone scale segments joined by two three-note cells. Interestingly, the whole phrase grows by multiples of three notes (first 3, then 6, then 9). The movement ends with a similar melodic line to the words 'Au dire des merveilles l'ombre en deux s'est déchirée' (Ex. 4:14b). This time the composer does not link the three stages of the phrase by repeating any words of the poem. The overall shape of these tenor lines, ascending by an augmented octave from F to F#, is shared by the refrain for solo oboe which opens and characterises *Epitaph* (see Exx. 4:19 and 6:1). Lutosławski evidently has a particular liking for melodic lines which span or otherwise emphasise the interval of a minor ninth (or augmented octave). His sensitivity to the property of this interval has already been noted in connection with the chord-aggregates shown in Example 3:5.

Ex. 4: 14a

Quieto (♩-ca 120)

2

p *p* *mp* *p* *mf*

Quand le jour quand le jour a rou-vert a rou-vert les bran-ches du jar-din

Ex. 4: 14b

Quieto (♩-ca 120)

p *poco cresc.* *poco, f*

Au di - re des mer-veil - les l'om - bre en deux s'est dé - chi - ré - e

Horizontal Pitch Organisation: Melody

A distinctive kind of melodic line generated by the 1+2 interval-pairing can be found in several works, sometimes indicated by the Italian term *dolente*. As the composer's choice of performance indication suggests, such lines are usually sad in character, and they convey this mood by means of chromatically twisting three-note cells, but with the important additional ingredient of *acciaccature* grace notes. A comparatively early example has already been given, from the fourth movement of the First Symphony (Ex. 4:11), in which these grace notes play a significant role.

Most appearances of *dolente* melody occur with interval-pairing 1+2, but not all. In the Cello Concerto, for example, there is a memorable *dolente* passage generated by the 2+3 interval-pairing of major seconds and minor thirds (see Ex. 4:28). Example 4:15 illustrates the 1+2 *dolente* style extracted from five works so that a preliminary stylistic comparison can be made. As the following works all date from after 1979 detailed discussion of them, and the context in which these melodic lines are found, is reserved for the chapters of Part Two:

- a Double Concerto II movement, *Dolente*, Figs. 28, 32, 45-46,
- b Third Symphony Figs. 81-84
- c Partita III movement, *Largo*, p. 16-17, bars 51-65
- d Chain 2 III movement, opening, and Fig. 90-end
- e Piano Concerto III movement, *Largo*, p. 68-9

Ex. 4: 15

HORIZONTAL INTERVAL-PAIRING 1+3

An early example of the horizontal pairing of semitones and minor thirds dating from 1951 occurs in the Children's Song *Piosenka o złotym liście* (Song of the Golden Leaf).²⁰ Example 4:16 shows the whole song, which is a modest miniature only 21 bars in length. Interval-pairing 1+3 is used to generate every note of the middle part, beginning and ending on B. This chromatically twisting counterpoint is freely composed against the tune, although there are many minor third and major third vertical relationships. Note the minor ninth dissonance in the piano part, between D and Eb in bars 12, 14 and 16. Lutosławski often selects bass notes to produce this effect.

Ex. 4: 16

Andantino *p*

1. Na - sza Ka-siu-leń-ka, na-sza pa-ste - re - czka,
2. Na - sza Ka-siu-leń-ka, ma-leń-ka pa - ste - rka,
3. Ta ma - la Ka-sień-ka i jej gą-ski bia - le

szu-ka - la pod wie - rzbą zło-te-go li - sie - czka,
py - ta - la po dro - dze cie-ple-go wia - te - rka,
zło-te-go li - sie - czka na próżno szu - ka - ly.

a jej bia - le gą - ski po tra-wie bie - ga - ly
czy bie - ga - jąc szy - bko po da - le - kich ste - czkach,
Lecz zamiast zło - te - go li - sią-ce zie - lo - nych

i zło - te-go li-ska szu-kać po-ma - ga - ly.
nie wi - dział przypadkiem zło - te-go li - sie - czka.
wy - try - snę - ly wio-sną z wierzby po - chy - lo - nej.

11

15

poco rit.

Horizontal Pitch Organisation: Melody

Dating from 1952, only a year later than the previous example, the second of the five *Bucolics* for piano also illustrates the 1+3 interval-pairing (Ex. 4:17). The top line alternates two 3-note cells: one curling by semitone and minor third; the other falling by minor third and tone. The lower part takes the first 3-note cell and elaborates it through the 1+3 pairing up to and including the low D in bar 10. The 1+3 pairing returns in bars 17-21 and connects with the root of the final D minor triad. ²¹

4: 17

Allegretto sostenuto ♩=144

Musical score for measures 1-5. The piece is in 3/4 time, marked *p*. The top staff (treble clef) features a melody with two distinct 3-note cells: one curling by semitone and minor third, and another falling by minor third and tone. The bottom staff (bass clef) elaborates on the first 3-note cell. Fingering numbers (1-5) are indicated above and below notes.

Musical score for measures 6-9. The tempo is marked *poco accel.*. The melody continues with the 3-note cells. The bottom staff shows further elaboration of the first cell. Fingering numbers are present.

Musical score for measures 10-14. The tempo is marked *più vivo* and the dynamics *poco f*. The time signature changes to 4/4. The melody continues with the 3-note cells. The bottom staff shows further elaboration of the first cell. Fingering numbers are present.

Musical score for measures 15-18. The tempo is marked *Tempo I*. The time signature changes to 4/4. The dynamics are *dim.* and *p*. The melody continues with the 3-note cells. The bottom staff shows further elaboration of the first cell. Fingering numbers are present.

Musical score for measures 19-21. The tempo is marked *più lento*. The dynamics are *pp*. The time signature changes to 4/4. The melody continues with the 3-note cells. The bottom staff shows further elaboration of the first cell. Fingering numbers are present.

Horizontal Pitch Organisation: Melody

Example 4: 18 shows the first twenty-two bars of Dance Prelude no. 4. The 1+3 interval-pairing is used to generate the staccato bass line (as a succession of interlocking diminished triads) up to and including the first (tied) note of bar 22. This line returns in bars 40-53, extending to the low Eb which forms the root of the final (augmented) triad. The bar numbers quoted refer only to the piano, as the clarinet plays in metrical contradiction (hence the provision of rehearsal figures). Note the intervallic contraction in bars 9-10: F#-C-F-A-F#-G# (6-5-4-3-2). ²²

Ex. 4: 18

Andante (♩-ca 60)

The musical score is divided into four systems, each with a piano (p) and clarinet (cl) staff. The tempo is marked 'Andante (♩-ca 60)'. The piano part features a staccato bass line of diminished triads. The clarinet part has a melodic line with various dynamics and articulations. Rehearsal figures 1, 2, and 3 are marked at the beginning of the first, second, and third systems respectively. The key signature has one sharp (F#).

System 1 (Bars 1-8): Piano part starts with a 3/4 time signature and a *p* dynamic. Clarinet part starts with a circled rehearsal figure 1. The piano part has a circled 1 above the first measure.

System 2 (Bars 9-16): Piano part starts with a circled rehearsal figure 2. The piano part has a circled 2 above the first measure. Dynamics include *mf p*, *cresc.*, *mf mp*, and *poco cresc.*. Articulation includes *legato* and *dim.*.

System 3 (Bars 17-22): Piano part starts with a circled rehearsal figure 3. The piano part has a circled 3 above the first measure. Dynamics include *mf poco cresc.* and *f molto espress.*. Articulation includes *cresc.* and *f*.

Horizontal Pitch Organisation: Melody

Example 4:19 shows a brief, but nonetheless significant example of the interval-pairing of minor seconds with minor thirds (1+3) occurs towards the end of the oboe's opening refrain in *Epitaph* (see also Ex. 6:1 for this passage in context). Whereas the first phrase rises through nine notes of interval-pairing 2+3, the second phrase falls chromatically through seven notes paired according to 1+3, before dropping with a quasi-cadential perfect fourth onto the opening F natural. The use of grace notes in this type of line establish a connection with the *dolente* style.

Ex. 4: 19

The musical notation for Example 4:19 consists of a single staff in treble clef. The tempo is marked '♩ = ca GG'. The first phrase, marked '2+3', starts with a piano (*p*) dynamic and rises through nine notes, ending with a forte (*f*) dynamic. The second phrase, marked '1+3', starts with a piano (*p*) dynamic and falls chromatically through seven notes, ending with a mezzo-piano (*mp*) dynamic. A grace note is present above the final note of the second phrase.

The vocal line of *Morze*, the first of the Five Songs, provides a more extended example (Ex. 4:20). From bars 5-26 the voice has only the intervals of 1+3 when the direction of the line is rising, but with the addition of the major third, perfect fifth and minor seventh providing the connecting intervals at points where the line is falling. This example differs from the others shown here as it does not result from linear interval-pairing but from horizontal projection of a 12-note chord (see Ex. 3:16).

Ex. 4: 20

The musical notation for Example 4:20 consists of three staves of a vocal line in treble clef. The first staff starts at bar 5 and ends at bar 11, with a sharp sign (#) above the final note. The second staff starts at bar 12 and ends at bar 18. The third staff starts at bar 19 and ends at bar 26. The notation includes various intervals and dynamics, with a sharp sign (#) above the final note of the first staff.

Horizontal Pitch Organisation: Melody

The 1+3 horizontal interval-pairing also occurs (but not exclusively) in the earliest example of a 12-note line to appear in Lutosławski's work: at the opening of the scherzo of the First Symphony (Ex. 4:21).²³ Although this 12-note pattern occurs as a melodic feature, it does not follow that serial technique is applied in the First Symphony, as the row is only one of several elements alternated and combined freely.

Several features of the row are of interest. Initially there are only three types of interval used (tritone, minor 3rd, and minor 2nd), thus a certain type of intervallic character is maintained wherever the original row or its sub-sets appear, and this enables intervallic contrast to be drawn between the subsequent sections of the form. The row displays a simple isomorphic property in that notes 7-12 are an inversion of notes 1-6, (D#, A, C, B, D, C# + E, Bb, G, G#, F, F#).²⁴ There is also a more complex isomorphic scheme resulting from the recurrence of a 1+3 three-note cell, of which eight permutations can be identified, three within each hexachordal set, and two linking the hexachords to each other.

Ex. 4: 21

The image shows a musical staff with a treble clef and a key signature of one sharp (F#). The melody consists of 12 notes: D#4, A4, C5, B4, D5, C#5, E5, Bb4, G4, G#4, F4, F#4. The notes are grouped into two hexachords. The first hexachord (notes 1-6) is D#4, A4, C5, B4, D5, C#5. The second hexachord (notes 7-12) is E5, Bb4, G4, G#4, F4, F#4. A bracket labeled 'inversion' spans the second hexachord, indicating it is an inversion of the first. Below the staff, the interval classes between consecutive notes are labeled: 6, 3, 1, 3, 1, 3, 6, 3, 1, 3, 1, 3. The label 'interval-classes' is written vertically on the left side of the staff.

Canonic treatment of the row in the first and third sections of the form (bars 1-24 and 54-80, respectively) gives rise to many other interval combinations vertically; thus the melodic pitch organisation results in a different type of harmony which it does not govern. The intervening section introduces different material and cells in which the minor second is replaced by the major second, thus changing the intervallic character. In order to show the process of melodic unfolding through the use of 1+3 cells, the first 24 bars are shown in Example 4:22a. In Example 4:22b, a segment of the third section shows the canon developing in five parts.

Horizontal Pitch Organisation: Melody

HORIZONTAL INTERVAL-PAIRING 1+4

Lutosławski has made infrequent use of the horizontal pairing of semitones with major thirds. Those examples which can be found tend to be embedded in the musical fabric in such a way that they are not perceived as melodic material of thematic significance. Example 4:23 shows the Polish Carol *A cóż z tą dzieciną* ('What to do with this child?'), the seventeenth in the set of twenty carols dating from 1946.²⁶ Here, interval-pairing 1+4 is confined to the middle of a three-part texture. It is typical of these carol settings to use chromatically twisting counterpoints against the traditional tunes, and to emphasise tonal or modal ambiguity between the melody and accompaniment; in this case between F# minor and D.

Ex. 4: 23

Allegretto *mf*

1 A cóż z tą dzie - ci - ną będziemy - ni - li,

p $\frac{3}{4}$

p cresc.

pastuszko-wie mi - li, że się nam kwi - li? Zaspiewaj - my mu weso - ło

pp cresc.

p rit.

i o - bró - emy się z nim wkoło, hoc, hoc, hoc, hoc -

poco f *p* *pp*

HORIZONTAL INTERVAL-PAIRING 1+6

The pairing of minor seconds with tritones is usually associated in Lutosławski's music with a sad, mournful, expressive quality. This character is determined, in a positive sense, by the properties of the two interval types which occur, but also, in a negative sense, by the absence of major and minor thirds and their inversions.

Three works by Lutosławski bear dedications *in memoriam*. Two of these are written in memory of fellow composers, albeit of very differing styles: the short *Epitaph* for oboe and piano was written in memory of the English composer, Alan Richardson; *Muzyka żałobna* was composed in memory of Béla Bartók. The third work is *Grave, Metamorphoses* for cello and piano, composed in memory of the Polish musicologist and Debussy scholar, Stefan Jarociński.²⁷ It is not surprising to discover that the 1+6 interval-pairing is used to supply a funereal mood^{iw} these pieces.

In *Epitaph* the oboe lines of each of the four episodes are generated only from the two intervals of the 1+6 pairing. These episodes alternate with five statements of the refrain which is of contrasting intervallic character determined by 2+3 and 1+3 pairings. Extended discussion of the interval differentiation in *Epitaph* is reserved for Chapter Six (see Ex. 6:1). In *Grave* the alternation of interval-pairings is between 2+5 and 1+6, although the structural segmentation of the piece is less clearly defined and does not correspond simply with the change in intervals, as in *Epitaph* (see Chapter Seven). In both cases the change produces a contrast in expressive quality. In *Muzyka żałobna* the 1+6 pairing is used to generate a 12-note row, although this was not the first time Lutosławski had made use of a row, as has^{been} noted above in connection with the scherzo of the First Symphony. The significance of Lutosławski's use of 12-note rows lies not in any allusion to principles of serial organisation, but in the intervallic properties of the rows themselves, especially their isomorphic groupings (see Ex. 4:21). The composer has consistently rejected the notion that his rows have anything of significance in common with Schönberg's use of this resource, although the emphasis on isomorphic patterns does show some similarity with the construction of some of Webern's rows.²⁸

Horizontal Pitch Organisation: Melody

I have never been influenced by the doctrine of Schönberg, even though I must admit that I make use of certain elements of his principles, that is to say the use of the chromatic whole... In no case have I ever used the twelve-note technique as more than that. Even if I use twelve-note rows, this use always aims for entirely different effects. ...in *Musique funèbre* I use a twelve-note row, but the way of handling and certainly the choice of intervals shows clearly that what matters is the means of obtaining a harmonic result, of creating vertical aggregations, and not of employing a new functional system of intervals as is the case in the classic doctrine of serialism. ²⁹

If the work owes anything to a composer other than Lutosławski or Bartók, it is perhaps Stravinsky's use of serial organisation in his *Dirge* *Canons and Song: In Memoriam Dylan Thomas* (interestingly, the latter was composed in 1954, the same year Lutosławski began work on *Muzyka żałobna*). The funereal character of each is self-evident, but a more striking connection is the way that both works open and close with canonic sections: Lutosławski subtitles them as *Prologue* and *Epilogue*; Stravinsky terms his outer movements as *Prelude* and *Postlude*.

It is the only piece where I have used methodically a twelve-note row [...] in the two outer movements... But what is important in these two movements is the vertical result of the use of this row. It is composed only of tritones and minor seconds. Used canonically it gives certain harmonic results which, containing neither third nor sixth, produces a certain atmosphere of open sonority which corresponds particularly with the title of the piece. ³⁰

It has already been noted that Lutosławski owes much to Bartók in his use of those three-note cells which have the interval-pairings of 1+2 and 1+3. It is not without some significance, therefore, that he chose to express his musical tribute to the memory of Bartók, originally intended to commemorate the tenth anniversary of his death, by using another of the interval-pairings within the same group.

The most decisive consideration for Lutosławski appears to have been the achievement of 'certain harmonic results'. Stucky's analysis of *Muzyka żałobna* is misleading on this point: he states, erroneously, that the vertical result includes interval-classes 0,1,2,5, and 6, and that interval-class 4 occurs occasionally. ³¹ The harmony, in fact, contains only interval-classes 0,5, and 6 between vertically adjacent notes.

Horizontal Pitch Organisation: Melody

The first seven bars from the Prologue are quoted in Example 4:24, illustrating the quasi-fugal principle which Lutosławski adopts, certainly influenced by the opening movement of Bartók's Music for Strings Percussion and Celesta (see Ex. 4:2). The point of climactic density is reached, as the sectional subtitles suggest, at the beginning of Apogeeum, which presents a succession of 12-note chords (see Ex. 3:17). But the point of greatest emotional intensity is reached at the beginning of the Epilogue (bars 246-249) which opens with a statement of the 12-note row played by all the string instruments in a powerful unison, *fortissimo* (Ex. 4:25).

Ex. 4: 24

Musical score for Example 4:24. The score is in 5/2 time with a tempo marking of quarter note = 88. It features four staves: 1 Violoncello I solo, 1 Violoncello II solo, 1 Vc. I solo, and 1 Vc. II solo. The first two staves are marked with a *p* dynamic. The last two staves are marked with a *mp* dynamic. There are circled numbers 3 and 5 above the first two staves, and a circled number 5 above the third staff. A double bar line with repeat dots is at the end of the first two staves.

Ex. 4: 25

Musical score for Example 4:25. The score is in 5/4 time. It features seven staves: Violini I, Violini II, Violini III e IV, Violini I, Violini II, Violoncelli I e II, and Contrabassi I e II. The first five staves are marked with *sul sol*. The last two staves are marked with a *pp* dynamic. A circled number 250 is above the first staff. A double bar line with repeat dots is at the end of the last two staves.

Horizontal Pitch Organisation: Melody

The interval character of the various Fugue subjects in Preludes and Fugue is very similar in concept to the 12-note row used canonically in the Prologue and Epilogue of *Muzyka żałobna*. In each case, the use of imitative counterpoint enables the composer to derive both the melody and harmony, the horizontal and vertical planes, from the interval-pairing. The Fugue subjects also have only the 1+6 interval-pairing between horizontally adjacent notes. By association, this determines a sad, mournful character for the later work. The principle of intervallic differentiation outlined in Table 4:3 is applied, however, by contrasting the fugue subjects with episodes based mainly on the 2+5 interval-pairing (see Ex. 4:31). Given that fugue is an inherently tonal form, normally dependent on the pull between tonic and dominant, it is interesting to note that Lutosławski exploits the form-building potential of contrasted interval-pairings as a substitute for the structural properties of key change.

The Fugue subjects are 'exposed' in an unusual way. Rather than appear in solo or unison lines, they are delivered by means of what the composer calls 'bundles' of melody. These bundles are typical of his technique of controlled aleatory counterpoint, whereby the rhythmic differentiation of the individual lines within each group of parts is intended to result in a limited degree of de-synchronisation. Being the result of this technique, extended discussion of the principle will be left to the next chapter. Meanwhile the 12-note row is shown below in the bundle of three parts which introduces the first fugue subject (Ex. 4:26): G#, A, Eb, D, Db, G, F#, C, B, Bb, E, F.

Altogether, there are six fugue subjects, each with a different character: *cantabile*, *grazioso*, *lamentoso*, *misterioso*, *estatico*, and *furioso* (see Table 4:9 for a summary of the formal and intervallic scheme). In the first formal stage, up to Fig. 24 (functioning as fugal exposition), the designated character of each fugue subject is kept within a discrete section. In the second stage, however, the six characters are superimposed to create even more complex polyphony, not only of individual lines but of contrasting textures and different gestures. This procedure may be equated with the technique of stretto in conventional fugal writing; but the degree of contrapuntal complexity is far greater than in previous fugal forms.

Horizontal Pitch Organisation: Melody

Ex. 4: 26

Interval-pairing 1+6 also governs all of the 104 notes contained in the introductory soliloquy for first violin which opens the String Quartet (Ex. 4:27). Here the line is composed relatively freely, without reference to a 12-note row. Instead, there is informal emphasis on 3-note cells of two adjacent semitones that appear as recurrent motifs. The gestural effect of this violin solo is of a quasi-improvisatory section delivered in a nonchalant, whimsical manner; Lutosławski was later to create a similar effect at the beginning of the Cello Concerto. Both works lend themselves to interpretation according to abstract theatrical imagery; here the instruction to play *eloquente* implies some analogy with acted speech.²²

Although there is an overwhelming preponderance of semitones, major sevenths and minor ninths in this solo violin part, Lutosławski is able to generate a surprisingly interesting line from this very restricted interval palette. Tritones are not used in equal partnership with the semitones, as in *Muzyka żalobna* and the Fugue, but are used merely to link sequential treatments of the various motifs.²³ It is also worth noting that the composer makes use of the 1+6 pairing in ways which do not necessarily allude to the funereal mood of *Muzyka żalobna* and other memorial pieces. Here it is the rhapsodic, fragmentary nature of the line (as opposed to a slow, sustained string sound) which ensures that such aural connections are unlikely to be made by the listener.

HORIZONTAL INTERVAL-PAIRING 2+3

The interval pairing of major seconds with minor thirds (2+3) is used in two quite distinct ways. The first is where the intervals are used in their compact form with the widest step being the minor third. This application gives rise to lines which 'curl', similar to some shapes produced by the 1+2 pairing, although the slightly wider intervals of 2+3 give a more expansive effect. The second is where the intervals are used with their respective inversions, the minor seventh and major sixth, to generate lines which are more wide-ranging, fast and active. The first type can occur in the *dolente* mood, but is also found marked *cantabile* or *cantando*, as in the final pages of *Mi-Parti*. The second type is also found in *Mi-Parti*, in transitional passages where greater energy and vigour is required.

The character of melodic expression usually articulated with grace notes (*acciaccature*) and designated as *dolente* has already been considered under the 1+2 interval-pairing. A variant of this type of melody with the 1+3 pairing has also been identified in the second phrase of the oboe refrain which opens *Epitaph* (see Exx. 4:19 and 6:1). The first phrase of this refrain, played unaccompanied, is a further variant of the *dolente* mode of expression, this time with the 2+3 interval combination. Although the score of *Epitaph* is not marked with the term *dolente*, a sad, funereal mood is implicit in both the title and the dedication *in memoriam*.

The most striking appearance of the *dolente* melody using interlocking major second and minor third intervals is in the Cello Concerto. In the gradual build-up from Fig. 63 towards the brass *fortissimo* at Fig. 81 several stages can be identified according to the consistent correlation between mode of expression and alternation of melodic interval-pairings. The cello soloist is required to play *molto espressivo* (*dolente*) when the melodic line comprises notes derived from the 2+3 interval-pairing. This type of expression alternates with 2+5 which does not carry either the *dolente* or the *molto espressivo* markings. There are also two passages consisting of the 1+2 three-note cells. Table 4:7 shows the outline of this scheme:

Horizontal Pitch Organisation: Melody

TABLE 4:7 Cello Concerto: solo part Figs.63-81

Figs.	Interval-pairing(s)	Expressive character
63 - 64d	1+2	<i>indifferente</i>
64d- 65	2+3	<i>dolente, molto espressivo</i>
65 - 66	2+5	<i>sostenuto</i>
66 - 67	2+3; 2+5; 2+3; 2+5	[<i>dolente / sostenuto, etc implied</i>]
67 - 68	2+5	<i>sostenuto</i>
68 - 69	2+3	[<i>dolente implied</i>]
69 - 76	1+2	[no expression mark given]
76 -	2+5	[<i>sostenuto implied</i>]
- 77	2+3	<i>dolente, molto espressivo</i>
77 - 81	2+3	" " "

The only, slight deviations from the maintenance of strict intervallic differentiation between these sections are where there is a quasi-cadential falling perfect fourth at the end of a 2+3 line. This occurs, for example, just prior to Figs.65 and 77. In most cases the falling perfect fourth provides a link, leading into a 2+5 line. Example 4:28 shows the final stage of this section, from Figs.76-81. ³⁴

Ex. 4: 28

Horizontal Pitch Organisation: Melody

Use of the 2+3 interval-pairing is not restricted to or reserved solely for the *dolente* mode of expression. In *Mi-Parti* we find melodic material consisting of major seconds and minor thirds arranged to form 11-note rows without the *acciaccature* that characterise most of Lutosławski's *dolente* lines.

Although *Mi-Parti* unfolds through an unbroken span of fifteen minutes, several formal stages can be identified. A structural segmentation of the whole work is given below in Table 4:8. A harmonic reduction of the first part has already been given in Chapter Three, showing the vertical pitch organisation in 12-note chord-aggregates. The horizontal lines that emerge from these chords are actually vertically organised, and merely arpeggiate notes drawn from the harmony. It is in the second part, and in the coda, that Lutosławski employs genuinely horizontal methods of organising the pitch of the instrumental lines.

TABLE 4:8 *Mi-Parti*: formal scheme

<u>Figs.</u>	<u>Section</u>	<u>Stage</u>	<u>Material</u>	<u>Pitch organisation</u>
- 8	Part 1	1	emerging lines	12-note chord-aggregates
8-14		2	emerging lines	12-note chord-aggregates
14-19		3	emerging lines	12-note chord-aggregates
19-24		4	polyphonic	overlapped harmonic strands
24-28	Part 2	5		initially 2+3 interval-pairing
28-39		6		passages of 2+3 interval-pairing
39-40	Climax		tutti, fortissimo	12-note chord-aggregate B-K-B
40-43	Aftermath			
43-53	Coda		string cantilena	horizontal interval-pairing 2+3
52-53			final chord	12-note chord-aggregate J-K-F

Whereas the effect of the first part is predominantly static or slow moving, the second part moves much more quickly. This change of pace is partly due to a faster pulse, but is greatly assisted by the rapid delivery of pitches in the horizontal line. Whereas in the first section the melodic dimension is subservient to the underlying harmonic material, in the second section the harmonic sonorities that are produced are a by-product of the horizontal interval-pairing. Stages 5 and 6 are each jolted into action by energetic lines generated from 11-note rows played by three trumpets and three trombones.

Horizontal Pitch Organisation: Melody

The way that the composer scores these eleven-note rows for trumpets and trombones is of particular interest. The line is divided between the six parts with notes sustained in each part for a short time so that the melody leaves behind a residual harmonic trace, akin to playing a single line on the piano with the sustaining pedal depressed. At certain points these harmonic by-products of the melody are changed, just as if the piano's sustaining pedal had been lifted and the resonance cleared.

Example 4:29a shows the passage of twelve bars, from Figs. 24 to 25, which begins the second section of the form, stage five overall. There are 51 notes all linked by the 2+3 intervals, but it is the particular pairing of intervals, rather than the presence of a row, which matters. Intervally there is a 9-note pattern which repeats five times (interval-classes 3-2-3-2-3-2-2-3), the sixth rotation being incomplete. Regarding repetition of pitches the notes operate on an eleven-note cycle. Example 4:29b shows the equivalent passage of 49 notes which begins stage six, the eleven bars between Figs. 28 and 29.

Ex. 4: 29a



Ex. 4: 29b



Horizontal Pitch Organisation: Melody

The fourth section of *Mi-Parti*, from Fig.43 to the end of the work, consists entirely of a long *cantilena*, first for three solo violins then for a bundle of twelve solo violin lines (from Fig.44), which winds its way in a leisurely ascent from G# at the bottom of the instruments' compass to the high C at the very top of their range (Ex. 4:30).

Against this unbroken *cantilena* there are some moments of punctuation provided by chords on the lower strings, *pizzicato*, with colouristic mobiles in the woodwind and percussion parts. The pitch organisation of these embellishments is vertical rather than horizontal and is conceived as an independent layer of *harmonia localna* ('local harmony', cf Chapter 3).

The melodic pitch organisation is entirely according to adjacent major second and minor third intervals of the 2+3 pairing. This governs the 43 notes of the winding ascent from G# to high C (Figs.44-53), as well as the smaller bundle of three parts from Figs.43-44. Whilst this description is inevitably merely technical, the sound itself is magical.

Ex. 4: 30

The image shows a handwritten musical score for five staves, numbered 43 to 53. The notation includes treble clefs, notes, rests, and accidentals. The word "cantabile" is written above the second staff, and "Bve" is written above the fifth staff. The score shows a melodic line with various intervals and a final high note marked with a circled 53.

HORIZONTAL INTERVAL-PAIRING 2+5

Intervallic differentiation between phrases or sections of a piece often provides a context for appearances of melodic lines generated by the 2+5 interval-pairing of major seconds and perfect fourths/fifths.

In *Grave*, for cello and piano, the interval differentiation is of the strongest contrast: 2+5 against 1+6 intervals. The alternation between these two pairings generates the cello part throughout the piece and serves to highlight the difference between, respectively, major and minor second, perfect fourth/fifth and tritone. The dedication *in memoriam* Stefan Jarociński determines the use of the 1+6 intervals. Whereas the latter are elegiac in character the 2+5 intervals are used lyrically.

The second movement of *Chain 2* is also governed by this principle of contrasting interval types. In the score we find the terms *rude* and *soave* used in alternation (as also in *Dzwony Cerkiewne*, the last of the Five Songs ²⁵). Here the *rude* character is mainly harmonic rather than melodic and produced by harsh chords containing minor seconds, major sevenths, minor ninths and tritones (see Ex.9:19a). On the other hand the *soave* character is melodic and uses 2+5 intervals exclusively (see Ex.9:19b), including some long and highly expressive phrases; for example, the extended solo violin line between Figs.38 and 48. The violin melody providing this link of the 'chain' form contains 186 notes all of which make adjacent interval connections of the 2+5 pairing (see Ex.9:22).

A similar scheme of intervallic contrast can be observed in *Preludes and Fugue*. The latter begins, not with the main subject, but with an introductory bridge passage linking it to whichever Prelude has been chosen to come before. After this link, characterised predominantly by interval-classes 2+5, the initial entry of the first fugue subject appears at Fig.1 (see Ex.4:26). The most significant feature of the fugue subject is its use of interval-pairing 1+6 (semitones and tritones), which contrasts strongly against the 2+5 pairing used for the Episodes. Table 4:9 summarises the principle of intervallic differentiation which defines contrast between alternate sections of the form.

Horizontal Pitch Organisation: Melody

TABLE 4:9 Fugue: formal and intervallic scheme

<u>Figs.</u>	<u>Episodes</u>	<u>Subjects</u>	<u>character</u>	<u>horizontal</u>	<u>vertical</u>
[0]-1	Episode 1			2+5	
1- 5		Subject 1	<i>cantabile</i>	1 + 6	
5- 6	Episode 2			2+5	
6- 9		Subject 2	<i>grazioso</i>	1 + 6	
9-10	Episode 3			2+5	
10-13		Subject 3	<i>lamentoso</i>	1 + 6	
13-15	Episode 4			2+5	
15-17		Subject 4	<i>misterioso</i>	1 + 6	
17-18	Episode 5			2+5	
18-20		Subject 5	<i>estatico</i>	1 + 6	
20-21	Episode 6			2+5	
21-24		Subject 6	<i>furioso</i>	1 + 6	
24-29	Episode 7			2+5	12-notes
29-47		Stretto 1	(layered)		
47-48	Episode 8			2+5	
48-49		Stretto 2	(layered)		
50-51		Stretto 3	(layered)		
51-53		Stretto 4	(layered)		
53-54			CLIMAX		3+4(+5)
54-58			subsides		2+3
58-60			static		2+3
+60	Cadence			2+5	2+5

Whereas in the Cello Concerto differentiated interval-pairings establish linear coherence within a structural framework defined primarily by gestural contrast between conflict and co-operation, in the Fugue the structural scheme itself is defined and made coherent by contrasted interval-pairings. A non-tonal or atonal fugue is a questionable proposition, inherently self-contradictory. Yet in this case it seems to succeed as a result of the formal clarity provided by intervallic contrast. After Fig.24 the pitch organisation ceases to be conceived horizontally, greater attention being paid to the vertical dimension. Throughout this second formal stage the effect is of dramatic intensification. This change of approach is shown in Example 4:31, which is a facsimile of a passage occurring between Figs.24-25. A blurred horizontal line (of interval-pairing 2+5) expands outwards in pitch to produce a sustained 12-note chord-aggregate (B-F-D) having a dominant-seventh chord in the low strand (Eb, Bb, G, Db), a major-seventh chord in the middle strand (E, A, C, F), and a minor-seventh chord with diminished fifth in the high strand (G#, B, D, F#). Table 4:9 inevitably over-simplifies this process of development, which is neither purely melodic nor simply chordal, but a combination of both.

Horizontal Pitch Organisation: Melody

Ex. 4: 31

acc. 2+5 *a tempo*

vni 1. 2. 3. 4. 5. 6. 7.

vle 1. 2. 3.

VC 1. 2.

↓
B
F
D

12-note chord-aggregate

Horizontal Pitch Organisation: Melody

In the third movement of *Jeux vénitiens* the piano part carries a continually unfolding 12-note row (Ex. 4:32). Intervallically it is of a very simple type, consisting only of perfect fourths and perfect fifths as adjacent intervals (interval-class 5). During the course of the movement it is stated thirteen times. In the first part of the movement (up to letter L) the Prime Form (G, C, F, Bb, Eb, Ab, Db, Gb, B, E, A, D) appears in full eight times, plus the first note at letter L of what would be the beginning of the ninth statement. The middle of the movement (letters L-Q) does not use the row. The final section of the movement (from letter Q to the end) uses the Inverted Form of the row (G, D, A, E, B, F#, C#, G#, D#, A#, F, C) five times in full, plus the first two notes of the fourteenth statement.

The row delivered by the piano is only one of several independent strands of the whole texture and provides a background layer of both melodic and harmonic colour against which a foreground melody is played out: a solo flute elaborates a line gradually expanding from tight little three-note cells (1+2) to a more wide ranging interval span. The other woodwind parts are used in a subsidiary role to sustain notes which form a residual harmonic trace of prominent notes in the flute melody. The harp fulfills a similar role but with clustered motifs which become gradually more active and expansive. The string section, unlike the other supporting parts, does not accompany the flute, but is used merely to punctuate the movement with sixteen chords, mostly of 12-notes (see Table 3:6). These become successively louder up to letter Q and then gradually quieter to the end.

Of particular interest, from the perspective of pitch organisation, is the way in which the 12-note row in the piano fulfills simultaneously both melodic and harmonic functions, the latter being a by-product of the former. This dual role is determined by the use of the sustaining pedal which is to be depressed from the beginning until after letter L (without a break), and again from letter Q until the end. As the notes of the row are all played quietly, the effect of resonance is not one of increasing density but a discreet maintenance of the fully chromatic harmonic background of all twelve pitches, to which new notes are constantly added to replace those which continually die away.

Horizontal Pitch Organisation: Melody

Although the piano's 12-note row clearly has a secondary harmonic function, its primary role is the horizontal, melodic unfolding of a particular interval type. On the other hand, the string chords which punctuate both the earlier and later sections of the movement provide a separate component of pitch organisation operating exclusively in the vertical plane. These planes interact but remain self-contained. The movement illustrates Lutosławski's typical treatment of formal shaping. Both the flute melody and its various supporting background layers, begin with small interval patterns contained in a middle register. Through the use of octave displacements in the piano part (and the introduction of different interval patterns in the flute solo) they move towards the climax of the movement between letters M and Q. From Q to the end there is a gradual subsidence in the intervallic contraction of the flute melody as it returns to the three-note cells but in its highest register.

Ex. 4: 32

The musical score for Ex. 4: 32 is presented in two systems of staves. The first system consists of a piano part (bottom staff) and a flute part (top staff). The piano part features a 12-note row starting with C, followed by D, E, F, G, A, B, C, D, E, F, G, A. The flute part begins with a similar row, marked with circled numbers 1, 2, and 3. The second system continues the piano part with letters K, L, M, N, O, P, Q, R, S, T, U, V, W. The piano part includes circled numbers 4 through 14. The flute part continues with letters H, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, with circled numbers 5 through 14. The piano part includes circled numbers 5 through 14. The flute part includes circled numbers 5 through 14. The piano part includes circled numbers 5 through 14. The flute part includes circled numbers 5 through 14.

Horizontal Pitch Organisation: Melody

Apart from *Muzyka żalobna* there are few examples, exposed as thematic foreground, of a 12-note row being stated in full in one part or voice. One such example occurs in the third movement of *Paroles tissées*, in which the tenor soloist twice has a melisma of all twelve pitches. The intervallic character of this row is determined by interval pairing 2+5.

The placing of the first appearance of this line at Fig. 70 (Ex. 4: 33a) is particularly significant as it represents the highpoint of the vocal line, occurring shortly after the *fortissimo* orchestral climax of the work between Figs. 62 and 63. Whereas the orchestral climax is harmonic and does not subside, presented as a densely voiced *ad libitum* section elaborating a vertically constructed 12-note chord, the highpoint of the solo part is melodic and lyrical, subsiding by falling through an octave from Bb₂ to Bb₁. The second appearance of this melismatic line is unaccompanied and ends the third movement (Ex. 4: 33b). It is an intervallic inversion of the earlier row, thus ascending through an octave from Eb to D#.

Ex. 4: 33a

Ex. 4: 33b

In the slow, central section of *Les espaces du sommeil* there is an underlying 12-note row which appears with so many octave displacements that it is obviously intended to be perceived more in harmonic than melodic terms. Whilst this may seem to be an untidy division of material demonstrating vertical and horizontal pitch organisation between Chapters Three and Four, this kind of overlap is significant (see Ex. 3: 19). In this case the row performs dual roles, both horizontal and vertical, each process revealing the complementary aspects of the composer's approach to the organisation of pitch.

Horizontal Pitch Organisation: Melody

Although the row is fully chromatic in linear terms, the vertical harmony has a more transparent sonority less dense than 12-note pitch collections. The harmonic colours change slowly, only one note at a time, the voice-leading ensuring that the row does not sustain as a 12-note chord (clustered) until the end of the *adagio* section. As notes of the row are delivered one at a time, the major seconds and perfect fourths/fifths of the 2+5 interval-pairing tend to produce a pentatonic effect which is one of the most characteristic aspects of the sound and assists in evoking the desired mood of tranquillity.²⁷ Table 4:10 shows how these pentatonic segments (underlined) overlap in the prime version of the row:

TABLE 4:10 Pentatonicism in *Les espaces*

1	2	3	4	5	6	7	8	9	10	11	12		
	<u>D,</u>	<u>C,</u>	<u>F,</u>	<u>G,</u>	<u>A,</u>	<u>E,</u>	<u>B,</u>	<u>C#,</u>	<u>F#,</u>	<u>G#,</u>	<u>D#,</u>	<u>A#,</u>	(etc.)
				<u>A,</u>	<u>E,</u>	<u>B,</u>	<u>C#,</u>	<u>F#,</u>					
						<u>B,</u>	<u>C#,</u>	<u>F#,</u>	<u>G#,</u>	<u>D#,</u>			
							<u>C#,</u>	<u>F#,</u>	<u>G#,</u>	<u>D#,</u>	<u>A#,</u>		(etc.)

In my most recent works I have tried to make use of simple aggregations containing a limited number of pitches. This is already apparent in *Les espaces du sommeil* where there is a long passage, *adagio*, in which I wanted each new note appearing in the orchestra to have its own meaning. It is built on a series which comprises only two kinds of interval: major seconds and perfect fourths or perfect fifths.²⁸

Example 4:34 shows a whole page from the composer's original sketches for the slow, middle section of *Les Espaces*. Six rotations of the row can be seen above the short score, with the composer's own numbering, ① ② ③, showing three pairs (the second of each pair an inversion of the first). Rows ①, ② and ③ form a simple cycle of fifths transposition. The notes are then assigned to particular registers by octave displacement. Although the melody contains only two interval types, horizontally, the vertical harmony is not restricted in the same way. Whilst the first five versions of the row are used for the *adagio* section, the sixth begins the baritone line of the next section, from Fig.82, and is extended so that the 2+5 pairing governs the vocal part up to Fig.92. On the sketch the composer has also shown the corresponding phrases of the poem by Robert Desnos.²⁹

Horizontal Pitch Organisation: Melody

Ex. 4: 34

The image shows a handwritten musical score for the song "Les Mousquetaires". The score is written on a grand staff (treble and bass clefs) and includes several systems of music. The lyrics are written in French and are annotated with boxes and lines pointing to specific notes or phrases in the melody. The annotations include:

- System 1:** "et de chasser les ennemis", "et de braver les dangers", "dans les plus beaux lieux", "non - et de les vaincre".
- System 2:** "Les mousquetaires au service du roi", "de braver les dangers", "des ennemis qui s'acharnent", "sur les routes mousquetaires".
- System 3:** "qui s'attends", "Quand je l'envisage, les dévotions phantômes", "et venant", "bon pays", "qui se sont", "de la balle et de la poudre".
- System 4:** "et l'on a pu", "de la poudre", "et de braver les ennemis".

There are also circled numbers 1, 2, and 3, and a circled number 5, which likely refer to specific measures or phrases. The score is written in a clear, legible hand, and the annotations are neatly placed around the notes.

Horizontal Pitch Organisation: Melody

TABLE 4: 11 *Les espaces du sommeil*: formal scheme

Figs.	Stage	Section	Text	Pitch organisation
- 2	ONE	Intro.	-----	basic set B, C, Db, F (strings/timpani)
2-10		Episode 1	Verse 1	
10-12			<i>Il y a toi</i>	G, F, C (voice); D, E, F, G (horns, harp)
12-15		Episode 2	Verse 2	
15-17			<i>Il y a toi</i>	A, G, B (voice); Eb, F, G, A (horns, harp)
17-20		Episode 3	Verse 3	
20-22			<i>Il y a toi</i>	B, A, Bb (voice); E, F#, A, B (horns, harp)
22-24		Episode 4	Verse 4	
24-33	TWO	Phrase 1	Verse 5	12-note row of major seconds and
33-40		Phrase 2	"	perfect fourths/fifths (interval-
40-50		Phrase 3	"	pairing 2+5), in prime/inverted
50-63		Phrase 4	Verse 6	24-note cycles, transposed by
63-82		Phrase 5	"	perfect fifths
83-88	THREE		Verse 7	vocal part continues 2+5 row
88-92			"	" " " " " "
92-96			Verse 8	
96-97		Climax	-----	12-note chord-aggregate F-J-K
97-104		Aftermath	Verse 9	
105		'cadence'	"	12-note chord-aggregate D-J-D

Verses 5 and 6 form the slow, second stage. Underlying this central period of calm and repose, a distinctive kind of 12-note row is used to provide exquisite harmony in the strings. The subtle harmonic sonorities change very slowly, each new note being introduced individually. Although the row is fully chromatic in linear terms, the vertical harmony is more transparent, and only builds up a full 12-note chord in the dense, semitone cluster sustained at the end of the *adagio* section, prior to Fig.82. Interval-pairing of major seconds and perfect fourths/fifths continues in the vocal line through the next stage of the form, from Figs.83-92. Example 4:34 includes twelve notes of the row (the inverted form of cycle no.3) which are not used for the slow section; these provide material for continuation. The 2+5 interval-pairing is discontinued at Fig.92 for the eighth verse, leading directly to the overall climax of the work as the vocal line climbs ever higher with each phrase: C-C#-D-D#-E-F-F#. For the climactic harmony, played *ad libitum*, Lutosławski uses a 12-note chord-aggregate with a different four-note chord in each harmonic strand: F-J-K. This is followed by an abrupt change to a *pianissimo* string chord made from major seconds combined with minor thirds (2+3), against which the soloist begins to deliver the final stanza: '*Dans la nuit, il y a les merveilles du monde. Dans la nuit il n'y a pas d'anges gardiens, mais il y a le sommeil*'.

HORIZONTAL INTERVAL-PAIRING 3+7

Of all the expressive melodic lines to^{be} found in the later works two of the most potent, dramatically, are of the type which combines minor third and perfect fifth intervals. It is interesting that, in the case of this particular combination, Lutosławski does not treat the intervals as inversionally equivalent to their complements, the major sixth and perfect fourth, respectively. For this reason the classification introduced earlier in this chapter distinguishes between the perfect fourth and perfect fifth. Unlike the other melodic interval pairings where the composer's intent is to make use of the primary interval character of the interval classes occurring between adjacent notes, in this case his purpose is to achieve secondary (i.e. non-adjacent) intervals of the minor ninth.

The first of these highly-charged melodies generated by the interval-pairing 3+7 appears in the latter part of the Third Symphony, beginning at Fig.86 and spanning ten of the most memorable bars of the whole work (Ex.4:35). Out of a total of thirty-six interval steps no less than twenty-one are minor thirds, connected by eleven perfect fifths. Of the remaining four intervals, two are minor sevenths (the sum of one minor third and one perfect fifth), one is a minor ninth (the sum of two minor thirds and one perfect fifth), and one is a major tenth. Three of these 'extra' intervals are merely linking the rising phrases. The fourth, occurring in bar six, is the result of interlocking minor third and perfect fifth.

The melody and its harmonic context will be discussed in full detail in Chapter Seven. Meanwhile the violin line is shown in Example 4:35. Here the primary (adjacent) intervals are shown as well as the secondary (non-adjacent) minor ninths. The harmonic result is one of superimposed diminished triads whose roots are each a minor ninth apart (see Ex.3:5b). Much of the tension is due to the effect of the non-expressive sound quality of the open G string, and to the low F# which underpins the whole passage a minor ninth below. The open G string is sustained throughout, rising by a semitone to meet the G# at the end of the long, arching phrase. This causes a change to the expression which is decisive.

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Ex. 4: 35

Fig. (86)

pp p mf f

MINOR THIRD

PERFECT FIFTH

MINOR NINTH

(Imp.)

(87)

ff

In the above example, at the beginning of the staff devoted to minor ninths, the F# which underlies the whole passage is shown in its minor ninth relationship to the violins' open G string. The aural effect of the F# is almost subliminal, but without it the passage would lose much of its dramatic tension, and the consequent sense of 'resolution' when the line eventually rises by a semitone onto G#.

Horizontal Pitch Organisation: Melody

Another work featuring this type of melody is *Chain 2*. In its third movement, after an opening in which the solo violin part plays with 1+2 cells (see Ex. 4:15d), a melody comprising minor thirds and perfect fifths emerges between Figs. 67 and 69 (Ex. 4:36a). This first appearance is very similar to the equivalent passage in the Third Symphony, quoted above. Both start on G and emphasise the compass of a minor ninth from G to Ab produced by two minor thirds and one perfect fifth. The phrase is transposed and extended between Figs. 71 and 74 and makes a third appearance after Fig. 89 (Ex. 4:36b). Each of these phrases and their contexts will be discussed more fully in Chapter Nine.

Ex. 4: 36a

Fig. 67

Violin

MINOR THIRDS

PERFECT FIFTHS

MINOR NINTHS

Ex. 4: 36b

Fig. 89

Violin

MINOR THIRDS

PERFECT FIFTHS

MINOR NINTHS

FOREGROUND and BACKGROUND

It has already been noted that Lutosławski reached a decisive point in the development of his methods of pitch organisation at the end of the 1970s. The work which brought this to a head was *Mi-Parti* (1976). During the two or three years following the work's first performance in October 1976, the composer was able to reach an understanding of the problem through his experience of conducting *Mi-Parti* in performance. It is also worth noting that the large-scale composition which immediately preceded *Mi-Parti*, *Les espaces du sommeil*, did not (and still does not) produce similar feelings of dissatisfaction in the composer. This is undoubtedly due to the presence in that work of the solo vocal line and its poetic text, which both give a foreground focus against which the background ideas operate. The other factor to be taken into consideration is that the first performance of *Les espaces* was delayed until 1978, by which time Lutosławski was already working on his new ways of organising pitch. Thus, for various reasons, it was *Mi-Parti* rather than *Les espaces* which acted as the catalyst. Lutosławski's comments on the relationship between melody and harmony in *Mi-Parti* have already been quoted in Chapter Three, and it is appropriate to reconsider his remarks at this stage, even though the following text is duplicated:

I consider melodies derived from harmonies as rather poor. That's the way I composed the string background at the beginning of *Mi-Parti*, which I think I will avoid in the future... if I were to write this section of *Mi-Parti* again, I should do it in an entirely different way, which would be a more accurate realisation of my sound vision. ⁴⁰

Example 4:37a shows solo instrumental lines from the beginning of *Mi-Parti* (bars 10-34) derived from the succession of 12-note chord-aggregates already discussed in Chapter Three (Table 3:5 and Ex.3:18). The first of these nine solo lines appears in the subdued tone quality of the bass clarinet in its low register at Fig.1. and plays without a break through to Fig.7 (bars 10-37). Eight other lines then follow, played by two horns, two clarinets, two oboes and two flutes. Although nine instruments are used this does not indicate the true number of composed parts, since the horns, clarinets, oboes and flutes are used in pairs. This pairing enables

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individual players to rest whilst the melodic line itself continues, being passed to the other member of the pair. Thus the resulting network of nine lines (Ex. 4:37b) really represents five parts, or layers of (metred) counterpoint, with the upper four layers played by pairs of instruments and the lowest layer played by the bass clarinet, alone.

Ex. 4: 37a

Musical score for Ex. 4: 37a, showing five staves of music for different instruments. The staves are numbered 10 through 34. The instruments are: cl. 10 (basso), cor. 1 (17), cl. 1 (23), ob. 1 (27), and fl. 1 (32). The music is written in 3/4 time and features various rhythmic patterns and dynamics.

Ex. 4: 37b

Musical score for Ex. 4: 37b, showing a complex orchestral arrangement with multiple staves. The staves are numbered 33 through 34. The instruments are: fl. 1, fl. 2, ob. 1, ob. 2, cl. 1, cl. 2, cl. basso, cor. 1, and cor. 3. The music is written in 3/4 time and features various rhythmic patterns and dynamics, including *pp*, *mp*, *mf*, and *p*.

Horizontal Pitch Organisation: Melody

Table 4:12 provides a graphic representation of the order, pairing and overlapping of entries in the nine instrumental parts. In this diagram the vertical ordering of instruments is altered slightly, from what appears in a normal score layout, to show the bass clarinet below the horns. This makes it easier to see the overall shape of this first stage of the form, whereby the layers to which the entries belong are in an ascending order of pitch register. The numbering shown in square brackets indicates both the order of layers and the pairings within them. From Fig.6 all nine instruments play together, reaching the first *ad libitum* bar at Fig.7.

TABLE 4: 12 *Mi-Parti*, Figs. 1-7

Fig.	①	②	③	④	⑤	⑥	⑦
Bar.	10	17	23	28	32	35	37
fl. 1 [5a]					- - - - -		
fl. 2 [5b]						- - - - -	
ob. 1 [4a]				- - - - -			- - -
ob. 2 [4b]					- - - - -		
cl. 1 [3a]			- - - - -				- - -
cl. 2 [3b]				- - - - -			
hn. 1 [2a]		- - - - -			- - - - -		
hn. 3 [2b]			- - - - -				- -
b. cl [1]	- - - - -						- - - - -

The simplification of the first stage, shown above, also reveals the gradual process of foreshortening produced by the introduction of successive layers at progressively shorter time intervals. Thus the section (including the first nine bars) breaks down into eight units with the following numbers of bars: 9, 7, 6, 5, 4, 3, 2, 1. The last bar in this metred passage, which is also the first *ad libitum* section of the work, is thus an inevitable consequence of the foreshortening of phrases.

Horizontal Pitch Organisation: Melody

As both the vertical and the horizontal planes of pitch organisation in this example from *Mi-Parti* are similar, merely expressed in a different way, there is no real differentiation in this case between foreground melody and background harmony.

Thus far the organisation of pitch has been considered in both its vertical and horizontal aspects and in terms of some simple relationships between the two, where the vertical alignment was precisely determined. The next chapter also considers the organisation of pitch between vertical and horizontal aspects, but in terms of the oblique relationship between vertical and horizontal where the rhythm is not so precisely determined, the vertical alignment being treated according to Lutosławski's technique of 'controlled aleatory counterpoint'.

CHAPTER FIVE

Oblique Pitch Organisation: Polyphony

It has already been observed in the preceding chapters that Lutosławski has developed methods of organising pitch in the vertical and horizontal planes. In the present chapter attention will be drawn to the dimension of polyphonic relationships between harmony and melody in sections composed according to limited aleatory principles. Because these relationships occur in ways that are neither purely vertical nor purely horizontal, the polyphonic dimension is referred to here as 'oblique'.¹ In spite of the fact that Lutosławski has, in various interviews over the years, consistently referred to the organisation of pitch as 'the basic problem of music',² there have been commentators who, attracted by the apparent novelty of Lutosławski's use of controlled aleatory counterpoint after 1960, have assumed that the harmonic outcome of *ad libitum* sections is not pre-determined.³ It is not necessary, here, to provide a complete exposition of the rhythmic techniques applied in Lutosławski's music since his adoption of aleatory principles, as previous writers have already addressed this issue in sufficient detail, not least the composer himself.⁴ It is necessary, however, to consider the crucial issue of how the application of aleatory techniques is governed by pitch organisation.

Jeux vénitiens is to Lutosławski's organisation of time as the Five Songs are to his organisation of pitch. Each was a decisive turning point marking the introduction of new elements which have remained central to his musical language and compositional technique. Though they have been developed and refined, both changes were radical and neither has been reversed; but whereas the problems of harmony occupied him over a decade before the solution was unveiled, the changes to rhythm occurred suddenly, whilst working on the Postludes. The catalyst for change came in 1960, when he heard a radio broadcast of the *Concert for Piano and Orchestra*⁵ by John Cage, which gave him the idea of using 'chance' procedures. In spite of the significance of this event as a breakthrough for Lutosławski, one must beware of overstating the notion of direct influence; he was stimulated by the ideas of Cage, but was not influenced by the music itself. He later recalled his experience of first hearing the Cage *Concert*: 'Composers often do not hear the music that is being played...we are listening to something and at the same time creating something else.'⁶

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Chance has been central to Lutosławski's vocabulary since 1960; yet the word still leads to misunderstanding. The article by Paul Griffiths on chance procedures in the New Grove Dictionary ('Aleatory'), for example, is misleading in its comments relating to Lutosławski:

Greater indeterminacy is introduced, still with conventional notation, when performers are asked to improvise on the basis of given pitches or rhythms, to interpret a given pitch sequence with any rhythm, to interpret a given rhythm with any pitches, and so on. All of these demand invention from the performer, and they have been used by composers as different as Kagel and Lutosławski. 7

It is arguable whether 'indeterminacy' is an appropriate heading under which to discuss Lutosławski's application of aleatory counterpoint. All except one of the parameters are fully determined: the pitch and the order of pitches is fully specified; the rhythmic values are specified; only the polyphonic co-ordination of parts is affected by chance. Griffiths is wrong to suggest that improvisation plays a part in Lutosławski's music. There is no demand for compositional or improvisational invention from the performer. Perhaps the second of the *Trois poèmes d'Henri Michaux*, 'Le grand combat', could be used as an example to justify some of the above observations, but even then without validity because there the chorus parts are used to represent various types of unpitched vocal effects.

In a lecture intended for presentation at Darmstadt in the late 1960s, significantly titled as 'Rhythm and the Organisation of Pitch in Composing Techniques Employing a Limited Element of Chance', Lutosławski began by defining his view of aleatorism (in German), quoting the leading proponent of Information Theory as applied to music, Werner Meyer-Eppler:

"Aleatorisch nennt man Vorgänge deren Verlauf im groben festliegt, im Einzelnen aber von Zufall abhängt." [By 'aleatory' one means a procedure whose broad outcome is defined, but whose details depend upon chance.] 8 Compositions written within the terms of this definition do not really go beyond the basic conventions and traditions of European music where a piece of music is, typically, an occurrence rather than a state. ... The work will continue to be 'an object in time' so long as the play of chance is held sufficiently in check by the composer and it does not become the controlling impulse of the work, but is kept subservient to the composer's design... Conceived in this way, aleatorism does not appear to be much of an innovation. But although it

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is true that it makes no fundamental change in the treatment of a music-work as 'an object in time', it has an utterly radical effect on its rhythmic and expressive physiognomy, and this is enough to give music composed in this vein a totally different sound from that in which chance makes no appearance whatsoever. ⁹

In emphasising the European approach to music as '...an occurrence rather than a state...', Lutosławski took care to distance himself from the ideas of Cage that embrace the orientalism of the *I Ching*. Cage's Concert for Piano and Orchestra (1957-8), for example, can be performed by any number of players, each of whom selects pages from the instrumental part which can be played in any order. Ensemble co-ordination (assuming that an ensemble is even used) is effected simply by the elapse of time, indicated by the the arms of the conductor acting as a clock. Even in his works of the 1960s such as the String Quartet and the Second Symphony Lutosławski maintained the more traditional principle of 'an object in time'.

It is interesting to compare the approach outlined in Lutosławski's text for Darmstadt with that of Pierre Boulez delivered to the same forum at the beginning of the same decade:

Free (or mobile) forms present a delicate problem. The moment that you are dealing with a number of performers it is hard - for psychological as well as technical reasons - to allow them initiatives or responsibilities. The greater the number of performers and the greater their lack of special skills, the less it is possible to control the 'operations' within a mobile form. ...in any ensemble the possible margin of error must be calculated and borne in mind when determining in advance the 'mobility' of the work, ie. the margin of error must either be included in that mobility or else that mobility must be limited by the margin of error. ¹⁰

His warning that a composer must calculate in advance 'the margin of error' indicates a similarity of approach, although in addressing the issue of chance procedures applied to the form of a work Boulez was obviously thinking in far more radical terms than aleatorism applied merely to contrapuntal co-ordination. Lutosławski has described his own method of composing aleatory sections in terms of anticipating what he calls the 'least advantageous solution':

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In principle I should make allowance for all the possible versions that can arise out of my text as a result of the introduction of simultaneous *ad libitum* performance and compose the text in such a way that all the versions meet the planned requirements. To visualise all the possible alternatives is usually impossible, but then it is not really necessary either. It is enough to compose just one version of a particular section of the form:...which might be called 'the least advantageous' from the point of view of the original intention. ¹¹

It is ironic that Lutosławski's exposition of his aleatory technique was intended for presentation at Darmstadt because he was drawn in the direction of chance procedures partly as a reaction against the overcomplex scores of the Darmstadt school in its post-Webernian serialist phase of the 1950s. Others were to react in a similar way, notably Ligeti. Lutosławski has expressed a strong dislike towards the idea of performers being required to execute music with the rhythmic precision of a machine, preferring to derive his complex ensemble rhythms from the interaction of individual parts:

...the rhythmic structure developed by collective *ad libitum*, being the sum of all the rhythmic structures of the individual parts, is a far more complex texture than any polyrhythmic structure to be found in traditional music. One of the reasons for this is that there may be... accelerandos and rallentandos within each part. There are many other similar possibilities. All of them spring from the composer's assumption that each of the performers will, within a specified time-unit, play as though he were on his own, without worrying whether he is in time with the others. In this way the rhythmic structure acquires a distinctive suppleness not attainable otherwise. ¹²

Although the adoption of collective *ad libitum* techniques brought the polyrhythmic complexity and 'suppleness' that Lutosławski sought, it also carried the considerable problem of how to maintain compositional control over the harmonic outcome. Hence he developed methods of building aleatory sections that can be classified according to three main types: those built on one or more vertically planned chords or chord-aggregates; those generated by the projection of a horizontally composed line; and those representing subdivision of the chromatic whole according to set-complementation. In all cases the pitch material is fully composed, as are the rhythmic durations in each individual part. The chance element only applies to the parameter of ensemble co-ordination, effected by the absence of pulsation common to all parts.

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Vertically planned aleatory sections can be built on a single chord, either containing all 12 notes, or a subdivision of the chromatic whole. Collective *ad libitum* is then used merely to elaborate only the notes of that unchanging harmony, analogous to broken-chord patterns in music of the classical period. This approach is also embellished by introducing non-harmony notes to the individual parts which elaborate the basic chord, analogous to the function of passing-notes and auxiliary-notes (neighbour-notes) in tonal harmony. All such aleatory sections share the disadvantage of being harmonically static. In order to mitigate the static quality of chordally conceived aleatory sections, Lutosławski has also developed a technique of composing aleatory passages that move gradually from one chord to another. In such sections there are three stages: where only the notes of the first harmony will be heard; where notes of the first and second harmonies will mix and overlap; where only the notes of the second harmony will be heard.

Horizontally planned aleatory sections may consist of the projection of a monodic line delivered as a polyphonic 'bundle' (the composer's term) of individual parts which play slight rhythmic variants of the same line. Bundles may deliver the notes of a 12-note row, or may be more freely composed according to a particular horizontal interval-pairing. The effect is one of 'blurring' the single line (note that the composer also uses this principle of blurring in some passages which are subject to conventional metre).

Set-complementation is used where the composer wishes to combine several horizontal lines in a polyphonic texture which maintains strict separation of pitch material between the constituent parts. In most cases the sum of the parts will provide all 12 notes, the individual lines containing complementary sub-sets, usually of between 3 and 6 notes. In other cases the sum of the parts may provide less than 12 notes, perhaps only 6. The latter method is used where successive aleatory sections derived from complementary pitch-sets are overlapped and thus harmonically superimposed, for example, in pieces composed according to 'chain' technique.

Oblique Pitch Organisation: Polyphony

The first movement of *Jeux vénitiens* demonstrates a simple method of pitch organisation whereby successive aleatory sections merely elaborate vertically planned harmony. It is divided into eight sections notated in self-contained boxes (that override the conventional rhythmic co-ordination of notes vertically aligned on the page) and labelled A-H, inclusive. Each section begins with a percussive aural signal (played *fortissimo* by side-drums, claves and xylophone) that also abruptly terminates the preceding section. The form can be designated as Refrains and Episodes, a typical procedure for an introductory movement in Lutosławski's work. Sections A,C,E,G represent the refrain (the instrumentation is increased each time), while sections B,D,F,H are the episodes. The refrains are rhythmically active and intervallically angular, whereas the episodes are reposeful, slow and sustained. The refrains are based on two superimposed 12-note chords (Ex.5:1). The first is heard each time (played in angular, arpeggiated figurations by a seven part woodwind section of two flutes, oboe, three clarinets and bassoon), and contains only interval-classes 2, 3 and 5. It is a vertically symmetrical construction of major seconds and minor thirds around the axis of perfect fourth. The second 12-note chord is fully overlaid on the first in section G and partially in section E. In the latter, three brass instruments play a four-note cluster (G, Ab, A, Bb) that fills the axis interval of the first 12-note chord (i.e. the perfect fourth F#-B). In section G the piano (two players at one keyboard) delivers a widely-spaced symmetrical pattern of superimposed minor thirds which complement the brass cluster in order to complete the second 12-note chord. Thus the whole scheme is based on vertical interval symmetry, an aspect of harmonic design typical of Lutosławski's works of the 1960s, but less common in the later works.

Ex. 5: 1

The musical notation consists of two systems, each with three staves (treble, alto, and bass clefs).
 System 1:
 - Treble staff: A series of notes with various accidentals (sharps, flats, naturals) and a final note with a sharp sign.
 - Alto staff: A series of notes with various accidentals and a final note with a sharp sign.
 - Bass staff: A series of notes with various accidentals and a final note with a sharp sign.
 Labels below the first system: "A,C,E,G" under the bass staff and "#E" under the treble staff.
 System 2:
 - Treble staff: A series of notes with various accidentals and a final note with a sharp sign.
 - Alto staff: A series of notes with various accidentals and a final note with a sharp sign.
 - Bass staff: A series of notes with various accidentals and a final note with a sharp sign.
 Labels below the second system: "E,G" under the bass staff and "#E" under the treble staff.

Oblique Pitch Organisation: Polyphony

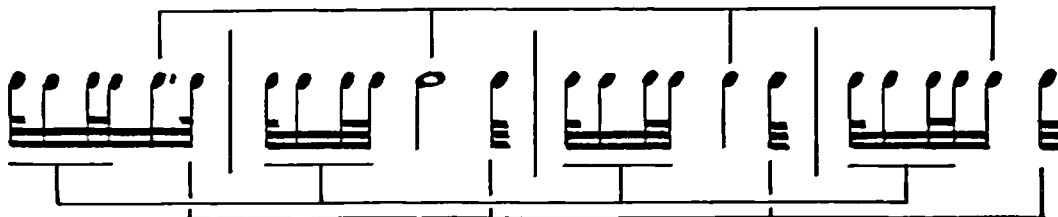
The four notes of the brass strand and the eight notes of the piano strand combine to form a 12-note chord having no notes in common with the previous chord. In this way twelve octave doublings are produced. In the actual hearing these octaves are barely discernible. This is due to the differences in the timbre and the interval and rhythmic construction of the particular strands. In the perception of the whole passage there is something that might be called a division into local harmonies, that is a disintegration of the perception of the harmonies into three separate strands and an elimination of the harmonies arising between the notes belonging to different strands. ¹⁴

It is arguable whether in this case the listener is able to distinguish easily between the various harmonic strands and whether the result is perceived in terms of 'local harmonies'. The degree of frenetic activity is such that the ear is unlikely to be able to achieve harmonic focus, hence this section is more likely to be heard in terms of its gestural, timbral and textural effect rather than a distinct harmonic sonority. In later pieces where the level of harmonic density is reduced, such effects of local harmony are more telling; for example, the slow, central section of *Les espaces du sommeil* already discussed in Chapter Three (see Ex. 3:19).

Within the aleatory section for the woodwind players that appears in each statement of the refrain, there is a carefully calculated rhythmic scheme based on recurrent motifs. Even though it is intended that the seven wind parts should not be co-ordinated by common pulsation, the parts are composed in such a way that the degree of discrepancy between them will be only slight. Lutosławski has explained his method of ordering these motifs:

There are seven woodwinds here, each of them playing a number of motives divided by caesuras [commas shown above the stave]. Altogether there are nine such motives. They appear in a different order in each of the instruments (the flute parts, for instance playing a, b, c, d, e, f, g and h, c, b, f, a, d, respectively, the oboe part i, a, h, c, d, g, and so on). The 'least advantageous' situation is when the same motive is played by all the instruments at once. But even should this happen, there would be no sameness of rhythm because each of the motives appears in various rhythmic variations [see Ex. 5:2 for variants of motif 'a'], one version being reserved for each instrument. ¹⁵

Ex. 5: 2



Oblique Pitch Organisation: Polyphony

Table 5:1 illustrates Lutoslawski's method of establishing rhythmic variants within a self-contained aleatory section, in such a way that the sum of durational values in each individual part reaches the same total. The integers given below represent the number of semiquavers within each of the eleven motifs contained in each instrumental part. In addition, there are also ten semiquaver rests in each line: one semiquaver rest between each of the eleven motifs. The line total of 29 semiquavers to each part thus represents only the value in notes; if the rests are also included the total increases to 39.

Table 5:1		<i>Jeux vénitiens, IV, fig. gl, woodwinds</i>										
piccolo:	----	----	----	----	----	----	----	----	----	----	----	
flute :	--	-	----	----	----	----	----	----	----	----	----	
cl.1 :	---	--	-	----	----	----	----	----	----	----	----	
cl.2 :	-	----	-	----	----	----	----	----	----	----	----	
cl.3 :	-----	-	----	----	----	----	----	----	----	----	----	
bassoon:	-----	-	----	----	----	----	----	----	----	----	----	
piccolo:	6	4	1	3	2	3	1	5	2	1	1	= 29
flute :	2	1	6	3	3	1	2	4	1	1	5	= 29
cl.1 :	3	2	1	4	1	1	5	2	3	1	6	= 29
cl.2 :	1	4	1	1	3	1	3	5	6	2	2	= 29
cl.3 :	5	1	1	6	1	1	2	3	3	2	4	= 29
bassoon:	4	1	2	1	2	5	6	1	3	1	3	= 29

Example 5:3 shows the staff notation corresponding to Table 5:1 (page 36 in the score). The pitch is based on a 12-note chord in which minor thirds predominate: each of the six parts plays only two pitch-classes, and within each line only interval-class 3 is used. Interval-class 4 links (or separates) most of the adjacent parts: between piccolo and flute; flute and clarinet I; clarinets II and III; and between clarinet III and bassoon. Interval-class 5 occurs between the first clarinet and clarinet II. This is only one of many textural blocks which overlap during the progress of the final movement of *Jeux vénitiens*; it precedes and overlaps with the textural block for strings shown in Example 4:4 (see also Table 4:6).

Ex. 5:3

ca 192

fl. picc.
fl.
cl. I
cl. II
cl. III
B.

Oblique Pitch Organisation: Polyphony

At the end of the final movement of *Jeux vénitiens* there is a complex polyphonic texture consisting of four superimposed harmonic layers (Ex. 5:4). These are not complementary harmonic strands, of the type which make up 12-note chord-aggregates. Instead we find Lutosławski using four layers each of which contains all twelve notes. The result is harmonically so dense that one's ear is unable to distinguish between the different sonorities involved. It is significant to note, however, that Lutosławski was to progress beyond this type of dense texturalism.

Ex. 5: 4

The musical score for Ex. 5:4 consists of four staves. The top staff is a treble clef with a key signature of one flat and a common time signature, containing a single chord marked (4X). The second staff is a treble clef with a key signature of one flat, containing a sequence of notes: #G, A, B, C, D, E, F, G, A, B, C, D. The third staff is a treble clef with a key signature of one flat, containing notes: Bb, C, D, E, F, G, A, B, C, D, E, F. The fourth staff is a bass clef with a key signature of one flat, containing notes: C, C#, F, F#, G, and B, with a harp part indicated above it.

The lowest of the four levels is constructed around a clustered 12-note chord of minor seconds contained between C and B. The double-basses and cellos play C, C#, F, F#, G, and B, the other notes being taken by the harp. The lower-middle 12-note chord, played by motorless vibraphone, is also a clustered minor second sonority, in this case contained between Gb and F; its three top notes are also played by a group of three brass instruments. The upper-middle layer, played by woodwinds and celesta, has a different structure which does not supply a semitone cluster. Instead, its twelve pitches are stretched across a range of nearly two octaves. The top register is occupied by an 11-note chord of clustered semitones (played by three violins, three violas and piano) from which one pitch-class is missing. E is omitted from this layer due to its appearance in the closing of the French horn part. Since the instrumental groups representing each of the levels enter successively, the moments of the highest density of sound do not occur simultaneously. Thus the listener's attention is switched from one level to the next, a feature which the composer intended to produce a perception of 'local harmonies' rather than a single harmony (see Ex. 5:5).

Oblique Pitch Organisation: Polyphony

Ex. 5: 5

The musical score is arranged in several systems. The top system includes flutes (fl picc, fl), and a low flute (flg). The second system features trumpets (trba), cornets (cor), and trombones (trbne). The third system includes vibraphone (vibr senza trca), cello (cel), and double bass (ar). The fourth system features piano (pf), violin I (vni I), violin II (vni II), viola I (vle I), and viola II (vle II). The fifth system includes violin III (vni III), violin IV (vni IV), viola III (vle III), and viola IV (vle IV). The sixth system features cello I (cb I) and cello II (cb II). The score includes various dynamic markings such as *con sord*, *chiuso*, *p*, *pp*, *mf*, *f*, and *dim*. Performance instructions include 'L', 'M', and '6''.

* Przed rozpoczęciem należy klawisze przycisnąć bezgłośnie opierając kartonem i przycisnąć do końca łokciem i lewą ręką

Before beginning depress the keys silently with the cardboard cylinders and hold them down with the elbow and left hand until the end.

Vor Beginn mit steifem Karton die Tasten stumm niederdrücken und (mit Ellbogen und linker Hand) so beissen bis zum Schluß

Much of the String Quartet demonstrates the principle of set-complementation between the four instruments. In particular, the *pizzicato* section of the Main Movement between Figs.14-23 is composed entirely according to set-complementation.¹⁶ Table 5:2 gives a breakdown of the pitch information contained in these aleatory sections (which the composer has referred to as 'mobiles'). The pitch-classes for each part are named, then the interval-pairing between them is identified, together with the interval-vector. Merely from the naming of pitch-classes the complementation between intervallic cells is self-evident. As an additional cross-referential aid, the pc-sets are specified (applying the principle of intervallic inversion where required), and their numerical 'names' given.

Most of these aleatory sections display a simple subdivision of the chromatic whole into four complementary three-note sets, although at Figs.16 and 17 the division is unequal due to the transfer of one pitch-class between the instrumental parts. It is particularly interesting to see that Lutosławski achieves a distinctive intervallic pattern in each part. For example, from Fig.23 violin I has A#,B,F, and the viola has C,F#,G. These mutually invertible three-note cells both comprise interval-classes 1+6. Violin II has Db,Eb,Ab, whilst the cello has E,D,A; each cell has interval-classes 2+5. Another example is provided by the aleatory section beginning at Fig.15 (Ex.5:6). Here, violin I has A,A#,B, and the cello has E,F,F#; both three-note cells of adjacent semitones. These outer layers contrast with the interval patterns of violin II and the viola: G,C,Db; and D,Eb,Ab; mutually invertible cells of semitone and perfect fourth (interval-classes 1+5). Thus the chromatic whole is partitioned to produce complementary three-note intervallic cells which invest each harmonic strand with a particular interval physiognomy, in some cases giving intervallic similarity (Fig.14), in other cases giving strong intervallic contrast between strands (eg. Figs.15 and 23).

Although this method of pitch organisation may give some advantage in establishing an aural difference between complementary instrumental parts, it must also be acknowledged that it brings the considerable disadvantage of potential impoverishment of individual melodic lines.

Oblique Pitch Organisation: Polyphony

TABLE 5:2 String Quartet: set-complementation Figs. 14-23

Fig.	Part	Pitch-classes	Intervals		pc-set	set name
			Code	Vector		
14	vl. I	E F# B	2+5	010020	0, 2, 7	3-9 (12)
	vl. II	Db Eb Ab	2+5	010020	0, 2, 7	3-9 (12)
	vla	G A D	2+5	010020	0, 2, 7	3-9 (12)
	vlc	Bb C F	2+5	010020	0, 2, 7	3-9 (12)
15	vl. I	A A# B	1+2	210000	0, 1, 2	3-1 (12)
	vl. II	C Db G	1+5+6	100011	0, 1, 6	3-5
	vla	Ab D Eb	1+5+6	100011	0, 1, 6	3-5
	vlc	E F F#	1+2	210000	0, 1, 2	3-1 (12)
16	vl. I	E F# B F	1+2+5+6	210021	0, 1, 2, 7	4-6 (12)
	vl. II	Db Eb Ab †	2+5	010020	0, 2, 7	3-9 (12)
	vla	Bb C [F]	2 [+5]			
	vlc	G A D	2+5	010020	0, 2, 7	3-9 (12)
17	vl. I	F G C	2+5	010020	0, 2, 7	3-9 (12)
	vl. II	Ab Bb Eb D	2+5	020202	0, 2, 6, 8	4-25 (6)
	vla	A E [D]	5 [+2]			
	vlc	B C# F#	2+5	010020	0, 2, 7	3-9 (12)
18	vl. I	F G C	2+5	010020	0, 2, 7	3-9 (12)
	vl. II	F# G# C#	2+5	010020	0, 2, 7	3-9 (12)
	vla	A# B D#	1+4+5	100110	0, 1, 5	3-4
	vlc	D E A	2+5	010020	0, 2, 7	3-9 (12)
19	vl. I	G# B C#	2+3+5	011010	0, 2, 5	3-7
	vl. II	D F# G	1+4+5	100110	0, 1, 5	3-4
	vla	C E F	1+4+5	100110	0, 1, 5	3-4
	vlc	A Bb Eb	1+5+6	100011	0, 1, 6	3-5
20	vl. I	B C Db	1+2	210000	0, 1, 2	3-1 (12)
	vl. II	F Ab Bb	2+3+5	011010	0, 2, 5	3-7
	vla	D F# G	1+4+5	100110	0, 1, 5	3-4
	vlc	D# E A	1+5+6	100011	0, 1, 6	3-5
21	vl. I	A B E	2+5	010020	0, 2, 7	3-9 (12)
	vl. II	Gb Ab Db	2+5	010020	0, 2, 7	3-9 (12)
	vla	Bb D Eb	1+4+5	100110	0, 1, 5	3-4
	vlc	F G C	2+5	010020	0, 2, 7	3-9 (12)
22	vl. I	B D# E	1+4+5	100110	0, 1, 5	3-4
	vl. II	Bb C# D	1+3+4	101100	0, 1, 4	3-3
	vla	F# G C	1+5+6	100011	0, 1, 6	3-5
	vlc	F Ab A	1+3+4	101100	0, 1, 4	3-3
23	vl. I	F A# B	1+5+6	100011	0, 1, 6	3-5
	vl. II	Db Eb Ab	2+5	010020	0, 2, 7	3-9 (12)
	vla	C F# G	1+5+6	100011	0, 1, 6	3-5
	vlc	E D A	2+5	010020	0, 2, 7	3-9 (12)

Table 5:2 illustrates the preponderance of a 2+5 intervallic cell (pc-set 0,2,7) throughout the *pizzicato* section. Naturally, the true intervallic relationships produced by the polyphonic interaction of parts will be much more complex than suggested by the interval profile for each individual cell. Example 5:6 reproduces the aleatory section beginning at Fig.15.

Oblique Pitch Organisation: Polyphony

Ex. 5: 6

(15)

vno I

vno II

vla

vc.

ff sost. acc. (rit) ff sost. acc. sost. ff

acc. sost. acc. (rit) (rit)

ff menof ff menof

ff sost. acc. (rit) sost. ff

ff acc. sost. acc. ff acc. sost. acc. sost. ff

ff acc. sost. ff acc. sost. acc. sost. ff

give the viola a signal that you have finished

go on after you have made sure that the end violin and cello have stopped.

give the viola a signal that you have finished.

Oblique Pitch Organisation: Polyphony

Set-complementation also defines the pitch organisation in the first movement of Lutosławski's Second Symphony: *Hésitant*.¹⁷ Structurally, it conforms to a formal scheme of episodes and refrains which can also be observed in several other works, including the first movement of *Jeux vénitiens*, *Epitaph*, and the first movement of the Third Symphony. In *Livre pour orchestre*, the separation of movements (Chapitres) by *Intermèdes* can also be regarded as a variant of the same procedure. In the String Quartet the episodes of the introductory movement are separated by a signal of repeated octaves Cs, rather than by refrains; yet the similarity of formal approach remains.

In the Second Symphony, each episode is characterised by a different combination of instrumental tone colours, and invested with a distinctive harmonic colour due to the differing sub-divisions of the chromatic whole. The hesitant, introductory nature is achieved by interrupting each episode twice: firstly just after it has begun, causing a false start followed by a second attempt; secondly just before the end, causing a general pause followed by a brief abortive attempt to continue, followed by another general pause before the intervention of the refrain indicates that the preceding episode has been discontinued.

Episode 1 is an introductory fanfare for the ten-part brass section, generated entirely by the bright, relatively consonant sound of major seconds with perfect fourths/fifths, paired horizontally and resulting in a 12-note row (Eb, F, Bb, C, G, A, D, E, B, C#, F#, G#). The strong beginning, with its harmonic overlap of a major second between Eb and F, is crucial to the long range harmonic organisation of the work. The same notes later reappear at Fig. 158 as a major ninth played by the entire orchestra with maximum force (*tutta forza*), acting as the ultimate destination point of the second movement and therefore the dramatic culmination of the work as a whole. Episode 1 is abruptly terminated by a 12-note chord of clustered semitones played by the string section *pizzicato* at Fig. 2. There is a half-hearted attempt to continue before another statement of the string chord finally ends this introductory section. Apart from these two *pizzicato* chords near the beginning, and another two which bring about its end, the string section is not used in the first movement.

Oblique Pitch Organisation: Polyphony

Episode 2 is scored for three flutes, celesta and five tom-toms.¹⁰ Lutosławski assigns nine notes to each of the four main parts. Eight of these notes are common to all four instruments, but each line also contains one other note which is exclusive to that part; thus all twelve pitches are used. The eight common notes appear in all four parts linked horizontally by interval-pairing 2+5. The four other notes, B (celesta), Bb (fl.1), A (fl.2), G# (fl.3), are announced at the beginning of the Episode at Fig.4; thereafter they are separated from the other eight notes, being isolated in the top register.

After episode 2 the refrain is heard for the first time (Ex.5:7). On each of its six appearances, it is played by three double-reed instruments: two oboes and cor anglais (nos.1-2); cor anglais and two bassoons (no.3); oboe, cor anglais and bassoon (nos.4-5); two oboes and cor anglais (no.6). These double-reed woodwinds are specifically excluded from the episodes; thus the composer is able to exploit contrast of instrumental tone colour between successive sections, as well as identifying the refrain with a particular timbre. Pitch organisation is also carefully controlled. Each refrain uses only six notes partitioned as three-note cells: eg. C-Db-D, and F#-G-G# (Refrain 1); the two other implied three-note cells of the complementary hexachordal set (D#-E-F and A-A#-B) are left unstated. Similar pitch patterning of two three-note groups is used for the other five refrains, but notionally transposed up a semitone each time so they span C#-Eb and G-A, D-E and G#-Bb, D#-F and A-B, E-Gb and Bb-C, F-G and B-Db, respectively.

There is also a distinctive disposition of intervals in the refrains. Each individual part plays only two pitch-classes, assigned so that two lines give interval-class 4, whilst the remaining line gives interval-class 6. Recognition of the refrains on each repetition rests on these three factors: distinctive intervallic physiognomy in the individual lines; identification with a particular instrumental tone colour; and a restricted harmonic palette overall. Refrain 6 differs from the preceding five by being extended and by involving other trio combinations as the pitch material gradually migrates lower and lower in register.

Oblique Pitch Organisation: Polyphony

Table 5:3 summarises the pitch material used in each of the six refrains in *Hésitant*. Each refrain uses the hexachordal pc-set 0,1,2,6,7,8, with a pattern of transposition between successive statements of the refrain. ¹⁹

Table 5:3 Pitch summary of the refrains in *Hésitant*

Section	Figs.	Instruments	Pitches	Interval	Hexachordal set 6-7 pc-set 0,1,2,6,7,8
Refrain 1	8-9	oboe 1	Ab, C	4	C, Db, D, F#, G, Ab
		oboe 2	D, F#	4	
		cor anglais	G, Db	6	
Refrain 2	13-14	oboe 1	A, C#	4	C#, D, Eb, G, G#, A
		oboe 2	G#, D	6	
		cor anglais	Eb, G	4	
Refrain 3	18-19	cor anglais	Eb, A	6	D, Eb, E, G#, A, Bb
		bassoon 1	Bb, D	4	
		bassoon 2	E, G#	4	
Refrain 4	25-26	oboe 1	B, D#	4	D#, E, F, A, Bb, B
		cor anglais	F, A	4	
		bassoon 1	Bb, E	6	
Refrain 5	31-32	oboe 1	Gb, Bb	4	E, F, Gb, Bb, B, C
		cor anglais	F, B	6	
		bassoon 1	C, E	4	
Refrain 6	47-48	oboe 1	Db, F	4	F, F#, G, B, C, Db
		oboe 2	C, F#	6	
		cor anglais	G, B	4	
48-49		trumpet 1	Bb, D	4	D, Eb, E, G#, A, Bb
		trombone 1	E, G#	4	
		tuba	A, Eb	6	
49-50		bassoon 1	C, F#	6	F, F#, G, B, C, Db
		bassoon 2	G, B	4	
		bassoon 3	Db, F	4	
50-51		trumpet 1	Gb, Bb	4	E, F, Gb, Bb, B, C
		trombone 1	B, F	6	
		trombone 2	C, E	4	
51-52		bassoon 1	Eb, G	4	C#, D, Eb, G, Ab, A
		bsn. 2/trb. 3	D, Ab	6	
		bassoon 3	A, C#	4	
52-53		trombone 1	C, E	4	E, F, Gb, Bb, B, C
		trombone 2	Gb, Bb	4	
		tuba	B, F	6	
53-54		bassoon 1	E, Bb	6	D#, E, F, A, Bb, B
		bassoon 2	F, A	4	
		bassoon 3	B, D#	4	
55-56		trombone 1	E, Bb	6	D#, E, F, A, Bb, B
		trombone 2	F, A	4	
		tuba	B, D#	4	
56-		bassoon 1	E, Bb	6	D#, E, F, A, Bb, B
		bassoon 2	D#, B	4	
		bassoon 3	F, A	4	

Oblique Pitch Organisation: Polyphony

Refrain 6 also illustrates the principle of set-complementation occurring between successive hexachords: the 6-note set used between Figs.48-49 is the complement of the preceding and succeeding hexachord. At Fig.50 there is a downward semitone transposition. Similarly, the hexachord used between Figs.51-52 complements the group which appears both before and after. At Fig.53 there is further downward semitone transposition.

Episode 3 is scored for four horns, harp, two side drums and bass drum. Gradually, the range of each line making up the five-part polyphony is extended until, collectively, they have outlined a chromatic scale ascent from G#-G, enclosing a semitone cluster within one octave. Episode 4 is for three clarinets, piano and vibraphone. Here, sub-division of the chromatic whole corresponds to the contrast of instrumental tone colours. The three clarinets each play only two notes, paired by interval-class 3 and linked by semitones: F/D; C#/E; Eb/C, (in descending order). Vibraphone and piano act together with the remaining six notes: B, A#, A, G#, G, and eventually F# after Fig.17. Episode 5 is scored for the typically Lutosławskian combination of piano, harp and celesta, with the addition of two suspended cymbals and tam-tam (Ex.5:8). Here the chromatic whole subdivides into three complementary tetrachords: E, F, F#, G (piano); G#, A, Bb, Cb (harp); C, Db, D, Eb (celesta).

Ex. 5: 8

The musical score for Ex. 5: 8 consists of four staves. The top staff is for the bass drum (batt 3), marked with *vivace* and *pp*. The second staff is for the celesta (cel.), marked with *vivace* and *mf*. The third staff is for the harp (ar.), marked with *vivace* and *mf*. The bottom staff is for the piano (pf.), marked with *vivace* and *mf*. The score includes various performance instructions such as *vivace*, *rit*, and *a tempo*, and dynamic markings like *pp*, *p*, *mp*, and *f*. Measure numbers 20 and 21 are circled at the top of the score.

Oblique Pitch Organisation: Polyphony

Episode 6 combines most of the instrumental resources already used for Episodes 2-5: 3 flutes; 3 clarinets; 3 horns; celesta, harp and piano; and 5 tom-toms. It starts at Fig.27 with nine parts building up a 9-note chord, then re-starts at Fig.28 with the addition of the three flutes, and succeeds in building a full 12-note chord by Fig.29.

Episode 7 is the longest and brings back each of the instrumental combinations already used in the previous episodes, including the brass section from the introductory fanfare, although not all at the same time. Initially (Figs.32-33), the three flutes and three clarinets combine to produce a 12-note chord, consisting mainly of thirds, in a pattern emphasising minor ninths. The flutes and clarinets occupy distinct harmonic strands, containing four notes and eight notes, respectively. The lower strand, occupied by clarinets, extends upwards from middle C in a pattern of major and minor thirds as two 'half-diminished-seventh' chords placed a minor ninth apart. The remaining four notes are given to the flutes (G#,D,F,A), stressing the minor ninth G#-A. At Fig.33, the woodwinds are replaced by four horns with harp, celesta, piano, xylophone and tubular bells. This group plays a 12-note chord, also sub-divided into patterns of four and eight notes. Extending upwards from a low G# played by both piano and harp, the interval structure of the eight-note segment contains only minor thirds and perfect fifths. It is worth noting that this pairing of intervals appears elsewhere in Lutosławski's music, also with interval class 5 used as perfect fifths rather than perfect fourths. In order to show this significant distinction, the interval-pairing can be coded as 3+7, rather than 3+5 (as already noted in Chapters Three and Four).

Further sub-divisions of the chromatic whole are applied as the instrumental groupings change, some overlapped. By Figs.42 and 43 a relatively dense texture has been built up with thirteen instrumental lines plus three percussion parts. The latter take over and continue to Fig.44 where they are abruptly discontinued by a very dense chord played *pizzicato* by the string section, consisting of forty notes producing thirty-nine adjacent semitones across a range just over three octaves. This is one of the most densely clustered chords ever used by Lutosławski. Its purpose is to signal the end of the first movement; but this does not happen

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immediately. Against a delicate harmonic background provided by celesta, harp and piano, the percussion players try to continue; another 40-note semitone cluster stops them again. They make one more attempt to continue before finally surrendering. The sixth and last refrain, unlike the previous five, covers all twelve notes by passing from one hexachordal set to its complement, thus using all four three-note cells. Various trio combinations are used, alternating double-reed woodwind timbre with brass, as the changing instrumentation assists downward transposition of refrain material: two oboes and cor anglais; trumpet, trombone and tuba; three bassoons; trumpet and two trombones transferring to two trombones and tuba; three bassoons. The bassoons overlap into the second movement.

It must be acknowledged that there are problems with the aleatory sections in the Second Symphony, including those in the first movement. Due to their considerable length (in terms of the number of notes in each part) and their duration (in terms of performing time), the degree of discrepancy which can develop is much greater than in the later works. During a performance given in London on 23 September 1981 (by the Philharmonia Orchestra, conducted by the composer), the present author observed some occasions when one instrument was left isolated at the end of a refrain, having to play again (unintentionally solo) a passage enclosed within repeat signs. After the performance, Lutosławski confirmed that this effect had not been intended at these points in the score and that his degree of compositional control over the 'least advantageous solution' was not ideal in this work. It is worth noting that, after the Second Symphony, subsequent works tend to use shorter aleatory sections which avoid such ensemble problems, and that the degree of discrepancy between different performances is more carefully limited.

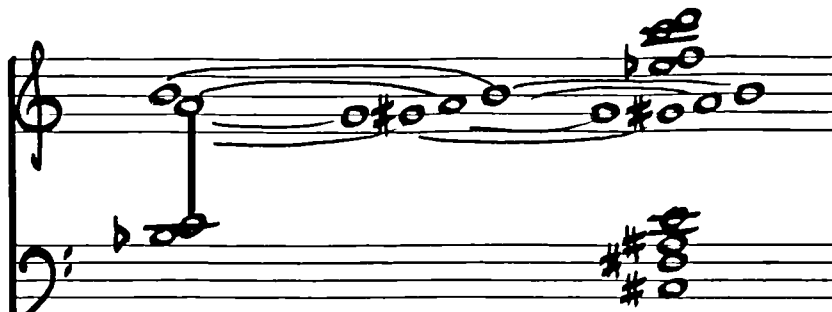
The second movement of the Second Symphony, *Direct*, provides examples of Lutosławski attempting to mitigate the problem of harmonic stasis by building aleatory sections from two distinct 12-note chords in such a way that they involve a kind of harmonic progression. The composer has explained how this is achieved (it is interesting to note that he uses the term 'modal' to describe the informal arpeggiation of a 12-note chord):

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Employment of assigned notes is only possible with a handful of performers. We saw that with a group of twelve instruments, each of which has only one note assigned to it, the melodic possibilities within each part become negligible. Accordingly, if we want to employ ensemble *ad libitum* with a large group, we must once again have recourse to a modal treatment of aggregations [i.e. 12-note pitch collections]. To avoid the static element in this case as well, we can adopt yet another procedure: for example, we can lay down for the whole section two chords with a number of notes in common. The section is divided into three stages. In the first we use the first chord, which is treated modally, that is, all the parts are constructed around its notes which are kept in the same position throughout. In the next stage we use notes common to both chords. In the third come all the notes of the second chord. The length of the middle stage must be long enough to preclude notes from the first and second chords coinciding, since this would blur the harmonic picture and introduce undesirable octaves. ²⁰

This type of gradual harmonic succession (within a lengthy aleatory section) is illustrated by the string cantando between Figs. 123-124 of *Direct*; a harmonic summary of this section is given in Ex. 5:9. The first 12-note chord is a semitone cluster with major seconds at the top and bottom. This is gradually succeeded (without any further indication or coordinated cue from the conductor to the strings) by the tetrachord G, G#, A, B as a transitional stage of notes in common between the two 12-note chords (there are other notes in common which were not used). This tetrachord is then maintained in the middle register while the second 12-note chord is completed by the addition of complementary tetrachords in the low and high registers: C#, F#, A#, E (dominant-seventh chord), and Eb, F, C, D, respectively. The next full 12-note chord occurs at Fig. 124 and is a vertically symmetrical configuration of interval-classes 2+5 (see Ex. 3:3d).

Ex. 5: 9



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A simpler case of harmonic movement within an aleatory section can be heard at the beginning of *Paroles tissées* (Ex.5:10). The first movement opens with a 12-note chord-aggregate of three complementary 4-note chords in discernable harmonic layers: F#-C#-E-A in the low strand (minor-seventh chord); C-Eb-G-Ab in the middle strand (major-seventh chord); Cb-F-Bb-D in the high strand (diminished triad with added major seventh). This widely spaced sonority converges onto a unison Cb via an *ad libitum* section in which all parts except the double bass arpeggiate through notes of the 12-note chord. The manner of conducting is worthy of note: the first bar is metred in order to set an approximate tempo for the *ad libitum* section which follows at Fig.2; the third bar is silent, but metred in order to give upbeats in tempo for the *ad libitum* section at Fig.4. The next full 12-note chord appears from Figs.16-17 in the strings. This is of the same type as at the beginning, although not so widely spaced and therefore not covering all registers.

Ex. 5: 10

The musical score for Ex. 5: 10 is a complex polyphonic arrangement. It features three distinct harmonic layers: a low strand (F#-C#-E-A), a middle strand (C-Eb-G-Ab), and a high strand (Cb-F-Bb-D). The score is divided into three sections marked with circled numbers 1, 2, and 3. Section 1 is in 3/4 time (J. ca. 84). Section 2 is marked 'ad lib.' and features a downward-pointing triangle. Section 3 is in 3/4 time. The instruments are arranged in three systems: Violins (vni) 1-10, Violas (vle) 1-3, and Cellos/Double Basses (vc. 2, 3, cb.). The notation includes various dynamics such as *dimin.*, *pp*, and *prideado*, and includes arpeggiated patterns in the lower strings.

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The set-complementation procedure already observed in the refrains and episodes of the first movement of the Second Symphony also applies to the interludes in *Livre pour orchestre*. The work is divided into four Chapitres, separated by three Intermèdes, although without any break in performance. Lutosławski's purpose in providing these interludes was to give the listener an opportunity to relax the level of concentration, thus refreshing the ear and the mind for what is to follow. He was later to apply a similar formal principle with the five-movement scheme of Partita, where the main weight falls in the first, third and fifth movements, the second and fourth being relaxed *ad libitum* interludes.

The first two Intermèdes are associated with woodwind sound: Intermède 1 has three clarinets; Intermède 2 has two clarinets and harp (Intermède 3 is for harp and piano). A similar association of interlude material with woodwind sound has already been observed in the first movement of the Second Symphony, and also occurs in the first movement of the Third Symphony. All three Intermèdes have similar distribution of pitch into four complementary and overlapping tetrachords, giving 12 pitches (with four duplications) spanning a major seventh from G-F#. Each tetrachord forms a symmetrical pattern (theoretically) of interval-classes 2-3-2, although they are actually used with horizontal interval-pairing 2+5. Intermède 1 has three rhythmic layers provided by three clarinets; clarinets 1 and 2 each have one tetrachord (B, C#, E, F; and Ab, Bb, Db, Eb, respectively), whilst clarinet 3 has two tetrachords (G, A, C, D; and Bb, C, Eb, F). Due to this pattern of 4 x 4 intervallic cells there is inevitable overlap of pitches between these rhythmic and pitch layers. Even though all twelve pitch-classes are delivered within the span of one octave, the overall result is quite different to a semitone cluster, due to the choice of intervals and the way Lutosławski sub-divides the chromatic whole in order to produce a distinctive intervallic physiognomy.

Intermède 2 retains the first two clarinets which play the same tetrachords as before; but the notes previously played by the third clarinet are now assigned to the harp (which, obviously, can only play seven pitches due to the pedal mechanism). Unlike the previous interludes, Intermède 3 develops without any break into the final Chapitre. The harp

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plays as before, but the five pitches previously played by the tetrachords given to first and second clarinets are now assigned to the piano. The developmental role in leading away from the Intermède into the main discourse of the final Chapter is performed by the piano. Example 5:11 reproduces all three interludes.

Ex. 5: 11

1^{er} INTERMÈDE

110 AD LIB.
 ∇ 20" 2)
 10 Δ /sec

1. cl. 1
 2. cl. 2
 3. ar.

2^{me} INTERMÈDE

216 AD LIB.
 ∇ 20"
 10 Δ /sec

1. cl.
 2. ar.

3^{me} INTERMÈDE et CHAPITRE FINAL

401 AD LIB.
 ∇ ca 20"
 ca 10 Δ /sec

ar.
 pf.

402
 ∇ ca 15"
 ca 10 Δ /sec

cmp.
 ar.
 pf.

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In Preludes and Fugue the application of aleatory techniques is taken further than in any of Lutosławski's previous works, with the exception of the String Quartet. It must be stressed, however, that the form itself is not subject to chance. Although it would appear that Lutosławski was making an uncharacteristic flirtation in the direction of an open form, the options for performing the Preludes (in any order) must be decided in advance by the conductor. Hence there is no freedom given to the individual players for the exercise of choice during the performance, and there is no element of chance in the resulting order of sections. Similarly, the options provided by the composer for performing shortened versions of the Fugue must be selected in advance.

The seven Preludes are composed to interlink with each other in any chosen order. Lutosławski makes this possible by overlapping all endings and beginnings of the Preludes with the same group of six parts: violins 2, 4, 6; violas 1, 3; cello 1. The pitch material is allocated in such a way that similar hexachordal set-complementation will occur in each case. Each ending is drawn from the pitch-classes G#, A, Bb, B, D, D# (pc-set 0, 1, 2, 3, 6, 7; 6-5), whereas each beginning is drawn from the remaining six notes C, C#, E, F, F#, G (also pc-set 0, 1, 2, 3, 6, 7, but by inversion).²¹ The idea of overlapping sectional divisions to achieve alternative means of passing from one formal stage to another has been a preoccupation of Lutosławski for much of his career. This principle can be observed in the treatment of the passacaglia theme (and overlapping episodes) in the finale of the Concerto for Orchestra, although without the application of pitch division in terms of set-complementation. The 'chain' principle has been more fully explored in the three works which share that generic title as well as in the finale of the Piano Concerto.

Preludes and Fugue provides numerous examples of what the composer refers to as polyphonic 'bundles'. The effect of a single horizontal line played out of synchronisation by several instruments could be achieved simply by specifying exactly the same part but without common pulsation. In practice, Lutosławski prefers to ensure that such lines will result in blurred effect by providing each player with rhythmic variants of the basic contour. In Prelude 1 there is a simple illustration of this technique between letters

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E and F, where three violins make a 'zig-zag' descent through a diminished octave from F to F# (Ex. 5: 12).

Ex. 5: 12

E *Meno mosso*
arco* ($\Gamma = ca 152$)

The score consists of four systems of three staves each, labeled vni 1, 2, and 3. The first system begins with a tempo marking 'Meno mosso' and a tempo code 'arco* ($\Gamma = ca 152$)'. The music is written in E major. The first system ends with a dynamic marking 'p'. The second system ends with a dynamic marking 'pp'. The third system ends with a dynamic marking 'ppp'. The fourth system ends with a dynamic marking 'ppp' and a 'ca 3" P.G.' marking.

*These glissandi should be played continuously, without stops at particular notes.

*Diese Glissandi sollen durchgehend gespielt werden, ohne Berücksichtigung bestimmter Töne.

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There is a different type of polyphonic bundle just after the beginning of Prelude 5 (Ex. 5:13). Between letters B and C, twelve of the strings play *pizzicato* against an *arco* line played by the double bass. The absence of notated rhythm values here should not be misinterpreted as a request for improvised rhythmic patterns.²² The reason for showing note heads without rhythmic flags in this case simply acknowledges that the duration of each sound will be determined by the plucked attack and rapid decay. This is a bundle in the sense that all the parts begin on the same note, middle C, and then expand with variants of the same line. This line is, in fact, conceived vertically as a 9-note chord emphasising internal triadic formations. Against the *pizzicato* bundle, the double bass plays a line generated by the remaining three pitches: the complementary triad F#, A#, C#.

Ex. 5: 13

B
▽

The musical score for Ex. 5:13 is divided into three sections: Violins (vni), Violas (vle), and Double Bass (vc). Each section contains two staves. The top staff of each section is marked *pizz.* and the bottom staff is marked *pp*. The *pizz.* parts consist of a series of notes starting on middle C, with some notes marked with asterisks. The *pp* parts consist of a series of notes starting on middle C, with some notes marked with asterisks. The *pp* parts are marked *pp* and *pizz.* at the beginning and *pp* at the end.

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Although the Preludes provide further examples of polyphonic bundles, it is in the Fugue that the technique is applied extensively. Mention has already been made in Chapter Four of the semitone/tritone (1+6) interval-pairing used for the various fugue subjects (see Ex. 4:26 and Table 4:9). Whereas in *Muzyka żałobna* the 12-note row of semitones and tritones was treated canonically (in metred bars) in order to produce a limited range of intervals in the vertical harmony, in the Fugue a similar type of 12-note row with the same interval-pairing is developed horizontally (in unmetred aleatory counterpoint) with apparent disregard for the vertical sonorities which will result between superimposed layers. Within each bundle of three parts the effect of combining rhythmic variants of the same linear projection of pitch material is to cause vertical simultaneity between horizontally adjacent notes. Thus the harmonic blurring of the line will tend to emphasise the same intervals of semitones and tritones, although other intervals will also occur. Because the line delivers a 12-note row it was evidently not possible here for Lutosławski to adopt the technique of set-complementation between superimposed layers. Instead, for the entries of the first fugue subject he differentiates the superimposed polyphonic strands dynamically, by reducing the level of each layer to *pianissimo* by the time the next voice bundle enters. Example 5:14 shows the third entry of the first fugue subject (*cantabile*) at Fig. 3, with the continuation of the second entry reduced in dynamic level to the status of a kind of counter-subject. There is still an aural problem for the listener when superimposed bundles occupy the same register, with consequent duplication of pitches; this is only partly mitigated by dynamic separation.

Ex. 5: 14

The musical score for Example 5:14 consists of three staves. The top staff, labeled 'vni 5.', contains three entries of a fugue subject, each marked 'cantabile' and 'f'. A box with the number '3' and an arrow points to the third entry. The middle staff, labeled 'vno 7.', contains a continuation of the second entry, marked 'f' and 'dim.'. The bottom staff, labeled 'vle 2.', contains a continuation of the second entry, marked 'f' and 'dim.'. The music is written in a single system with a common time signature.

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Later in the fugue, during the stage which exploits overlapping entries analogous to stretto in conventional fugal terms, there are examples of Lutosławski applying set-complementation between polyphonic strands. This approach can be contrasted with the fourth movement of *Jeux vénitiens* where overlapping textural blocks each contained up to twelve pitch-classes. The degree of harmonic and textural density produced in the earlier work is such that any notion of intervallic or chordal sonority is purely hypothetical and almost impossible for the listener to perceive. In the stretto sections of the fugue the degree of polyphonic complexity is such that, without such subdivision of pitch material and allocation of notes to particular strands, the overall effect would suffer the same fate as *Jeux vénitiens* and risk operating on a merely textural level.

Example 5:15 is a facsimile of page 128 in the score of the Fugue (see Table 4:9 for the position of this passage in relation to the overall structure of the work). Six polyphonic bundles are represented, although the entry points of the first three are not shown, as they appear on the previous page. Successive entries are allocated either three or four pitches, in alternation. At no point does the polyphonic overlap between three-part and four-part bundles result in more than eleven pitch-classes used at the same time (i.e. $3+4+3=10$, or $4+3+4=11$).

Violas 1-3 had entered at Fig.36 with a bundle using only three pitch-classes: C, C#, E (only the tail end of this bundle is shown on page 128). Violins 1-4 had entered at Fig.37 with a bundle containing four notes: F, F#, G, Ab. The low register is occupied by cellos 1 and 2 with the double bass; these entered at Fig.38 with three pitches, Eb, D, B. Violins 5-7 enter at Fig.39 with four notes: A, Bb, C, Db. Violas 1-3 re-enter at Fig.40 with a bundle containing E, Ab, F. Only the beginning of the sixth bundle (i.e. sixth represented on this page, not sixth overall) is shown: violins 1-4 re-enter with a four-note group emphasising interval-class 4, Bb, Gb and G, Eb. At Fig.39 there are only eleven pitch-classes present (E natural is 'missing'). At Fig.40 there will be seven pitch-classes, with the additional possibility of three more continuing in the low register. At Fig.41 there are only eleven pitch-classes.

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Ex. 5: 15

The musical score is organized into measures 38a, 39, 39a, 40, 40a, 41, and 41a. The instruments and their parts are as follows:

- vni (Violins):** Four staves (1-4) in measures 38a-40a, and four staves (1-4) in measures 41-41a. Dynamics include *pp*.
- vle (Violas):** Two staves (1-2) in measures 38a-40a, and three staves (1-3) in measures 41-41a. Dynamics include *mp* and *pp*.
- Vc. (Violas/Celli):** Two staves (1-2) in measures 38a-40a, and two staves (1-2) in measures 41-41a. Dynamics include *mp* and *pp*.
- CD. (Contrabass):** One staff in measures 38a-40a, and one staff in measures 41-41a. Dynamics include *mp* and *pp*.

Vertical lines connect the measures across the staves, indicating the polyphonic texture. Dynamic markings such as *mp* and *pp* are used throughout the score.

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The climax of the Fugue is similar to that in the String Quartet in the sense that each work reaches its dramatic highpoint within a lengthy aleatory section. The implication of this is that the climax will occur individually to each part rather than being subject to collective coordination by a downbeat from the conductor; thus the degree of rhythmic discrepancy between parts is likely to be considerable.

Lutosławski deploys a single 12-note chord, without any octave doublings, for the whole of the climactic section which occurs between Figs. 53-54. The point of arrival in each part is clearly marked by the composer with the instruction to play *tutta forza*. By the time all thirteen string players have reached this point in their individual parts, the chord sustained is a widely-spaced, vertically symmetrical construction of interval-classes 3 and 4 around the axis interval of a perfect fifth Ab-Eb (from the bottom upwards the chord reads as follows: A, F, C#, E, C, Ab, Eb, G, B, D, F#, Bb). ²³

Example 5:16 is a facsimile of page 140 in the score. The *tutta forza* indication is reached at the end of page 139, by which time all the parts are playing widely disjunct arpeggiations of the 12-note chord. Rhythmically, the effect of superimposing thirteen differentiated lines is an extension of the process of layering developed throughout the preceding stretto sections. Gesturally, each member of the ensemble conveys an image of frenetic activity so that the climactic section produces an effect of high energy level. There is a strong similarity here with the section of seven woodwind parts that plays in each statement of the refrain in the first movement of *Jeux vénitiens*. Variants of recurrent rhythmic motifs are distributed through the solo parts, with phrases separated by commas representing short caesurae.

It is difficult to imagine how else Lutosławski might have organised the pitch of this climactic passage other than by the prescription of a single, unchanging harmony. The degree of polyrhythmic complexity is so great that any more ambitious harmonic solution would no doubt have led to complete aural confusion for the listener. The broken-chord solution adopted is a simple but positive element in ensuring harmonic clarity and coherence.

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Ex. 5: 16

The musical score is organized into four systems. The first system contains seven staves for violins, labeled 'vni' on the left. The second system contains three staves for violas, labeled 'vle' on the left. The third system contains two staves for violas, labeled 'vc.' on the left. The fourth system contains one staff for a cello, labeled 'cb.' on the left. The score is written in a complex, polyphonic style with many accidentals and dynamic markings. The first violin part (staff 1) features a prominent melodic line with many sharps. The second violin part (staff 2) has a similar melodic line but with more frequent accidentals. The third violin part (staff 3) is more rhythmic. The fourth violin part (staff 4) has a melodic line with many sharps. The fifth violin part (staff 5) has a melodic line with many sharps and dynamic markings: *p*, *fff p*, and *fff*. The sixth violin part (staff 6) has a melodic line with many sharps. The seventh violin part (staff 7) has a melodic line with many sharps. The first viola part (staff 1) has a melodic line with many sharps. The second viola part (staff 2) has a melodic line with many sharps. The third viola part (staff 3) has a melodic line with many sharps. The first viola part (staff 1) has a melodic line with many sharps. The second viola part (staff 2) has a melodic line with many sharps. The cello part (staff 1) has a melodic line with many sharps.

Oblique Pitch Organisation: Polyphony

Preludes and Fugue was completed in 1972. The next two projects to which Lutosławski turned were for the Third Symphony and a concerto for Heinz Holliger. The genesis of the latter will be discussed in the following chapter, but it is important to note at this stage that there is a considerable discrepancy between the composer's original conception for even more radical chance procedures and the role that aleatory techniques were to play in the finished work. ²⁴

It has already been noted that the application of aleatory techniques tends to present considerable compositional problems. The most intractable of these is the problem of harmonic stasis. Lutosławski has evidently tried to address this issue in various ways, but the inherently static harmonic character of aleatory sections is a shortcoming that can be mitigated but not completely solved. There is also the problem of aleatory sections being perceived merely in terms of their textural and gestural effect, rather than in terms of distinctive harmonic or melodic material. Lutosławski has developed varied treatments of the harmonic dimension, and the differentiation he achieves between harmonic strands of his complex chord-aggregates must be counted as a success in addressing this particular compositional difficulty. But the problem of impoverished melody remains.

Of Lutosławski's pieces dating from the 1960s, only *Paroles tissées* displays a concern for the projection of melodic lines. This is largely due to the role of the tenor soloist, who naturally provides a concertante focus for horizontally generated material. Similarly, *Les espaces du sommeil* stands out from the other works of the 1970s. In both cases the vocal line provides a thread of continuity running through the work, against which comparatively short aleatory sections are cued by the conductor. In neither case does the composer choose to apply chance procedures to the horizontal unfolding of the solo line itself (presumably due to the textual confusion that would result). It is important to note that the rhythmic and polyphonic aspect of Lutosławski's music has undoubtedly been enriched by his pursuit of limited aleatorism, but the melodic aspect has been greatly impeded. In the works of the 1980s, however, we find the composer tackling these compositional problems and reducing the role played by aleatory techniques.

PART TWO

LUTOSŁAWSKI'S WORKS SINCE 1979

CHAPTER SIX

Epitaph and Double Concerto

The significance of *Epitaph* as a turning point in the evolution of Lutosławski's style and technique has already been discussed in Chapter One. There it was observed that this modest *pièce d'occasion* for oboe and piano also acted as a compositional study, assisting the completion of the Double Concerto for oboe and harp. The relationships between these pieces are determined not only by their close chronology, but also by their common concern for the projection of a solo oboe line. Hence it is appropriate for these works to be considered together, in the same chapter.

Whereas *Epitaph* was to prove relatively unproblematic for Lutosławski, being composed quite quickly and painlessly, this had not been the case with the Double Concerto. Three of his late works were conceived, sketched and shelved during earlier stages in his career. The idea of a Piano Concerto dates back to the late 1930s and was then abandoned, not only because of the interruption of the war but also due to Lutosławski's (self-confessed) inability to match his compositional technique to the ideas in his aural imagination (see Chapter Ten). The Third Symphony consumed many months of his time during the early 1970s, but dissatisfaction with the way the piece was evolving, particularly its harmonic density, led to its postponement. The Double Concerto was also conceived and sketched during the early 1970s before being temporarily abandoned; in this case the problem was not only one of harmonic density but a rethinking of the potential problems caused by extensive application of aleatory procedures.

Because the chronology of the pieces written at the end of the 1970s overlaps it is worthwhile at this stage clarifying the order of events. *Novelette* was composed during 1978 and the early part of 1979. At the time *Epitaph* was written, Lutosławski had already finished *Novelette* (completed on the 5th of May 1979) and had returned to work on his sketches for the Double Concerto. All three received their first performance during 1980: *Epitaph* in London on 3 January; *Novelette* in Washington on 29 January; and the Double Concerto in Luzern on 24 August.

EPITAPH

Epitaph was written for the oboist Janet Craxton, and dedicated to the memory of her husband, the composer Alan Richardson. It was first performed in a memorial concert at the Wigmore Hall in London on the 3rd of January 1980, played by Janet Craxton accompanied by Ian Brown.

If the unfortunate need for such a *pièce d'occasion* had not arisen it is unlikely that Lutosławski would have turned his attention towards chamber music at that time. Two later examples of duo combinations, *Grave* for cello and piano and *Partita* for violin and piano, were also the result of circumstance rather than design. The former is another unplanned memorial tribute, whilst the latter resulted from misunderstanding over the terms of a commission which the composer understood to be for violin and orchestra. Consequently, one cannot attribute the composition of these late duo pieces to any conscious plan on the composer's part to return to the medium of chamber music.

Although the return to small-scale chamber forces may not have been planned, it nevertheless fulfilled an identifiable need for the composer to concentrate on the basic elements of his harmonic and melodic language. Conveniently, for the purposes of the present study, *Epitaph* also provides an opportunity to examine these elements in detail and in context. Most of the musical examples given in the preceding chapters have necessarily been either narrow cross-sections through selected moments in a score or brief extracts. Comparison of harmonic and melodic features has been necessary in order to establish the principal elements of Lutosławski's musical vocabulary, but the unfortunate yet inevitable consequence has been to view these elements out of their proper context. As *Epitaph* is crucial to the identification of what now appears to be Lutosławski's late style, and therefore of central importance to the present study, it is reproduced here in full (Ex. 6:1). Being a brief score of only six pages this is feasible, whereas reproduction in full of other late works obviously is not possible. Annotations to the score, relating to the text of this chapter, are all shown in square brackets to distinguish them from the composer's own markings and instructions. To facilitate reference to each of the six pages in the score they are numbered as Examples 6:1a-f.

Epitaph

Ex. 6: 1a

EPITAFIUM na obój i fortepian
EPITAPH for oboe and piano

Alan Richardson in memoriam

[REFRAIN 1]

[melodic interval pairing
minor 2nd + minor 3rd]

WITOLD LUTOSŁAWSKI (1979)

Oboe

Pf

p *pp* *pp*

[melodic interval pairing
Major 2nd + minor 3rd]

P.G.

Ped. *

[EPISODE 1]

[melodic interval pairing
minor 2nd + tritone]

Oboe

Pf

p *p* *mf* *p*

[3-note cells]

[3-note cells]

Oboe

Pf

pp *mp* *mp* *p*

[3-note cells]

*Powtarzać do **
Repeat until **

**Przerwać natychmiast
Stop at once

Epitaph

Ex. 6: 1b

[REFRAIN 2] [exactly as Refrain 1]

2

Tempo I (♩ = ca 66)

[EPISODE 2]

Melodic interval pairing minor 2nd + tritone

♩ = ca 200

[points of correlation between foreground and background]

*Nie jest istotne, na którym dźwięku fortepianu wejdzie oboj
It is not important on which notes of the piano the oboe begins

**Zacząć razem z fortepianu
Begin together with any / of the piano

Epitaph

Ex. 6: 1c

[REFRAIN 3]

3

Tempo I (♩ = ca 66)

Musical score for Refrain 3, consisting of three staves. The top staff is a single melodic line with dynamics *mp*, *f*, *pp*, and *p*. The middle and bottom staves are a piano accompaniment with dynamics *mf* and *p*. Pedal points are indicated by 'Ped.' with horizontal lines and vertical dashed lines. A star symbol is at the end of the piano part.

[truncated]

[EPISODE 3] [interval classes 1 and 6]

♩ = ca 176

Musical score for Episode 3, consisting of three staves. The top staff has dynamics *f*, *p*, and *pp*. The middle and bottom staves are a piano accompaniment with dynamics *p*. Pedal points are indicated by 'Ped.' with horizontal lines and vertical dashed lines. 'P.G.' (pedal group) markings are present. A star symbol is at the end of the piano part.

[REFRAIN 4]

Tempo I (♩ = ca 66)

Musical score for Refrain 4, consisting of three staves. The top staff has dynamics *p* and *sub.p*. The middle and bottom staves are a piano accompaniment with dynamics *pp*. Pedal points are indicated by 'Ped.' with horizontal lines and vertical dashed lines. The word 'delicatis.' is written above the piano part, followed by 'etc.' and a dashed line. A star symbol is at the end of the piano part.

Epitaph

Ex. 6: 1d

[EPISODE 4]

4

melodic interval pairing minor 2nd + tritone

acc. poco a poco

cresc.

ca 176

ca 105

f

p

ca 184

f

f

Ped.

Ped.

Ped.

*Od tego miejsca do — partie nie są dokładnie zsynchronizowane
From here to — the parts are not to be strictly coordinated

[G-G#-A-B^b]

Epitaph

Ex. 6: 1e

5

piu f *ff*

Ped. *Ped.* *Ped.* *Ped.*

[B4] [C-D^b]

fff

eresc.

Ped. *Ped.* *Ped.* *Ped.* *Ped.* *Ped.*

[D-D*-E-F]

[CLIMAX]

p *pp* *fff*

Ped. *Ped.*

[F*-G-G*-A]

*Urwać natchmiast
Break at once

Epitaph

Ex. 6: 1f

[REFRAIN 5]

Tempo I (♩ = ca 66)

[extension of interval pairing
major 2nd + minor 3rd]

[CODA]

6

Musical score for Refrain 5 and Coda. The score is in 2/4 time and consists of two systems. The first system is marked *p* and *f ma molto cantabile*. The second system is marked *f* and *poco f*. Pedal markings are present at the end of both systems.

Musical score for interval pairing 2+5. The score is in 2/4 time and consists of two systems. The first system is marked *dim.* and the second system is marked *f dim.*. Pedal markings are present at the end of both systems.

Musical score for development of interval pairing major 2nd + minor 3rd from bar 6 to the end. The score is in 2/4 time and consists of two systems. The first system is marked *mp* and *p*. The second system is marked *mp* and *p*. The tempo is marked *tranquillo*.

Musical score for 3-note cell. The score is in 2/4 time and consists of two systems. The first system is marked *p* and *rit. al fine*. The second system is marked *rit.* and *pp*. A circled section in the second system is labeled [3-note cell].

Epitaph

Epitaph lasts only about five minutes in performance and has a simple form based on alternation of contrasting sections which can be designated as Refrains and Episodes, a procedure that has already been noted in connection with several other works by Lutosławski. Here the contrast is achieved in four ways: by alternating a refrain that (initially) does not develop with episodes that are extended and developed; by using a slow tempo for the refrain and faster tempos for the episodes; by using the same static, sustained three-note chord for most of the refrains whereas the episodes have a variety of harmonic treatments; and, most important of all, by adopting different melodic interval-pairings for the refrain and the episodes. Contrast between static repetition of the haunting refrain and dynamic development of the faster, developmental episodes determines the unfolding of the piece up to and including the climax.

Most of Lutosławski's music is clearly goal-orientated and *Epitaph* is no exception. The overall climax, which occurs towards the end of the fourth episode, may also have metaphoric significance in relation to the dedication. The passionate nature of the episodes, continually growing and developing, is brought decisively to an end as the oboe subsides from *fff* to *ppp* on its high F#. The music passes across a threshold at this point and the material used for the episodes does not reappear. What was previously static and undeveloped then grows, as the fifth refrain is extended and developed, leading into a Coda. Lutosławski has not assigned any extra-musical meanings to these musical phenomena, but there is an obvious implication for the listener that the composer is suggesting a connection with the dedication; the climax can be interpreted as the threshold into a new spiritual world.

The aspects of contrast in *Epitaph* that are achieved primarily by gestural means are mostly self-evident both from the score and performance, and therefore these elements do not require extended discussion here. But those aspects of contrast that are achieved by the specific methods of pitch organisation making up the harmonic and melodic language are less obvious, hence the following discussion will focus on the technical issues of pitch and intervallic relationships.

Epitaph

The refrain appears five times. The first two appearances are identical in every respect, including the pauses (marked 'P.G.' in the score) dividing them from the episodes which follow. The next two are truncated; the third refrain is only slightly shorter, whereas only the beginning of the fourth is stated. The psychology of this process of foreshortening phrases is simple but nonetheless effective: after the second appearance of the refrain, the literal repetition conditions the listener (albeit unconsciously) to expect that the same will happen again. Once such expectation has been established it is neither necessary nor desirable for it to be fulfilled, hence Lutosławski's deft avoidance of redundant literal repetition. There is nothing in the piece, however, which either prepares for or leads one to expect that the last appearance of the refrain will be both extended and developed. The extension takes place immediately after the climax, whilst the development takes place in the Coda and will be discussed later as part of that section.

The oboe melody of refrains 1-3 consists of two phrases, one rising through nine notes, the other falling through eight notes. The rising phrase uses interval pairing 2+3 (Major 2nd + Minor 3rd), whilst the falling phrase uses interval pairing 1+3 (Minor 2nd + Minor 3rd), except for the last interval which is a quasi-cadential perfect fourth dropping back onto repetitions of the opening F natural. These two phrases of the refrain are differentiated not only melodically but also harmonically. Whereas the rising phrase is unaccompanied, the falling phrase is supported by a three-note chord from the piano. The *forte* entry of this chord marks the dynamic highpoint of the refrain as well as its midpoint dividing the two phrases and its decay complements the dying away of the oboe line. The three notes of this chord, each with octave doubling, are in accordance with interval pairing 1+3 and thus provide a complementary background intervallic setting against which the oboe plays the second phrase, also derived from the 1+3 pairing. The relationship between this chord and the melodic line above it is in accordance with the principle of set-complementation which has been outlined in Part One. The chromatic whole of twelve pitches available to the composer is divided so that some notes are assigned to the harmonic accompaniment leaving the remainder available for the melodic line, with no duplication of notes between these planes.

Epitaph

Table 6:1 shows a structural segmentation of *Epitaph* in terms of refrains and episodes, together with the pitch organisation of each section according to the principles of melodic interval-pairing and pitch complementation (notes that are duplicated between the oboe and piano parts are underlined). As the Coda is conventionally metred, with bar lines, bar numbers are provided in the second column relating only to that section of the piece. The first two phrases of Episode 4 do not show set-complementation between the oboe and piano parts. Instead, they duplicate notes up to and including the tritone A/Eb at the bottom of Example 6:1d. Thereafter, from the introduction of continuous semiquaver movement in both the oboe and piano parts, set-complementation applies until the duplication of F# that occurs at the climax.

Table 6:1 Structural segmentation of *Epitaph*

Section	Bars	Interval pairing in the Oboe line	Pitch complementation	
			Oboe	Piano
Refrain 1		maj 2 + min 3	F, G, Bb, C, D, B, C#, E, F#	
		min 2 + min 3	(F#), D, Db, E, Eb, Bb, F	B, Ab, G
Episode 1		min 2 + tritone	Bb, A, Eb, E	B, C, C#; F#, G, G#
			D, Ab, G, Db, C, D#, A	Bb, B, E, F, F#
			Db, C, B, Bb, E	Ab, G, Eb, D Eb, E, F, F#
Refrain 2		maj 2 + min 3	F, G, Bb, C, D, B, C#, E, F#	
		min 2 + min 3	(F#), D, Db, E, Eb, Bb, F	B, Ab, G
Episode 2		min 2 + tritone	(E), F, F#, G, G#, D, A, Eb	B, C, Db
			G, Gb, F; Db, C, B	A, Eb, D, G#, A, E
			<u>E</u> - <u>D#</u> incl.	<u>D#</u> , E, <u>E</u>
Refrain 3		maj 2 + min 3	F, G, Bb, C, D, B, C#, E, F#	
		min 2 + min 3	(F#), D, Db, E, Eb, Bb	B, Ab, G
Episode 3		min 2 + tritone	A, G#	G#, F#, B, F, Bb, G, E
			D, Db, C,	E# - Db incl. (9)
			D, D#, E	
Refrain 4		maj 2 + min 3	F, G, Bb, C, D, B, C#, E	
Episode 4		min 2 + tritone	[pitch duplication initially]	
			E, Eb, D, Db, C, Gb, F	G, G#, A, A#, B
			G, Gb, F, E, Eb, D	G#, A, A#, B
			D, G#, A, D#, E, F, F#	C, B, Db
			<u>F#</u>	C, C#, D, D#, E, F, <u>F#</u> , G
			F#	G#, A
Refrain 5		maj 2 + min 3	F, G, Bb, C, D, B, C#, E	
			F#, G#, F, G, A, B, C#	D#, A#
Coda	1-5	maj 2 + perf 4/5		
	6-15	maj 2 + min 3		

Epitaph

The first phrase of the refrain bears a very close resemblance to the third phrase of the tenor solo which both opens and closes the second movement of *Paroles tissées* (Ex. 4:14), even though the interval pairing is not the same. Both oboe and tenor lines ascend through nine notes from F, to F#₂, emphasising a minor ninth overall. There are also internal intervallic similarities. Both patterns have a tetrachord for the first four notes which is reproduced by transposition in the group of notes from 6-9. In each case the first five notes are all rising, whilst the interval between the fifth and sixth notes turns downwards. In both phrases the major second intervals predominate, although to different effect. The tenor line uses the major seconds as two interlocking whole-tone scale segments, whereas the oboe line uses them in pentatonic scale patterns. The pivotal role of the fifth note is particularly emphasised in the oboe line where it is differentiated from the others as an *acciaccatura*.

When the refrain appears for the fifth time, rising sequential extension of the first phrase replaces the second phrase altogether. This radically changes the effect of the overall gesture. Instead of a balanced arc, rising then falling, *crescendo* then *diminuendo*, the line continues to rise and does not subside either in pitch or dynamic level. Absence of the second phrase also requires a change in the supporting harmony. A strong perfect fifth played directly underneath the F# produces triadic ambiguity between major and minor (treating G natural as equivalent to F##) and does not duplicate any of the notes in the melodic line which it complements.

The second phrase of the refrain retains the minor third as one half of the interval-pairing but substitutes minor for major seconds. Thus there is a partial rather than complete change in intervallic character. There is a similar link between the second phrase and each of the episodes that follow it, retaining the minor second as half of the interval-pairing. It has already been pointed out (see Ex. 4:15) that the presence of grace note inflections within this type of line establishes a connection with the *dolente* type of melody often used by Lutosławski. Although the word *dolente* does not appear in *Epitaph*, the nature of the piece and its dedication suggest that this type of melodic expression is implicit in each of the refrains and their development in the latter part of the Coda.

Epitaph

Each of the four episodes is generated by horizontal interval-pairing 1+6 (semitone/tritone) in the oboe part. This combination of intervals has already been discussed at some length in Chapter Four where attention was drawn to the association in Lutosławski's music between melodic lines of this type and a mournful, even funereal character. In addition to *Epitaph*, two other pieces by Lutosławski have dedications *in memoriam* *Muzyka żałobna* dedicated to the memory of Bartók; and *Grave, Metamorphoses* for cello and piano, dedicated to Stefan Jarociński. In each of these three pieces the interval-pairing of semitones with tritones determines the sombre quality which relates directly to the dedication. There is, therefore, a strong indication that the composer intends, in these cases at least, some kind of association between the musical material and a specific mood, if not an extra-musical meaning.

Episode 1 consists of five short phrases from the oboe, accompanied by four figurations played on the piano, with no simultaneous duplication of pitches between these separate instrumental layers. The procedure of dividing the twelve available pitch classes between the melodic line and the harmonic accompaniment is clearly demonstrated by the third oboe phrase of episode 1, together with the second piano figuration. There are seven pitches in the oboe line (G, Db, C, D, D#, A, Ab) complemented by the remaining five pitches in the piano part (Bb, B, E, F, F#). The same passage also demonstrates the way Lutosławski often further subdivides such pitch collections into harmonic and melodic treatments of semitone/tone three-note cells. Thus the top three notes of the piano pattern (E, F, F#) give one cell, the oboe line has two others (C#, D, D#; and A, Ab, G), with the remaining three notes split between the piano (Bb, B) and the oboe (C). The three-note cells in this and other passages are shown circled as sets in Ex. 6:1. This type of pitch separation by set-complementation can be found in earlier pieces, but it increasingly becomes a feature of the later works and is one of the most important techniques contributing to the development of Lutosławski's late style. It is one of the principal means by which the composer assists the listener in achieving greater aural focus, and in establishing and maintaining differentiation between the horizontal plane of melodic line and the vertical/oblique planes of harmonic/polyphonic accompaniment.

Epitaph

Episode 2 shows further application of the set-complementation principle, but also illustrates how the composer chooses to reconcile the oboe and piano parts on certain notes, usually either at the beginnings or ends of phrases. Thus the piano sustains a three-note cell (spread in minor ninths through the use of octave displacement) and the oboe begins its line in unison with the bottom note of this chord. The next phrase, marked by rapid *staccato* semiquavers in the piano part, has strict pitch separation between oboe and piano, with six pitch-classes assigned to each (piano: B, C, D \flat and F, G \flat , G; oboe: A, E \flat , D, G \sharp , B \flat , E). Thereafter, there are several points of reconciliation, first on E natural, then on F. Meanwhile the piano plays a repeated three-note cell (D \sharp , E, F) in falling major sevenths, still emphasising interval class 1. This cell is then sustained as adjacent clustered semitones (descending: F, E, D \sharp) and gradually extended to provide two cells in a dense cluster (F, E, E \flat ; D, C, D \flat) before the entry of refrain 3.

The third episode is the shortest and precedes the shortest statement of the refrain (Ex. 6:1c). The oboe line uses only interval-class 1, and there is no duplication of notes between the oboe and piano parts. The piano sustains two chords, the first containing seven pitches, the second containing nine. The first note (F) of the fourth refrain is the logical continuation of the rising chromatic line in the oboe (C \sharp , D, D \sharp , E-).

Episode 4 accelerates through to the overall climax of the piece on repetitions of the oboe's high F \sharp , played *fortissimo* (Ex. 6:1e). The oboe line determines the course of this section and evolves through two stages consisting entirely of interval-pairing 1+6. The first stage (m.m. dotted crotchet = c. 176) is supported in the piano part by a 10-note ostinato pattern of two 5-note groups. Only one pitch (E \flat) does not occur in the first stage; its arrival marks the beginning of the second stage (m.m. crotchet = c. 184). The oboe then plays three phrases of descending semiquavers, followed by one which ascends to the top F \sharp . Accompanying this the piano appears to be playing chords, as determined by the changes in pedal marking. In fact, the piano merely plays a rising chromatic scale from G (at the bottom of Ex. 6:1d) to A (at the bottom of Ex. 6:1e) distorted through the extensive use of octave doublings and octave displacement of the line. Pitch duplication is avoided throughout this chromatic line.

Epitaph

After the climax of episode 4 neither the material nor the 1+6 interval-pairing of the episodes will reappear at all during the rest of the piece. Instead, Lutosławski provides development of both types of melodic interval-pairing used in the refrain. The last page of the score, represented by Example 6:1f, is the most interesting aspect of *Epitaph* and worthy of close examination.

The upward sequential extension of refrain 5 carries the 2+3 interval-pairing further, and links it to the 2+5 pairing with which the oboe line of the Coda begins. It has already been shown that there is a change of interval-pairing in the first three statements of the refrain, linked by the presence of the minor third, and that there is a similar intervallic connection between the second phrase of the refrain and the episodes, linked by the presence of the minor second. Between refrain 5 and the Coda an intervallic link is provided by the major second. The chord played by the piano beneath the extension of refrain 5 avoids pitch duplication with any of the notes of the melodic line and also differs intervallically from the chord used to complement the second phrase of refrains 1-3. In those previous statements the piano chord contained intervals of the 1+2 pairing, thus matching the melodic pairing in the oboe line. In refrain 5, however, the second phrase of the original refrain does not reappear, hence the supporting harmony is also changed. A strong perfect fifth sonority (D#-A#) establishes a decisive intervallic contrast with the tritone sound of episode 4, and also prepares the ear of the listener for the introduction of the 2+5 interval-pairing in the melodic line of the Coda. The upper note of the piano chord, A#, is a further continuation of the rising chromatic line used in the latter part of episode 4.

The beginning of the Coda is marked by the introduction of conventionally notated metre, with bar lines and time signatures. The regular pulsation of the first five bars and their 3/4 against 6/8 *hemiola* contradictions combine to produce a rhythmic effect often used in Lutosławski's work of the 1940s and 50s. It is not an effect we associate with his music of the 1960s or 70s, but it reappears in the late works, in particular the slow, central movement of *Partita* (see Ex. 9:8).

Epitaph

Continuing smoothly and directly from the end of refrain 5, the Coda begins with the piano intoning a repetition of the same high C#. The piano then continues in two parts, playing a chromatically descending sequence of major sevenths. The harmony changes in the fifth bar to chromatically descending minor thirds, anticipating the oboe's change of melodic interval-pairing which occurs at the point marked *tranquilla*. This chromatic descent in minor thirds continues for a further six bars, until it reaches its conclusion where the two parts meet on a three-note cell (C, Bb, B) in the fourth bar before the end.

The oboe line in the first five bars of the Coda (especially the nine notes in the fifth bar, and the first note of bar six) is reminiscent of two phrases in the third movement of *Paroles tissées* (Ex. 4:33) where the tenor sings a melisma on a 12-note row of major seconds and perfect fourths/fifths. This 2+5 interval-pairing in the oboe line, however, is treated informally and does not generate a 12-note row, emphasising that here the composer is more concerned with horizontal projection of the particular combination of intervals than any serial thinking.

The last ten bars, marked *tranquillo* in the oboe part, witness the return of the melodic interval-pairing of major second and minor third (2+3) that has already been heard in each of the refrains. Here it is used to achieve a gradual and unbroken ascent, twisting and turning chromatically through 36 notes as it climbs to its final resolution on a high F natural, two octaves above the first note of the piece. The effect of this upward curve is undoubtedly to convey some kind of spiritual or psychological allusion related to the dedication.

Almost all this final passage is subject to pitch separation between melodic line and harmonic accompaniment, the only exceptions being the B natural grace note three bars before the end, and the F natural in the last bar. The latter, present at the bottom of the final chord and at the top of the oboe line, not only reconciles the harmony and melody but also enables the piece to finish on its true 'tonic'. Actual tonal resolution is avoided, however, due to the harmonic ambiguity deriving from the superimposed tonic and dominant functions of the final chord.

Epitaph

Most of the above discussion of the Coda has been on the technical level of the all-important intervallic relationships; but what really matters is that there is a Coda at all. The dramatic shaping of *Epitaph*, whereby the most significant material follows rather than precedes the climax, shows that the composer is not treating the climax as the main destination of the piece. We still travel along a musical journey to a climactic point, but then cross this threshold to find further development of material and intensification of ideas. The Third Symphony is one of the most important examples of this type of approach to formal shaping on a large scale, and there again the overall climax is a means rather than the end.

In questioning whether *Epitaph* is, in fact, the decisive turning point which Lutosławski felt it to be, one must consider the type of harmony he might have used. The harmony we find is simpler than in any of his works since the Dance Preludes of 1954; this is hardly surprising as the duo combination of a wind instrument with piano is far less suited to dense harmonic effects than an orchestral medium. Yet the change cannot be ascribed solely to the instrumental resources, because it was in the piano writing of the Five Songs (1957) that Lutosławski first introduced his 12-note chords. Thus it would have been possible for him to apply his dense harmonic language in *Epitaph* had he so wished; but there is not a single 12-note chord to be found anywhere in the piece.

Epitaph does represent a turning point marking a shift in balance between the relative importance of harmony and melody. Evidently, the purpose of this simpler harmony was to transfer not only more notes of the chromatic whole but also the focus of the listener's attention towards the melodic line. The whole of *Epitaph* is thus determined not by the harmony but by the unfolding of the oboe line through its use of contrasted interval-pairings. Interestingly, the piece would work remarkably well as an oboe solo. If *Epitaph* was Lutosławski's "first attempt at the new solution" ² then the Double Concerto was his second attempt. This does not mean that we should expect to find the same solution; the different instrumentation presented a different challenge and required different treatment. Hence we do find 12-note chords used in the *tutti* sections of the Concerto, but in the duo passages for the two soloists there are similarities with *Epitaph*.

DOUBLE CONCERTO

Lutosławski's Double Concerto for oboe, harp and chamber orchestra was the first of several pieces to be commissioned by Paul Sacher, who also undertook to engage Heinz Holliger for the first performance. Originally planned as a concerto for solo oboe, the composer agreed to Holliger's request for harp obbligato, to be played by his wife, Ursula Holliger. The close association with Sacher is a significant thread running through Lutosławski's late works. He had been one of twelve composers asked by Rostropovich to write a cello piece in honour of Sacher's seventieth birthday: the five-minute Sacher Variation, first performed in Zürich on 2 May 1976. The relationship was later to be more strongly cemented with the commission and dedication of *Chain 2* and *Interlude*. It is fitting that these works form part of the catalogue of works commissioned by Sacher, as it establishes a direct link (albeit merely one of patronage) with pieces by Bartók that Lutosławski particularly admires: Sonata for Two Pianos and Percussion; Music for Strings Percussion and Celesta; and Divertimento.

The commission dates back to the early 1970s, and he began sketching the new piece soon after completing Preludes and Fugue. Like the Third Symphony, however, the initial sketches of which also date from the same period, the path to realisation proved to be long and problematic. After interrupting work on both projects several times during the 1970s, the Double Concerto was not finally completed until 1980. Hence it only partially represents the later style, as some of the earlier material was retained. The first performance was given in Luzern on 24 August 1980.

An early, premature account of the project was given in conversation between the composer and Bálint Varga during their interviews held in Warsaw in March 1973. At that time, soon after completing Preludes and Fugue, Lutosławski was evidently still preoccupied with the ideas of interchangeability of sections applied in the composition of the seven Preludes. His outline of the concerto refers to an uncharacteristically free approach to form, whereby aleatory procedures would be applied not only to self-contained sections but also to the order of sections in the second movement. ² His difficulty with this proposed 'experiment' with indeterminacy was the main reason for the work's postponement:

Double Concerto

In this work, chance will play a greater role than in the past. Although it may sound paradoxical, the piece is also going to be highly organised, but there might be greater differences between the various interpretations. ...Perhaps one might liken it to a sculpture out of a liquid substance. This problem attracts me a great deal...The first movement is going to be a short introduction, while the last will be a series of marches - it will start with a quick march, and end with a funeral march. The experiment concerns the second movement which will consist of short episodes. Only the beginning and end will be given, within the movement the instruments will be free to choose the duration of occurrences. Primarily it will be the pauses between the occurrences and the order of the particular sections that will be free. The movement will have to be composed in such a way that any section can be played together with any other. ⁴

By the time the piece was completed, several of the above ideas had been abandoned. One might go further and suggest that it could only be completed once the aleatory experiment had been dropped. The first movement is not particularly short (ca.5 min.), neither is it merely introductory. The final movement does have a brisk march, but there is no funeral march. There is no evidence in the second movement of the original plans for interchangeable *ad libitum* sections. The Double Concerto, as we now know it, is in three self-contained movements: *Rapsodico*, *Dolente*, *Marciale e grottesco*. The instrumentation is for a chamber orchestra of two percussionists and twelve strings (7.2.2.1.), although the strings can be augmented for performance with a larger orchestra in a large hall. The modest size of ensemble was obviously determined by practical considerations of dynamic balance with the soloists, as well as to suit the Collegium Musicum; but the treatment of the strings, particularly the use of twelve solo parts to allow polyphonic delivery of 12-note chords and chord-aggregates, establishes a similarity with Preludes and Fugue.

The first movement is in two clearly defined stages: *Rapsodico* (Figs.1-17); and *Appassionato* (Figs.17-end). Although the first stage could be described as introductory, the second goes beyond this limited function. The first stage is composed and co-ordinated entirely in short, self-contained *ad libitum* sections, alternating between the full body of strings and duo sections for the two soloists. There is an abstract allusion here to the alternation between *concertino* and *ripieno* passages found in the baroque Concerto Grosso, particularly with the focus on

Double Concerto

double-reed sound accompanied by a polyphonic instrument; but although there are these similarities of sonority and performance gesture, there are no allusions of style, technique or language.

The contrast is not only one of instrumental colour and sonority, it also juxtaposes two different approaches to the treatment of 12-note harmony. Whereas the strings deliver a succession of 12-note chords, mostly containing only one or two types of interval, the duo sections partition the chromatic whole into complementary patterns of five and seven pitches, assigned to oboe and harp, respectively. Example 6:2 shows the second duo section from the first movement beginning at Fig.10. Here the oboe plays a line elaborating the 5-note set A, Bb, B, E, F, whilst the harp plays chords derived from the 7-note set-complement B#, C#, D, Eb, F#, G, Ab. ⁵ It is inevitable that the duo passages should be treated in this way as the harp is obviously not capable of producing fully chromatic chords; the constraints imposed on any composer by the pedal mechanism determine the maximum harmonic density of only seven pitch-classes at any given moment. The recurring problem of differentiation between melodic and harmonic layers, that preoccupied Lutosławski during the latter part of the 1970s, here finds a ready-made solution. The differences of tone colour and expression between the solo instruments are so great that their respective linear and accompanimental roles are self-evident.

Ex. 6: 2

The image shows a musical score for Oboe (Ob.) and Harp (ar.). The Oboe part is on a single staff with a circled '10' above it, indicating the start of the section. The Harp part is on three staves. The score is written in a key signature of two flats and a 4/4 time signature. The Oboe part features a melodic line with various ornaments and dynamics. The Harp part features chords and arpeggiated figures.

Double Concerto

Table 6:2 shows how Lutosławski subdivides the chromatic whole and assigns complementary five- and seven-note pitch collections (in most cases) to the oboe and harp, respectively, in each of the aleatory duo sections occurring in all three movements of the concerto.

Table 6:2 Set-complementation in the *ad libitum* duo sections

Figs.	Part	1	2	3	4	5	6	7	8	9	10	11	12
		C	C#	D	D#	E	F	F#	G	G#	A	A#	B
8- 9	oboe				4	5					10	11	12
	harp	1	2	3			6	7	8	9			
10-11	oboe					5	6				10	11	12
	harp	1	2	3	4			7	8	9			
12-13	oboe	1	2	3				7	8				
	harp				4	5	6			9	10	11	12
14-15	oboe					5	6				10	11	12
	harp	1	2	3	4			7	8	9			
16-17	oboe	1	2				6	7	8				
	harp			3	4	5				9	10	11	12
25-26	oboe	1	2	3					8	9			
	harp				4	5	6	7			10	11	12
28-29	oboe	-			-		-	7	8	9	10	11	
	harp	-	2	3	-	5	-						12
30-31	oboe	-				-	6	7	8				12
	harp	-	2	3	4	-				9	10	11	
32-33	oboe	-		3	4	5	6	7	8		-		
	harp	-	2							9	-	11	12
77-78	oboe	1	2				6	7			10	11	
	harp			3	4	5			8	9			12
78-79	oboe	1	2				6	7		9	10		
	harp			3	4	5			8			11	12
79-80	oboe	1	2		4	5				9	10		
	harp			3			6	7	8			11	12
80-81	oboe	1			4	5				9	10		-
	harp		2	3			6	7	8			11	-

Double Concerto

Example 6:3 shows the third aleatory section for the soloists, beginning at Fig.12. Here the oboe line is elaborated from the five-note set C, Db, D, Gb, G, whilst the harp provides the seven-note set-complement Cb, D#, E, F, G#, A, Bb. Within the oboe line certain characteristic interval patterns can be identified. For example, three-note cells of semitone/tritone, three-note cells of tone/semitone, and some use of interval-class 5 to link these recurrent figurations. As one would expect, the harp part makes use of wide-ranging broken chord patterns rather than attempting a line.

Ex. 6: 3

ob.

ar.

re k do# si#
mi b fa# sol k la b

Most of the examples of set-complementation in Table 6:2 illustrate subdivision of all twelve pitch-classes. Those from the second movement and the end of the third movement, however, contain only nine or ten pitches. Pitch complementation between melodic line and harmonic accompaniment is also used for many passages in *Partita* (although subdivided as 6 and 6, rather than 5 and 7), particularly the *ad libitum* second and fourth movements, together with the climactic *ad libitum* section in the final movement. Whereas this feature of the duo sections in the *Double Concerto* is strongly characteristic of the late style, the intervening sections for the strings, playing densely voiced 12-note chords, are more typical of the harmonic language of earlier works such as *Preludes and Fugue*.

Double Concerto

Example 6:4 is a harmonic reduction of the succession of chords used for the ritornello sections played by the strings. Within the first two of these aleatory sections, beginning at Figs.1 and 3, respectively, there is an internal progression, as discussed in Chapter Five. The first converges from a widely-spaced 12-note chord with octave doublings onto a clustered semitone chord (but with major seconds at the top and bottom); note the octave relationships between the top and bottom notes of these chords. The second section diverges from a centrally placed 8-note chord onto another widely-spaced 12-note chord with octave doublings (note that this chord has the same outer notes as the chord at Fig.1). There is a pedal G linking these chords up to and including the one at Fig.9. This rises to G# at Fig.11, and the chords at Figs.21 and 23 continue to use G# as a foundation for the harmonic sonority. There is a gradual upward migration represented by the top note of the chords: Ab, Ab, (G), G#, A, A, B, C#, D#, E (the latter by Fig.15). Towards the end of the movement there are three 12-note chord-aggregates (C-C-H, E-H-G, and G-E-H) of the sort encountered in *Mi-Parti* (see Ex.3:18). It is interesting to note the level of harmonic density present in all the chords in the first movement, as they constitute a stylistic throwback to the style of the early- and mid-1970s when the concerto was first planned. Dense harmonic textures of this sort become increasingly hard to find in the later works and tend to be reserved for moments of special emphasis rather than appearing as a standard procedure.

Ex. 6: 4

The musical score for Example 6:4 consists of two systems of music, each with a treble and bass staff. The first system contains 9 numbered chords (1-9). Chords 1, 3, 5, 7, and 9 are marked with 'DUO'. The second system contains 15 numbered chords (10-24). Chords 10, 12, 14, 16, 18, 20, 22, and 24 are marked with 'DUO'. Chords 21, 23, and 24 are marked with 'C', 'E', and 'H' respectively, indicating chord aggregates. The notation includes various accidentals and note groupings.

Double Concerto

The second stage of the first movement is marked *Appassionato* and extends from Fig. 17 to the end of the movement, concluding with an *ad libitum* duo for the two soloists acting as a kind of cadenza between Figs. 25-26. During the second stage there is an interplay between three elements: melodic foreground, polyphonic accompaniment, and harmonic interruptions. The melodic dimension is provided by the two soloists, complemented by the cellos. Accompaniment is supplied by a three-part polyphonic bundle played by the upper strings (Ex. 6:5) and generated by the horizontal projection of a 12-note row. Chordal interruptions are made by the whole string section playing three *fortissimo* 12-note chord-aggregates, just after Fig. 21, at Fig. 23, and just after Fig. 24 (see Ex. 6:4, above). It is significant to note that here the polyphonic layer is metred rather than co-ordinated *ad libitum*. Thus the composer exercises a much greater degree of control over the melodic and harmonic result than was the case, for example, with the unmetred bundles in Preludes and Fugue. Whereas the aleatory sections in the latter work were largely static, the bundle of voices delivered here, in the concerto, maintains a more coherent sense of horizontal direction. Also, the harmonic blurring of the horizontal line, which is an integral part of Lutosławski's purpose in composing polyphonic bundles, is here strictly controlled to produce a specific outcome.

Ex. 6: 5

3
4 *Appassionato*

1.2.3. *vni* *p*

4.5.6.7. *p*

vle 1.2. *p*

2 3 4

Double Concerto

Table 6:3 shows the horizontal pitch organisation in 12-note rows used to generate the three-part polyphony of string lines (violins and violas) which provides a counterpoint for the solo lines. * As this whole passage is metred (in 3/4) it is possible to calculate reference points according to bar numbers from Fig.17, although these are not printed in the score.

Table 6:3 Double Concerto, 12-note rows, Figs.17-23

<u>Bars</u>	<u>Row</u>	<u>Permutation</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
1-3	1	P ₀ (Prime)	C	E	G	B	G#	Eb	D	E#	A	F#	C#	Bb
3-5	1a	RI ₀	D	B	Gb	Eb	G	Bb	A	E	Db	F	G#	C
5-7	2	P ₁₁	B	D#	F#	A#	G	D	C#	E	G#	E#	C	A
7-9	2a	RI ₁₁	C#	Bb	F	D	Gb	A	G#	Eb	C	E	G	B
9-11	3	P ₁₀	Bb	D	F	A	Gb	C#	C	D#	G	E	B	G#
11-14	3a	RI ₁₀	C	A	E	C#	F	G#	G	D	B	Eb	F#	Bb
14-17	4	P ₉	A	Db	E	Ab	F	C	B	D	F#	Eb	A#	G
17-21	4a	RI ₉	B	Ab	D#	C	E	G	Gb	Db	Bb	D	F	A
21-25	5	P ₈	Ab	C	Eb	G	E	B	Bb	C#	F	D	A	F#
25-29	5a	RI ₈	Bb	G	D	B	Eb	F#	F	C	A	C#	E	G#
29-32	6	P ₇	G	B	D	F#	Eb	Bb	A	C	E	C#	G#	F
34-39	6a	RI ₇	A	F#	C#	A#	D	F	E	B	Ab	C	Eb	G
39-45	7	P ₆	Gb	Bb	Db	F	D	A	G#	B	D#	C	G	E
45-47	7a	RI ₆	G#	F	C	A	C#	-	-	-	-	-	-	-

Typically for Lutosławski, the row (24 notes: prime followed by its retrograde inversion - RI) is treated according to a simple method of transposition, in this case by notional successive descent in semitones (thus P₀ P₁₁ P₁₀ etc; and RI₀ RI₁₁ RI₁₀ etc). Interval patterns within the row emphasise major and minor thirds (and their inversions); thus the harmonic result of blurring the line is to sustain many different triadic formations. This is a very different procedure to the kind of 12-note rows exploited by Lutosławski in previous works, which were usually

Double Concerto

constructed from horizontal interval-pairing of either semitones/tritones (1+6) or major seconds and perfect fourths/fifths (2+5). In *Muzyka żałobna* the 12-note row was constructed from semitones and tritones expressly to preclude the sound of thirds as adjacent intervals within the vertical harmonic sonorities. Here, the deliberate emphasis on triadic patterns invests the harmony with a warmth unlike the result of comparable methods of pitch organisation in earlier works.

The second movement is subtitled *Dolente*. This Italian term has already been noted in connection with types of melodic line that have semitones paired with one other interval (either major second or minor third) and in which *acciaccature* are usually a prominent expressive feature (see Ex. 4:15). After a 12-note chord-aggregate (chord types G-E-F) played *pizzicato* by the strings, the oboe enters on a high B \flat , leading into this movement's first *ad libitum* section for the two soloists (Ex. 6:6). *Dolente* appears here in the oboe part, showing the composer associates the character of the movement with this type of sad, lamenting melodic line. His consistent association of *dolente* expression with lines emphasising grace notes may suggest an allusion to the effect of vocal sighs, or even sobs. The set-complementation of this section has already been shown in Table 6:2. Whereas the duo *ad libitum* sections in the first movement subdivide all twelve pitches, here only nine are partitioned: four for the harp (B, C \sharp , D, E); five for the oboe (F \sharp , G, G \sharp , A, B \flat) in a narrow band of pitch initially twisting chromatically from B \flat -F \sharp .

Ex. 6: 6

The image shows a musical score for two instruments: oboe (ob.) and harp (ar.). The oboe part is written on a single staff with a treble clef and a key signature of one flat. It begins at measure 28, marked with a circled '28' and a downward-pointing triangle. The tempo/mood is indicated as 'f cantabile e dolente'. The oboe part consists of a series of eighth notes, some with grace notes, and ends with a fermata. The harp part is written on a grand staff (treble and bass clefs) and begins at measure 28, also marked with a circled '28' and a downward-pointing triangle. It features a series of chords and single notes, with dynamics marked as 'f', 'mf', and 'p'. A dashed line connects the two parts, indicating they are part of the same section. The harp part ends at measure 28a, marked with a circled '28a' and a downward-pointing triangle. The harp part concludes with a wavy line, suggesting a tremolo or a sustained chord.

Double Concerto

The violins then re-enter at Fig. 29, still *pizzicato*, in a polyphonic bundle of seven parts that arpeggiate a 9-note chord (Ex. 6:7). Starting on open-string G, they ascend through an intervallic pattern of interval-classes 3 and 5 until reaching a semitone at the top of the harmony. The B natural at the top prepares for the entry of the oboe at Fig. 30 on the same pitch. It is interesting to observe how Lutosławski ensures rhythmic differentiation between the parts, including accelerandos and ritardandos, to produce a subtly flexible texture from such a simple gestural idea. This brief example illustrates the interconnections between the vertical, horizontal and oblique planes discussed in Part One. The vertical planning is self-evident, and yet the harmony is not stated as a block chord. The horizontal projection of the harmony has a distinct intervallic character and provides each player with a line that is interesting and rewarding to play (much more so than if the chord notes were assigned one to a part). The oblique relationship produced by canonic treatment of the line enriches both the melodic and harmonic dimensions. Static harmony of this sort would still prove problematic if applied throughout the work, but here in the slow movement a mood of harmonic repose is not unsuitable.

Ex. 6: 7

29

The musical score consists of seven staves, labeled Vni 1 through Vni 7. Each staff contains a melodic line of eighth notes, with some notes beamed together. The music is written in a key with one sharp (F#) and a common time signature. Above the staves, there are various performance markings: *pizz.* (pizzicato), *pp* (pianissimo), *mf* (mezzo-forte), *acc.* (accelerando), and *rit.* (ritardando). Some staves also include *arco* (arco) markings. The overall texture is polyphonic, with each part moving in parallel motion, creating a shimmering, arpeggiated effect.

Double Concerto

The 12-note row delivered in the *appassionato* section of the first movement reappears in the slow movement from Fig. 31. Whereas most of this movement is subject to *ad libitum* co-ordination, the passages generated by the row are metred for the two soloists in order to ensure a specific contrapuntal outcome (see also the passage between Figs. 34-35).

Although the second movement has a loosely episodic structure, alternating between duo sections for the soloists and harmonic textures provided by the *pizzicato* strings, there is an underlying move towards a climactic point (of the movement rather than the whole work). This highpoint is reached at Fig. 47 where the oboe reaches a dynamic level of *fortissimo* in its top register, accompanied by 7-note chords from the harp. The build-up towards this point begins at Fig. 35 (Ex. 6:8), and in this central section of the movement there is a foretaste of the style that Lutosławski was later to develop in the slow movement of *Chain 2*. Against *pianissimo* harmonic accompaniment provided by tremolos on the vibraphone and marimba, the solo parts develop rhapsodic motifs using the complementary pitches (compare with *Chain 2*, the section beginning at Fig. 64). It is significant to note that this strong connection with *Chain 2* occurs in the slow movement rather than the outer movements. This would suggest that Lutosławski, after rejecting his original experimental plan, began to incorporate ideas that were more relevant to his current thinking in the early 1980s. The outer movements, on the other hand, display features that closely correspond with his original scheme of the early 1970s. Thus the concerto is stylistically a hybrid of earlier and later elements.

Ex. 6: 8

The musical score for Ex. 6: 8 consists of four staves. The top staff is for Oboe (ob.), the second for Harp (Ar.), the third for Vibraphone (vibr. senza motore), and the fourth for Marimba (marimba). Above the staves, measures 35, 36, 37, and 38 are indicated with circled numbers and downward-pointing triangles. The Oboe part begins in measure 35 with a melodic line marked *pp*. The Harp part includes the instruction "re# lab mi# fa#" and has a dynamic marking of *pp*. The Vibraphone and Marimba parts provide a harmonic accompaniment with tremolos, also marked with *pp*.

Double Concerto

After the climactic point of the movement has been reached at Fig. 47, the dynamic level suddenly drops to *pianissimo* at the entry of a widely-spaced chord-aggregate played *arco* (for the first time in this movement) by the strings. The oboe doubles the E at the top of the chord. There follows a progression of seven chords to end the movement, gradually reducing the harmonic density from twelve notes to six (Ex. 6:9). The movement from one chord to another is achieved by a network of glissandi, crossing the individual parts against each other. Similar effects of harmonic progression by string glissandi can be found in the central section of *Les espaces du sommeil* (see Ex. 3:19) and at the end of the first movement of *Chain 2* (see Ex. 9:17, Figs. 15-22). Here there are separate patterns of progression establishing linear coherence between the top and bottom notes of the chords. At the top there is a descending chromatic line of interval-pairing 1+2, including twisting three-note cells. At the bottom, there is a progression of interval-pairing 4+5 that migrates upwards as the number of notes is successively reduced. Distinct four-note chord types can be identified in the first two chord-aggregates; thereafter the reduction of notes causes the harmonic strands to change. In the first chord there are twelve notes but only eleven pitch-classes (E is doubled and F is omitted, presumably due the composer's desire to position a natural E harmonic at the top of the chord); hence the aggregate contains chord types B-H-C rather than the C-H-C construction identified in Chapter Three (see Ex. 3:13). The sonority of this chord-aggregate is very similar to the C-H-C configurations that define the long-range harmonic organisation of *Chain 2* (see Ex. 9:28).

Ex. 6: 9 (48)

49

The musical score for Ex. 6:9 consists of three staves: Soprano (top), Alto (middle), and Bass (bottom). The progression is as follows:

- Staff 1 (Soprano):** Interval pairing 1+2. Chords: B, \sharp (with \flat), K, \sharp , \sharp (with \flat), \sharp (with \flat), \sharp (with \flat).
- Staff 2 (Alto):** Chords: H, \sharp , F, \sharp , \sharp (with \flat), \sharp (with \flat), \sharp (with \flat).
- Staff 3 (Bass):** Interval pairing 4+5. Chords: C, \sharp , E, \sharp , \sharp (with \flat), \sharp (with \flat), \sharp (with \flat).

Annotations include "Nb. E doubled, F omitted" in the first measure and various accidentals (\sharp , \flat) throughout the progression.

Double Concerto

In the final movement, the *Marciale e grottesco* subtitle refers to two separate elements, one march-like and the other grotesque. The main march theme (Ex. 6:13a) provides an excellent illustration of melodic interval-pairing of semitones and tones. Although the character of this theme is not at all grotesque, there is certainly an element of parody; comic but not ironic. It would be misleading to suggest that an allusion to Shostakovich marches was intended, but one can hear more than a hint of Prokofiev. Lutosławski had been impressed by the music of Prokofiev in his youth, and the influence can be detected in the march theme (significantly, also for the oboe) that occurs in the slow movement of the First Symphony (from Fig. 45, bar 37). This theme in turn bears a strong similarity to the tenth of the Canons for Two Clarinets composed during the war as contrapuntal studies for the symphony. Example 6:10 shows extracts from three of these unpublished pieces (reproduced here for the first time).⁷ The second and third illustrate Lutosławski's developing preoccupation with melodic lines generated by interlocking tone/semitone cells; the march theme of the Double Concerto is projected horizontally by the same pattern of intervals.

Ex. 6: 10

a) *Allarghetto grazioso* CANONS FOR TWO CLARINETS no. 10



(see also Symphony no. 1, II, Fig. 45, from bar 37)

b) *Adagio* CANONS FOR THREE CLARINETS no. 5 (30. X. 1944)



c) *Allegro* CANONS FOR THREE CLARINETS no. 6 (31. X. 1944)



Double Concerto

The third movement unfolds through five formal stages: the first corresponds to the initial march (to Fig.60), played by oboe and orchestra whilst the harp remains silent; the second (Figs.60-67) is played by the harp and orchestra while the oboe falls silent; the third (Figs.67-77) is played by both soloists with orchestra, and here a grotesque character is represented by the oboe and strings. Although Heinz Holliger is well known for his virtuosity in avant-garde techniques of oboe playing, Lutosławski gives little opportunity in this concerto for the display of special effects. The only passages which use such techniques, presumably in deference to Holliger, are in the first movement just before Fig.23, and in the grotesque gestures of the finale between Figs.68-74 conveyed by squeaky sounds produced by multiphonic fingerings. In conversation with Varga, Lutosławski explained his attitude to these unusual sounds:

I do not like the new sounds that oboists, in the wake of Holliger, go in for. Sometimes I use them because they can be very funny, but they are too restricted to inspire me. I have been inspired by Holliger's wonderful sense of style and musicality in the Mozart oboe concerto. •

Structural subdivisions in the final movement are signalled by variants of a recurring device: a chord (or descending chord progression) of superimposed major thirds. Example 6:11 shows the third appearance of this ritornello idea where it marks the beginning of the third formal stage (the *grotesco* section). Previous appearances are at the beginning of the movement and at Fig.60. The next appearance makes a hesitant entrance after Fig.81, then leads to the recapitulation of the march theme at Fig.84. Its final appearance at Fig.89 begins the coda.

Ex. 6: 11

The musical score for Example 6:11 is presented in three systems. The first system is for Violin I (vni), marked 'a3' and 'a2 ff'. The second system is for Violin II (vle), marked 'a2' and 'sub. ff'. The third system is for Violoncello (Vc.), marked '1.' and '2.'. The tempo is indicated as $J = 72$. The key signature is one sharp (F#). The score is divided into three measures. The first measure is marked 'a3' and 'a2 ff'. The second measure is marked 'a2' and 'sub. ff'. The third measure is marked '1.' and '2.'.

Double Concerto

The Double Concerto is unusual in its treatment of the Climax, which is not marked by a fortissimo chord played by the whole orchestra, as one would normally expect with Lutosławski, but by a series of *ad libitum* sections (Figs. 77-81) for the two soloists without the orchestra, which assume the function of a cadenza. His decision to exclude the orchestra from this significant part of the movement was undoubtedly influenced by the potential problems of balance presented by the harp, which would have been unable to compete with a collective orchestral climax. The division of pitch material in these aleatory sections has already been shown above in Table 6:2. Although both the notation of self-contained boxes and the principle of set-complementation had been applied many years before in the String Quartet (see Ex. 5:6 and Table 5:2), the style of these sections has more in common with the aleatory movements in *Partita*. This is due to the division of pitch-classes between only two rather than four instruments, with the consequence that the complementary pitch collections in each part are able to generate more interesting and varied patterns (Ex. 6:12). The problem of impoverished melody in aleatory sections of earlier works has already been discussed in Chapter Five. In the climactic cadenza passages of the Double Concerto and the equivalent climactic section of *Partita* we find a solution which Lutosławski was not able to achieve in the Quartet.

Ex. 6: 12

79

ob.

ar.

The image displays two musical staves. The upper staff is for the Oboe (ob.) and the lower staff is for the Harp (ar.). The Oboe part features a melodic line with various dynamics and articulations, including slurs and accents. The Harp part consists of chords and arpeggiated figures, with dynamics ranging from *fp* to *ff*. The notation includes clefs, time signatures, and various musical symbols such as slurs, accents, and dynamic markings.

Double Concerto

After the climax, the march theme is recapitulated at Fig.84, this time played by both the oboe and harp together with the xylophone. The canonic relationship between the oboe and xylophone is intentionally humorous, due to a stretto overlap that sounds as if one of the players has miscounted or entered in the wrong bar. The composer suggests that this canonic chase is akin to one person walking behind another so close as to catch the toes on the other's heels. Example 6:13 shows both the initial appearance of the march theme from the beginning of the movement (Ex.6:13a) and the first thirteen bars of the oboe/xylophone stretto (Ex.6:13b). In the former the line is generated by the horizontal pairing of semitones and tones, in the latter the extension of the line involves the pairing of semitones with tritones. At the point where the strings re-enter with another progression of chords in superimposed, descending major thirds (Fig.89), the Coda begins. This adds a layer of harmonic accompaniment to the continued development of the march. The overlap of material is typical of Lutosławski in avoiding a simple, sectional division. Such overlapping strands can be found in earlier works, but they become a feature of the 'chain' form pieces of the 1980s.

Ex. 6: 13

a) 50

ob. *p* *poco sf* *poco sf* *poco sf*

xyl. *mf* *p*

b) 84

ob. *p* *mf* *p*

xyl. *mf* *p*

85

etc.

Double Concerto

Table 6:4 shows the 12-note rows which perform the leading role in the pitch organisation of the four-note chords in the Coda.⁹ These rows occur in the top line of the strings and are governed by melodic interval-pairing 2+5 (major second and perfect fourth/fifth). The chords below each of these notes of the row also emphasise interval classes 2 and 5, all producing either pc set 0,2,4,7 or pc set 0,2,5,7.

Table 6:4 Double Concerto, 12-note rows after Fig.90

Bars	Permutation	1	2	3	4	5	6	7	8	9	10	11	12
227-	P ₀ (Prime)	F#	E	A	B	Db	Ab	Eb	F	Bb	C	G	D
	(interval-classes:	2	5	2	2	5	5	2	5	2	5	5)
233-	I ₁₀	E	F#	C#	B	A	D	G	F	C	Bb	Eb	G#
	(interval-classes:	2	5	2	2	5	5	2	5	2	5	5)
239-	P ₇	C#	B	E	F#	G#	Eb	Bb	C	F	[G]	[D]	[A]
	(interval-classes:	2	5	2	2	5	5	2	5	-	-	-)

The penultimate note of this horizontal projection of the 12-note row is a C natural, repeated at the top of the string chords for eight bars between Figs.93 and 94. When this moves up a fourth to F at Fig.95, the aural sensation of dominant pedal followed by tonic is strong, even though the rest of the harmonic progression is not governed by tonal functions. There is a separate dominant/tonic effect in the bottom part at Fig.95, as a repeated B natural drops to E. Thus there is a conflict established between two rival tonics; this struggle is resolved in the last three bars with an angular alternation of F and E that decides in favour of the latter. Had this ending emphasised D# to E, the leading-note to tonic progression would have been explicit; yet the falling semitone (minor ninth) is no less cadential. Example 6:14 is a harmonic reduction of the coda, from Fig.89 to the end of the work. The bar lines have been preserved in order to facilitate cross-reference to the score, although the rhythmic durations are not shown. The four-note chords from Fig.90 are shown with their octave doublings as these are an integral part of the sonority.

Double Concerto

Ex. 6: 14

Musical score for Double Concerto, Ex. 6: 14, measures 89-96. The score is written for two staves (treble and bass clef) and includes various musical notations such as notes, rests, and dynamic markings. Measure 90 includes a '2+5' marking above the treble staff. Measure 95 features a circled measure number '95' and a circled '8' below the bass staff. Measure 96 includes a circled measure number '96'. The score concludes with a double bar line and a dashed line extending from the end of the bass staff.

Double Concerto

The chord occurring at Fig.95 is a combination of interval-classes 3+7, with octave doublings, and with the contradictory F natural at the top. Similar harmonic sonorities built from the superimposition of perfect fifths (as opposed to perfect fourths) and minor thirds can be observed in *Partita*, *Chain 2*, *Chain 3*, the Piano Concerto and *Chantefleurs et Chantefables*. The technique of using a 12-note row of interval-pairing 2+5 to generate a fast moving chord progression also appears in the first movement of *Partita* (see Ex.9:6) where the interval combination also governs the vertical intervallic relationships. In both cases there is strong sense of linear coherence, but the Double Concerto example is particularly remarkable in the way that it extends up to and governs the aural effect of the final cadence.

The Double Concerto is more typical of Lutosławski's style than *Epitaph* for the simple reason that it incorporates all the aleatory contrapuntal techniques which one associates with his mature works. Yet there are strong connections between them, particularly in the use of set-complementation between the oboe and its partner, whether piano or harp. His decision to simplify his harmony by assigning fewer (than twelve) pitches to accompanimental patterns has enabled him to compose more genuinely melodic lines that are supported and complemented, rather than swamped.

If *Epitaph* was a turning point in the development of Lutosławski's harmonic language, then the Double Concerto was no less important a turning point in his attitude towards aleatory procedures. Instead of pursuing a policy of radical experimentation he has consolidated his *ad libitum* techniques, reduced the number and length of such sections, and has improved the notation of conducted cues to exercise more careful control. This move towards consolidation is a positive feature of Lutosławski's later works and need not be interpreted either as a sign of retrenchment or a loss of creative impetus. It comes as a welcome indication that he has addressed the compositional problems presented by the element of chance.

CHAPTER SEVEN

Grave and Symphony no.3

Stefan Jarociński (b.1912), the distinguished Polish musicologist and critic, died on 8 May 1980.¹ Outside Poland, he is known principally for his writings on French music, particularly Debussy.² In 1967 he had published the first book devoted exclusively to Lutosławski and his music, including a biographical essay, a selection of the composer's writings, a list of compositions, and a bibliography.³ As a contemporary of Lutosławski, a close friend of long standing, and a constant champion of his work, it was natural that Jarociński would be honoured with a musical tribute: *Grave*, Metamorphoses for cello and piano, was first performed at a memorial concert held in the National Museum in Warsaw on 22 April 1981.

In the book for which he will best be remembered by English readers, *Debussy, Impressionism and Symbolism*, Jarociński declared his great admiration for the music of *Pelléas and Mélisande* :

Debussy's vocal music and the lyric drama of *Pelléas et Mélisande*, its crowning glory, mark the beginning of the process of renovating the language of music and its symbolism.⁴

In his discussion of Debussy's treatment of harmony, timbre and sonority, Jarociński identified and described a principle of subdividing the sound texture into different layers. His account of this feature could be taken as a description of the same type of procedure in Lutosławski's music. In view of the long and close friendship between the two men, it is difficult to say whether Lutosławski's approach to the subdivision of his sound language into complementary harmonic strands influenced Jarociński's analysis and criticism of Debussy, or vice versa.

Not so long ago the notion of verticalism was always associated with harmony; and yet these two conceptions are not identical since, according to the sound-material employed, vertical structures will always be homogeneous and compact, and will either dissolve into a single sonorous stratum or, on the contrary, will be heterogeneous or 'polygeneous', and it will then be possible to distinguish two or three strata (purely sonorous, and having nothing in common with melodic lines). The horizontal structures will not necessarily present a melodic design, and the vertical ones may be decomposed or divided into separate sonorous levels, while their harmonic links may be weakened. ⁵

Grave

Jarociński's observation of harmonic strata in the music of Debussy would serve as an accurate description of the disposition of harmonic strands in Lutosławski's 12-note chord-aggregates. His attempt to distinguish between the concepts of verticalism and harmony underlines an important difference between traditionally based chord structures and more complex aggregates of harmonic timbre. This distinction is significant to the present study, particularly the inter-relationships of pitch organisation in the vertical, horizontal and oblique planes. Jarociński recognised, for example, that '...the horizontal structures will not necessarily present a melodic design...', an observation that touches on the oblique, polyphonic dimension of horizontally projected harmonies that are planned vertically.

In deference to Jarociński's admiration for *Pelléas*, Lutosławski begins his memorial tribute with an obvious quotation from the opening forest scene: the rising four-note phrase D-A-G-A. The interval combination of perfect fifth and major second is then taken as the point of departure for Lutosławski to develop a line using the 2+5 interval-pairing. Thus the quotation is incorporated naturally into Lutosławski's own compositional technique and does not sound out of place surrounded by his non-tonal, musical language. The *Pelléas* forest motif also reappears at the end of *Grave*.

In common with the 12-note row of *Muzyka żałobna* and the episodes of *Epitaph*, both works also bearing dedications *in memoriam*, *Grave* also makes extensive use of the 1+6 melodic interval-pairing of semitones with tritones. Symbolism may be found in the way the piece then unfolds in continual alternation of the 2+5 and 1+6 interval-pairings: the former representing an allusive reference to Jarociński's life-long study of Debussy; the latter expressing a mood of mourning. The principle of strong intervallic contrast between these two pairings has already been discussed in Chapter Four (see Table 4:3). Table 7:1 shows how *Grave* is structured through the alternation of interval-pairings in the cello line. Although bar numbers are not printed in the score, the piece is metred up to and including its moment of climax, hence the bar numberings form the clearest and most precise method of reference.

Grave

Table 7:1 *Grave*: intervallic scheme of cello line

<u>Bars</u>	<u>Interval-pairings</u>	<u>Bars</u>	<u>Interval-pairings</u>
1- 2	2 + 5	72- 75	2 + 5
3- 11	1 + 6	76- 88	1 + 6
12- 15 & 16	2 + 5	89- 94	2 + 5
17- 22	1 + 6	95-101	1 + 6
23- 24 & 26	2 + 5	101-105	2 + 5
27- 29	1 + 6	106-112	1 + 6
30- 35	2 + 5	113-120	2 + 5
36- 38	1 + 6	121-125	1 + 6
39- 41	2 + 5	126-130	2 + 5
41- 50	1 + 6	131-136	1 + 6
51- 57	2 + 5	137-150	2 + 5
58- 71	1 + 6	150-	1 + 6
		Fig. 11	2 + 5

Epitaph was also composed as a horizontal line with sectional subdivisions identified with differentiated interval-pairings. In both *Epitaph* and *Grave* there is a strong resulting degree of linear coherence, with the interesting consequence that both pieces are musically convincing even when played as unaccompanied, solo lines. The form-building potential of changing interval-pairings has already been noted in Chapter Four in connection with the Cello Concerto (see Table 4:7) and Preludes and Fugue (see Table 4:9), particularly in the latter which relies on this procedure to supply a non-tonal substitute for the structural properties of key change. *Grave* operates in a similar way, although the aural effect is of modal rather than tonal transformation.

Lutosławski adopts a consistent method of passing from one interval-pairing to the other. He uses the three-note interval cell of interlocking semitone/tone, the general significance of which has already been discussed in Chapter Four. Here he applies the cell in such a way that it acts as a link from the major seconds or minor sevenths of the 2+5 pairing into the semitones or major sevenths of the 1+6 pairing. This means that almost every 2+5 section (or phrase) both begins and ends with interval-class 2, whilst every 1+6 section (or phrase) both begins and ends with interval-class 1. The exception is at the very beginning, where the *Pelléas* quotation begins with a rising perfect fifth. The application of three-note 1+2 cells in this transitional way ensures that at no point do we hear interval-classes 5 and 6 immediately adjacent within the horizontal line.

Grave

Example 7:1 shows the first page of the cello part. Annotations indicate the changes of interval-pairing, and the semitone/tone cells linking phrases or sections have been circled (note that the 1+2 interval cell is also used in some cases within a 2+5 section, but not in 1+6 sections, to link phrases, either directly or across a rest or rests)

Ex. 7: 1

The musical score for cello part, Example 7:1, is presented in bass clef with a key signature of one flat (B-flat) and a time signature of 3/4. The score is annotated with interval-pairing brackets and circled semitone/tone cells. The annotations include:

- 2+5**: Brackets indicating a pair of intervals (e.g., a 2nd and a 5th) spanning multiple notes.
- 1+6**: Brackets indicating a pair of intervals (e.g., a 1st and a 6th) spanning multiple notes.
- Circled cells**: Semitone or tone intervals that link phrases or sections, often occurring across rests.

Performance markings and dynamics include:

- mf* (mezzo-forte)
- sub. pp* (subito pianissimo)
- mp* (mezzo-piano)
- pp* (pianissimo)
- mp* (mezzo-piano)
- mp* (mezzo-piano)
- poco f* (poco forte)
- sub. p* (subito piano)
- ppp* (pianississimo)
- poco f* (poco forte)
- f* (forte)
- p* (piano)
- mp* (mezzo-piano)
- poco f* (poco forte)
- sub. f* (subito forte)

Measure numbers are indicated at the beginning of each line: 1, 5, 11, 16, 21, 24, 28, 32, 36, 38. Circled numbers 1, 2, and 3 are placed above measures 16, 24, and 36 respectively. A tempo marking *♩=ca 152* is present above the first staff.

Grave

Unlike *Muzyka żalobna* the pitch is not organised by reference to a 12-note row. Instead, the cello line plays the leading role, supported and complemented by the piano. A strong connection exists between the two works, however, in their use of the term 'Metamorphoses'. Although in *Muzyka żalobna* this subtitle for the second section of the form signifies successive transformations of the 12-note row, there is an equally important transformation of rhythm. The Metamorphoses of *Grave* may be interpreted in this rhythmic sense, operating independently from the continual alternation of melodic interval-pairings (ie. the moments of rhythmic and intervallic change do not necessarily occur together). The overall effect of rhythmic quickening in *Grave* is not the result of any system, but follows a general, and informal principle of shortening the rhythmic durations: minims; crotchets; triplet crotchets; quavers; triplet quavers; semiquavers.

The piece drives towards its culmination in bars 146-50, with the cello reaching its highpoint at Fig.10. Significantly, in view of Lutosławski's conscious decision to simplify his harmony, the collective climax is not marked by a 12-note chord. The climax here has more in common with the equivalent moment in the slow movement of *Partita* than with the harmonically dense climactic *ad libitum* sections typical of the orchestral works. Although the cello reaches a highpoint at Fig.10 on Bb, the focal pitch here is D natural, the axis point of the augmented triad Bb-D-F# reached in bar 148. The significance of D as a reference pitch for the piece is obviously determined by the *Pelléas* quotation.

Ex. 7: 2

The musical score for Ex. 7: 2 consists of two systems. The top system is for the cello, starting at measure 146 with a 3/2 time signature and a circled '10'. It includes a 'sostenuto' marking and ends with a 3/2 time signature. The bottom system is for the piano, starting with a 'fff' dynamic and a '5' fingering. It includes a 'poco accel.' marking and a circled '8'. The piano part features complex harmonic structures with many accidentals (sharps, flats, naturals) and a '5' fingering. The score concludes with a final chord structure indicated by a bracket and a '5' fingering.

Grave

After the climax, there is no extended Coda as in *Epitaph*. Thus there is no comparable sense of crossing a threshold into an after-life. The cello returns, unaccompanied, to the semitone/tritone and then (at Fig. 11) to the opening four notes of the quotation from *Pelléas* (D-A-G-A), but this time played *fortissimo*. The final, haunting harmony is provided by set-complementation between the cello and piano: a 9-note chord sustained by the piano (emphasising a Debussian dominant-seventh sonority in the low register, Db, Ab, F, B/Cb); against which the cello plays the three remaining, complementary pitches, D-G-A, in an expansive ascent from *fortissimo* low D to a high A harmonic, *pianissimo* (note the way the final A harmonic of the cello combined with the piano upper register to complete a diminished-seventh chord).

Ex. 7: 3

The first system of musical notation shows a cello line in the upper staff and a piano line in the lower staff. The cello line begins with a *pp* dynamic marking and features a series of notes with slurs and accents, including some with a '5' above them. The dynamic shifts to *sub.f* towards the end of the system. The piano line consists of a single sustained chord in the bass register.

The second system is marked *Lento* with a tempo of $\text{♩} = \text{ca } 40$. The cello line starts with a circled '11' above the first note and a *p* dynamic marking. The notes are spaced out, with a *pp* dynamic marking appearing later. The piano line continues with the same sustained chord as in the first system.

The third system features a piano line in the upper staff and a cello line in the lower staff. The piano line begins with a *rit.* and *dimin.* instruction, followed by notes with a *p* dynamic marking. The cello line has notes with a *pp* dynamic marking and a *rit.* instruction. The system concludes with a *ppp* dynamic marking and a final chord. A double bar line is present at the end of the system.

rit. _____ *

Grave

Stylistically, *Grave* looks towards the harmonic language and rhythmic gestures of *Partita* and *Chain 2*, rather than looking back, for example to the Cello Concerto. Whereas the latter treats the concertante relationship between soloist and orchestra as one of conflict and confrontation, *Grave* and the late violin works illustrate the composer's more recent preoccupation with the projection of melodic line in a solo part against harmonic accompaniment. In 1982, Lutosławski produced a concertante version of *Grave* for cello and thirteen strings (4.3.3.2.1), first performed that summer in Paris. Concentration on concertante works has already been observed as a preoccupation of Lutosławski's later years; the second version of *Grave* thus consolidated a pattern established by the Double Concerto, and which continues through *Partita*, *Chain 2* and the Piano Concerto. The parallel with *Partita* is particularly strong: both originated as duos and were subsequently orchestrated. The keyboard writing of *Grave*, in particular, anticipates the tactile pianistic figurations of *Partita*, whilst the use of continual contrast between the 2+5 and 1+6 interval-pairings as a form-building principle anticipates the *soave/rude* contrast exploited in the second movement of *Chain 2*. The orchestral version of *Grave* highlights the absence of aleatory sections: it is the first ensemble piece since the Postludes to make no use whatsoever of chance procedures affecting the polyphonic relationships between the individual parts. There are some moments that exploit simple effects of harmonic blurring, but instead of resulting from aleatory polyphonic bundles they are strictly metred, and the outcome is precisely determined by specific notation in all the string parts. The gradual metamorphosis achieved by rhythmic quickening is more akin to the second section of *Muzyka żałobna* than any works post-1961. At the same time there is a rapid delivery of pitches in the unfolding of the solo line (and in the set-complementation of the harmonic accompaniment) that would be severely impeded by the operation of aleatory technique.

Grave, like *Epitaph*, provided Lutosławski with an opportunity to test his current (more linear) thinking in a compositional study, written quickly in response to an unplanned, external event. At the same time he was still working on the Third Symphony, a piece that was to display some features of the late style, but also declares its origin in the previous decade.

SYMPHONY no.3

The Third Symphony was a long time in the making. On 15 June 1974, Lutosławski visited the Northwestern University in Chicago in order to receive a doctorate *honoris causa*. Taking advantage of that occasion, the Chicago Symphony Orchestra management renewed an earlier request for an orchestral work. Initially, he envisaged a one-movement symphony in four sections: Invocation, Cycle of Etudes, Toccata, and Hymn; ⁶ but this plan was eventually rejected and he temporarily abandoned the project. Work was resumed in 1977, after the completion of *Mi-Parti*, and extensive sketches made, only to be set aside once more as still unsatisfactory. When he finally returned to the Symphony in 1981 he began afresh, although some material from the earlier sketches was incorporated into the new scheme. It was finally completed on 31 January 1983, eight and a half years after it was commissioned. In an interview published in 1983 he clarified the sequence of events:

First of all, I wrote the main movement which I then scrapped, disqualified it completely, and began a second time. In the meantime, all manner of facts came up that tore me away from this work. The first, in October 1973, was the Warsaw appearance of Dietrich Fischer-Dieskau and Sviatoslav Richter. After the concert Fischer-Dieskau asked me whether I had ever written a composition for a baritone and orchestra. That is I came to compose *Les espaces du sommeil*. Work on that composition took up nearly the whole of 1975. That means I had stopped work on the Symphony. The same thing happened again in 1979 when I sat down to write the short symphonic piece *Novelette* at the request of Rostropovich. ...Only after I wrote a new main movement of the Symphony, and this came after the completion of *Novelette*, did work begin to go much more briskly. The sketch, or rather the entire music of the Symphony, was composed by March 1982. After that I sat down to work on the score...It is this work on the final form of the score that occupies so much time and prolongs the period of its composition. ⁷

Intensive work on the Third Symphony thus covered the years 1981-83, a time of acute political tension and social upheaval in Poland corresponding to the imposition of martial law that followed the liberalised atmosphere of 1980-81 (i.e. the fifteen months of legalised Solidarity activity). It would be misleading, however, to suggest that the symphony reflected in any way the events or psychological trauma of this period in Polish history. There are no signs of any extra-musical references, even of the ironic or coded kind that one finds in the work of Shostakovich.

Symphony no. 3

Lutosławski's programme note is typically brief, confining itself to a general commentary on the main features of the form. This programme note, widely used since the première in Chicago, can be confusing for those analysing the score. It would appear that some words had been left out, presumably due to an incorrect proof-reading at some stage. The confusing points (shown below in italics) can now be clarified by making some corrections, approved by the composer, restoring the sense intended: ¹

The work consists of two movements, preceded by a short introduction and followed by an epilogue and a coda. It is played without a break. The first movement comprises three episodes, of which the first is the fastest, the second slower and the third is the slowest. The basic tempo remains the same and the differences of speed are realised by the lengthening of the rhythmical units. *Each episode is followed by a short, slow refrain and the last refrain leads to the short, slow intermezzo. It is based on a group of toccata-like themes contrasting with a rather singing one:* a series of differentiated tuttis leads to the climax of the whole work. Then comes the last movement, based on a slow singing theme and a sequence of rather dramatic recitatives played by the string group. A short and very fast coda ends the piece.

The italicised passage should read as follows:

Each episode is followed by a short, slow refrain. The third episode leads to a short, slow intermezzo which in turn is followed by the third and last refrain. The second, main movement is based on a group of toccata-like themes contrasting with a rather singing one: ...

It is most revealing, and of considerable importance to an understanding of Lutosławski's conception of the form, that he regards the Third Symphony as comprising two movements (as opposed to three or four), to which are added an Introduction, Epilogue and Coda. This approach to the dramatic shaping of large-scale symphonic form establishes a clear connection with the two-movement scheme of the Second Symphony, particularly as there is no break between movements in either case. It also serves to emphasise the way in which the Third Symphony grew from his experience of other treatments of this formal archetype in various works of the 1950s and 70s:

Comparison may be conjectured with my earlier works, because the [Third] Symphony is indeed one of the series of compositions in which I have applied the principle of the two-movement form, even though... there are more movements here. Nevertheless, it is a two-movement piece

Symphony no. 3

in the sense that the main movement is preceded by an introductory movement... while the last movement is actually an epilogue. The principle of the preliminary and the main movements was applied in my other compositions, such as String Quartet, Symphony no.2, and to a certain degree also in *Novelette, Livre pour orchestre* and *Jeux vénitiens*.⁹

Table 7:2 summarises the overall formal scheme, taking into account the composer's remarks and the authorised revision to his programme note. The column on instrumentation is not comprehensive, but it serves to indicate certain recurrent instrumental tone colours; for example, the association of woodwind sound with the refrains, and the association of the brass section with a repeated-note motif.

Table 7:2 Third Symphony: formal scheme

Fig.	Movement	Section	Material	Instrumentation
0	Intro.		repeated-note motif	w. wind, brass, timp, xyl
0- 2	"	1st start	static, fragmentary	
2	"		repeated-note motif	brass, timp, xyl,
2- 3	"	2nd start	static, fragmentary	
3	"		repeated-note motif	brass, timp
3-10	<u>First</u>	Episode 1	fastest of 3	
10-11	"	Refrain 1	slow, static, unmetred	woodwind trio
11	"		repeated-note motif	brass, timp
11-18	"	Episode 2	slower than 1	cor anglais solo, <i>et al.</i>
18-19	"	Refrain 2	slow, static, unmetred	woodwind trio
19	"		repeated-note motif	brass, timp
19-24	"	Episode 3	slowest of 3	
24-30	"	Intermezzo	<i>Adagio</i>	sustained strings
30-31	"	Refrain 3	slow, static, unmetred	woodwind quartet
31-	<u>Main</u>		repeated-note motifs	4 horns <i>et al.</i>
32-36	"	Stage 1	toccata-like theme	strings, harp
-37	"		repeated-note motifs	w. wind, horns, bell
37-40	"	Stage 2	cantando theme (1)	strings, etc
40-	"		repeated-note motifs	brass, strings
40-73	"	Stage 3	toccata-like themes	
73-76	"		cantando theme (1a)	strings then tutti
76-77	"		prepares for climax	tutti
77-80	"	Climax	abortive	tutti
80-81	"	Aftermath	static harmony	strings, brass
81-84	"		rising unison recit.	strings
84-89	Epilogue		<i>cantando theme (2)</i>	<i>upper strings</i>
89-92	"		<i>recit.</i>	string layers
92-93	"	Refrain 4	slow, static	woodwind quartet
93-97	"		extended chord	builds to tutti
97-99	"		cantando theme (2a)	tutti
99-102	Coda		very fast	percussion, with tutti
102	"		cadence	tutti
	"		repeated-note motif	tutti

Symphony no. 3

The listener's attention is immediately arrested at the opening by a *fortissimo*, repeated-note signal on octave Es (a group of four quavers) played by clarinets, trumpets, trombones, tuba, timpano and xylophone. Against a background of *pianissimo* strings, sustaining E across five octaves, superimposed layers of woodwind and horns are then introduced, quietly babbling in self-contained harmonic strands making up a 12-note chord-aggregate comprising chords K-F-J : F, C, Ab, B (two flutes and piccolo); A, F#, C#, D (three oboes); and G, Eb, Bb, E (four horns). After gradually subsiding in pitch level from Fig. 1, the *fortissimo* repeated-note motif (still on octave Es) reappears at Fig. 2 to signal a second beginning. This is short-lived, however, and is abruptly terminated by the repeated-note signal at its third appearance, marking the beginning of the first movement. As the movement progresses, the signal (always on octave Es) returns to mark the beginning of each of the three episodes.

Lutosławski had previously used the psychological device of a repeated-note signal in the String Quartet. There it is also associated with a fixed reference pitch (octave Cs). It is in this area of musical perception that he has learned much from the psychological structuring of Haydn and Beethoven symphonies and string quartets. Apart from the obvious function of punctuating and delineating formal subsections, the repeated-note signal in both the String Quartet and the Third Symphony acts as a tension building agent whose next appearance the listener will inevitably anticipate, albeit unconsciously. It is an example of what Lutosławski refers to as a 'once only convention'.¹⁰ The use of a fixed reference pitch not only to begin the work and to mark the sectional subdivisions, but also to act as the final cadential gesture, inevitably raises the issue of whether there is any tonal principle operating across the symphony. The same question can also be posed in the case of the Second Symphony (although less convincingly) due to the strong Eb/F beginning of the first movement and the same notes used at the end of the second movement. In the Third Symphony there is a strong sense of aural focus provided by the repeated E signal, but it lacks (initially) the context of other tonal features that could invest it with the functional properties of a tonic. Such features occur later, and will be discussed in relation to the attempted climax, the epilogue and the coda.

Symphony no. 3

Comparison with the Second Symphony can be made, not only with the overall two-movement structure, but also with the first movement scheme of episodes alternating with refrains. The first episode, the fastest of the three, makes much use of motoric triplet patterns derived from the ubiquitous three-note cell of adjacent semitones. These patterns are used to convey an impression of bustling activity, but controlled in dynamic in order to maintain a subdued, low profile. There are no melodic features in the first episode, which instead emphasises contrasted instrumental tone colourings with harmonic and rhythmic texture. Not until the first refrain (Ex. 7: 4) do we encounter a sense of line, albeit severely restricted to a narrow band of six pitches in a three-part polyphonic bundle. The two clarinets play variants of the same group of five notes between Ab and C, while the bassoon has an overlapping group of five notes between G and Cb. For this first appearance of the refrain the lines are entirely conjunct and do not move outside the band of assigned pitches.

Ex. 7: 4

The image shows two systems of musical notation for three woodwind parts: Clarinet 1 (cl. 1), Clarinet 2 (cl. 2), and Bassoon (fg.). The first system shows the beginning of the refrain, with the first two staves (cl. 1 and cl. 2) starting with a piano (p) dynamic and the bassoon (fg.) starting with a piano (p) dynamic. The second system shows the continuation of the refrain, with the first two staves (cl. 1 and cl. 2) starting with an accent (acc) and the bassoon (fg.) starting with an accent (acc). The notation includes various rhythmic values, including triplets, and articulation markings such as 'acc' and 'a ts'.

Each of the refrains is played by a combination of woodwind instruments: two clarinets and bassoon (refrains 1 and 2); oboe, piccolo clarinet, bass clarinet and bassoon (refrain 3); cor anglais, two clarinets and bassoon (refrain 4). There is an obvious similarity of approach with the woodwind refrains in the first movement of the Second Symphony (see Ex. 5: 7), although without pitch division between strands. Here, the horizontal lines within each refrain are generated by three-note cells within the 1+2 interval-pairing of semitones and tones.

Symphony no. 3

Refrain 2 (Ex. 7:5) develops slightly beyond the severely restricted harmonic and melodic stasis of refrain 1. Again the two clarinets play as a pair, but this time they are differentiated from the bassoon more clearly. The clarinets begin on F and then gradually migrate downwards, falling through semitone/tone cells, while the bassoon begins on F#, a diminished octave lower, and then migrates upwards through similar three-note cells. The three parts eventually converge onto cells that overlap: the last cell at the end of their respective repeated sections are G#,A,A# (bassoon), A#,B,C (clarinet 1), and B,C,Db (clarinet 2). In the process of converging they cover all twelve pitch-classes within the minimum span of just less than an octave.

Ex. 7: 5

Episode 2, occurring between refrains 1 and 2, begins by projecting a more genuinely melodic line (*cor anglais*) against a sustained harmonic accompaniment (Ex. 7:6). Whereas in the early stages of *Mi-Parti* the melodic lines had used the same notes as the harmonic background, merely doubling the 12-note chords, here the horns have chords of only four notes, enabling the *cor anglais* to develop an expressive line without duplicating notes of the harmony, except where reconciliation is desired, for example at phrase endings. There are also clustered chords sustained by the harp and piano, but these are background textural effects that colour rather than overwhelm the horns and *cor anglais*. The latter develops a line from only three types of interval, initially: semitones, minor thirds and tritones. There are no comparable melodic lines in the Second Symphony.

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Ex. 7: 6

The score for Ex. 7: 6 is divided into several parts. At the top right, the main melodic line is in 2/2 time, marked 'Stesso movimento (d = ca 108)'. It features a sequence of time signatures: 2/2, 5/2, 4/2, and 2/2. The dynamics range from *mp espressivo* to *p*. A circled '11' with a downward arrow indicates a specific measure.

On the left side, there are vertical staves for woodwinds and brass:

- Cl.** (Clarinets): Part 1 starts at measure 1, Part 2 starts at measure 2. A note at measure 2 is marked 'muta in cl. picc. (1/2 ms)'. A dashed line indicates a connection to the trumpet part.
- fg. 1** (Flute): Starts at measure 1.
- trbe 1.2** (Trumpets): Starts at measure 1, marked *ff*. A note at measure 2 is marked 'a 2 senza sord.'.
- trbni** (Trumpets): Starts at measure 1, marked *ff*. A note at measure 2 is marked 'a 2'.
- tuba**: Starts at measure 1, marked *ff*. A note at measure 2 is marked 'a 2'.
- tmp.** (Timpani): Starts at measure 1, marked *ff*. A note at measure 2 is marked 'a 2'.

In the middle, the **cor.** (Cor Anglais) section consists of four staves (1-4) playing chords. The notes are mostly sustained.

At the bottom, the **ar.** (Arpeggiated strings) and **pf.** (Piano) parts are shown. The arpeggiated strings have markings for *gliss.* and *mp*. The piano part includes *ped.* (pedal) markings.

Set-complementation is used here between the cor anglais and horns, although giving a total of less than twelve pitches. Despite the fact that they overlap in the middle register, absence of pitch duplication and difference in instrumental tone colour ensure that they can be perceived as distinct but interlocking strands. The chords played by the horns in this example correspond to the four-note configurations discussed in Chapter Three (see Ex. 3: 10): C, E, G, B (major-seventh chord, type F); D, F, Ab, Db (diminished triad with added fourth, type J); and C, D#, E, G (major/minor chord, type H). They are complemented, respectively, by three, five and four notes in the phrases played by the cor anglais. Example 7: 6 is shown including the fourth appearance of the repeated-note signal that marks the point of structural subdivision.

Symphony no. 3

After the second refrain has been abruptly terminated by the fifth statement of the repeated-note signal, *pizzicato* strings begin the third episode, the slowest of the three (Ex. 7:7). The initial cello line is generated by the 3+4 interval-pairing of minor and major thirds, a combination which has not been exploited as often as some of the other pairings used by Lutosławski. As the other strings enter, they build two alternating 6-note chords that complement each other to give the effect of a vertically symmetrical 12-note chord of superimposed minor and major thirds around the axis of a perfect fourth.

Ex. 7: 7

$\frac{3}{2}$ *Stesso movimento*
(d. ca 108)

ar. I. *mf* *lv.* *poco f* *lv.*

VC. *pp* *mf* *pp* *pp* *poco f* *pp* *pp* *mp*

ar. I. *mf*

VC. *pp* *mf* *pp* *pp* *poco f* *pp* *pp* *mp*

6 VC. *arco* *pp* *arco* *pp* *arco* *pp* *arco* *pp*

VC. *pp* *mf* *pp* *pp* *poco f* *pp* *pp* *mp*

vle *pizz.* *p* *pizz.* *p* *pizz.* *p*

cb *pizz.* *pp*

vni I *pizz.* *f* *pp* *pp* *mf* *pp*

vni II *pizz.* *f* *pp* *pp* *mf* *pp*

vle *pizz.* *f* *pp* *pp* *mf* *pp*

vc. *f* *mp*

cb *f* *mf*

vni I *pp* *mf* *pp* *pp* *mf* *pp*

vni II *pp* *mf* *pp* *pp* *mf* *pp*

vle *pp* *mf* *pp* *pp* *mf* *pp*

vc. *pp* *mf* *pp* *pp* *mf* *pp*

cb *pp* *mf* *pp* *pp* *mf* *pp*

Symphony no.3

Episode 3 is brief and leads to a slow Intermezzo (Figs.24-30) that is strongly reminiscent of the slow, central section of *Les espaces du sommeil*. Flutes play against a quiet, sustained harmonic accompaniment in the strings, which then evaporate in rising glissandi. The pitch organisation of set-complementation between flutes and strings is also similar to that used in *Les espaces*. For example, after Fig.24 the flutes play a three-part polyphonic bundle occupying a strand of 'local harmony' in the upper register (two three-note cells: B,C,C#; and Eb,E,F), with the complementary hexachord provided by the combination of strings and celesta.

The move from the intermezzo into the third refrain does not occur by clear-cut sectional division but by gradual transition. After Fig.26, initially the first oboe, then the first flute enter with linear fragments (made from falling three-note cells) that lead into refrain 3 (Ex.7:8). Unlike the previous refrains, the set-complementation principle is used here with all twelve notes to generate a network of four polyphonic lines, each of which is assigned only three notes according to the following subdivision in three-note cells:

oboe 1	:	C#	D	Eb							
piccolo clarinet:						G	Ab	A			
bass clarinet	:				E	F	Gb				
bassoon	:								A#	B	C

Whereas refrain 1 was completely static, and refrain 2 involved the migration of converging lines within an octave, this time, the parts migrate across a very wide span, beginning with the piccolo clarinet in its highest register and the bassoon on its lowest note. The bass clarinet and bassoon then migrate upwards and the upper parts gradually move downwards until they meet in the middle register prior to the end of the movement at Fig.31. Throughout the third refrain, the melodic pairing of interval-classes 1+2 is made more expansive by using the intervallic cells in a disjunct way, with octave displacement introducing the angular intervals of minor- and major-sevenths. Thus there is a pattern of transformation operating between the successive appearances of the refrain, working independently from the episodic contrast of the intervening sections.

Symphony no. 3

Ex. 7: 8

Lento (♩ = ca 54)

cl. picc. *mf* *p*

ob. I *mf* *p* *acc* *a tt*

cl. basso *mf* *p*

fg. I *mf* *p*

xyl. *f*

mar. *f*

pf. *f*

(senza Ped)

ob. I *acc* *a tt* *p*

cl. picc. *acc* *a tt* *p*

cl. basso *acc* *a tt* *p*

fg. I *acc* *a tt* *p*

ob. I *acc* *a tt* *p*

cl. picc. *acc* *a tt* *p*

cl. basso *acc* *a tt* *p*

fg. I *acc* *a tt* *p*

ob. I *p*

cl. picc. *acc* *a tt* *p*

cl. basso *acc* *a tt* *p*

fg. I *acc* *a tt* *p*

Symphony no. 3

Refrain 3 is interrupted by the return of the repeated-note signal (for the sixth time), played in unison, *fortissimo*, by four horns and tubular bell. At this stage the signal is extended, prompting an expectation for music that will be developmental and directional rather than episodic and introductory. Whereas the ensemble co-ordination of the first movement was mostly in aleatory *ad libitum* sections, and hence predominantly static in character, the second movement is largely conducted in metre, and thus invested with greater pace. Interplay between melodic and accompanimental elements is central to the unfolding of the main movement. For example, from Fig.32, the strings develop a polyphonic texture generated by motoric figurations (derived from disjunct treatment of three-note cells) in horizontal layers that gradually detach themselves from the supporting harmony. As successive groups of string parts transfer from the sustained harmonic background, so the balance between chord and line shifts in favour of the latter. By Fig.35 the strings have developed into a quasi-fugato section of metred contrapuntal lines without any supporting harmony (Ex.7:9). Nothing comparable can be found in the Second Symphony, which uses the strings for dense harmonic and aleatory polyphonic textures with almost no melodic features. *Mi-Parti* represents an evolutionary mid-point between these different stages in Lutosławski's development.

Ex. 7: 9

Musical score for Ex. 7: 9, featuring Violin I (div.), Violin II, and Viola parts. The score shows a complex polyphonic texture with motoric figurations. Performance markings include "non spiccato" for the violin parts.

Musical score for Ex. 7: 9, continuing from the previous section. It features Violin I (div.), Violin II, and Viola parts. Performance markings include "cresc." for the violin parts, and "non spiccato" and "cresc." for the viola part.

Symphony no. 3

The pitch organisation of the passage shown in Example 7:9 is subject to set-complementation in a similar way to refrain 3, but with a radically different effect due to the rapid delivery of notes made possible by metred control of the ensemble. By this stage each of the polyphonic layers has lifted three pitches from the previous supporting harmony with the result that each occupies a distinct harmonic, melodic and polyphonic strand. As the passage extends beyond Fig. 36 the parts gradually migrate upwards, with the individual three-note cells transposed by semitones. Table 7:3 sets out the subdivision into complementary three-note sets and shows how these progress.

Table 7:3 Symphony no. 3: set-complementation Figs. 35-36

violins I (upper) :	G#, A, Bb	A, Bb, B	A#, B, C	B, C, Db	etc..
violins I (lower) :	F, Gb, G	F#, G, Ab	G, Ab, A	G#, A, A#	etc..
violins II :	D, Eb, E	D#, E, F	E, F, Gb	F, F#, G	etc..
violas :	B, C, C#	C, C#, D	C#, D, Eb	D, D#, E	etc..

It has already been observed in Part One that the application of Lutosławski's *ad libitum* technique of aleatory counterpoint invariably leads to a greater or (slightly) lesser degree of harmonic stasis. Here one can observe the composer addressing that problem and deciding in favour of metred co-ordination in order to control the polyphonic delivery of pitches both vertically (maintaining the set-complementation) and horizontally (maintaining a rate of harmonic change as the polyphony migrates higher). This is an effective solution to the compositional problem that beset much of his work during the 1960s.

Having established the repeated-note signal as a 'once-only convention' operating on the listener's conscious and unconscious powers of recall and anticipation, at Fig. 40 Lutosławski exercises his prerogative to deliver it in an unexpected way. Here it marks a new stage in the form of the second movement by retaining the rhythmic motif of four repeated quavers, but abandoning the reference pitch of E in favour of an 8-note chord, mostly of superimposed minor and major thirds. The effect this time is to signal impending growth and development.

Symphony no.3

Whereas the second movement of the Second Symphony was clear in its purpose, driving inexorably towards the overall culmination of the work, the second movement of the Third Symphony contains so many different thematic ingredients that its progress is comparatively disjointed, its progress often impeded. It evolves through several different stages of what the composer has described, loosely, as 'toccata-like themes'; but the overall effect is episodic rather than directional. It is worth noting that it was this movement of his original scheme that had given him so much trouble, and which had caused him to shelve the project several times. There are two toccata-like themes for the strings based on different treatments of semitone/tone cells: Figs.32-36, and 47-49. Between these comes a brief attempt at an expansive cantando line, *molto espressivo* (Figs.37-8), but at this point in the movement he seems deliberately to prevent the strings from developing a fully extended, cantabile line (reserving this effect for the epilogue). There are other features of interest, for example a 'singing' passage for the brass section after Fig. 45 (Ex. 7: 10) that anticipates the *cantabile* playing required of them in *Chain 3*.

Ex. 7: 10

The musical score for Ex. 7: 10 is a complex orchestral passage. It features a string section with four staves (1-4) and a brass section with four staves (1-4). The string staves are labeled 'fg.2' and 'trbe'. The brass staves are labeled 'cor.', 'trbni', and 'tuba'. The score includes various musical notations such as notes, rests, and dynamic markings (p, f, mf, ff). There are also some handwritten annotations and markings above the staves, including vertical lines and arrows. The overall texture is dense and rhythmic, with a focus on the brass section's 'singing' passage.

Symphony no. 3

In Example 7:10 the brass play in canonic groups (determined by their registral compass) that build a dense network of superimposed polyphonic bundles, the sum of which produces eleven notes with octave doublings. Only one pitch-class is omitted from the brass polyphony (E) and this is present in a separate bundle of woodwind parts that arpeggiate the top register of the 12-note chord.

From Fig. 49, the strings build up a metred, polyphonic texture of rhythmically differentiated layers, the lowest of which is generated by a 12-note row of interval-pairing 2+5. Soon, however, the aural effect of the interval-pairing is obscured by the superimposition of additional layers derived from various treatments of three-note cells. As more and more parts are added in the section leading to Fig. 62 the motoric cells that were used in episode 1 of the first movement return to predominate, and assist the process of developing rhythmic energy. The densely textural 'differentiated tutti's that follow are reminiscent of the composer's earlier style of the Second Symphony, *Livre pour orchestre* and the Cello Concerto, in moving towards the climax by a succession of gestural effects rather than by a process of linear projection such as occurs later in *Chain 3*. The earlier string cantando reappears at Fig. 73, developing into a startlingly triadic theme at Fig. 75 that gradually moves upwards by sequential shifts until reaching the putative climax at Fig. 76 (Ex. 7:11a).

The reappearance of the *cantando* at Fig. 73 is significant in that it marks the end of the textural treatment of harmony in the preceding tutti, and begins a strong, underlying bass-line progression that defines the progress of the symphony from this point until the end of the work. It has already been noted that the repeated-note signal marking formal divisions earlier in the piece was identified with the fixed-pitch reference of E. The long-range bass 'progression' from Fig. 73 not only invests E with some of the functional properties of a tonic, but also emphasises the dominant implications of B. The bass note of the chord at Fig. 73 is Bb, this changes enharmonically to A# and rises a semitone to B at Fig. 75, three bars before the climactic point at Fig. 76. B remains as the lowest pitch from Figs. 76-77 as the abortive climax is reached and quickly passed (note that there is a crucial misprint in the score at Fig. 76; the low D shown in the double

Symphony no. 3

bass part is incorrect and should be read as low B, sounding together with the bassoons, double bassoons, tuba and timpani). Later, as the epilogue continues from Figs. 93-96, E returns as the strong root of a an extended 12-note chord (emphasising interval-class 5). From Fig. 97-99 there is a descending bass-line: E, Eb, Db, C, that omits the expected, implied dominant and continues to G then low E. The 'missing' note then appears at the bottom of the chord at Fig. 99 that constitutes the coda. The final, quasi-cadential progression at Fig. 102 has a 8-note chord-aggregate (of superimposed diminished-seventh chords; the four-note set-complement occurs horizontally in the trumpet parts) with D# as the lowest note rising to E in the last bar. Any aural sense of leading-note rising to tonic is greatly obscured by the surrounding harmony, so the tonal effect is perhaps more easily seen in the score than it is heard in performance. But the dominant-tonic relationship of B-E in the harmonic planning of the final stages of the Third Symphony is clear.

The climax is radically different to the equivalent moment occurring in earlier orchestral works, both in treatment and in function. Most pieces of the 1960s and 70s reached a point of collective *ad libitum* on a *fortissimo* 12-note chord, or 12-note chord-aggregate. In this case the climactic harmony is far less dense. It is metred and immediately moves beyond the highpoint. It is attempted rather than achieved. The position of this abortive climax in relation to the overall duration explains its different function: it occurs comparatively early in the form, at only 7/10. This compares with *Mi-Parti* (0.67), and the String Quartet (0.72), both of which use their respective highpoints as a threshold which is crossed in order to reach new material of significance (see Table 2:2); in the case of *Mi-Parti* this new material is a long, ascending string cantando; in the String Quartet it is a long, *funèbre* section, functioning as the Epilogue. *Muzyka żałobna* and *Paroles tissées* both reach the climax even earlier, and each has a fourth movement of dramatic significance. Whereas the Second Symphony undertakes a journey whose destination is the climax, the Third Symphony treats this part of the form as transitional rather than concluding. Whereas the Second Symphony represents a steep and direct ascent to a high peak, from which the ground falls sharply away, the Third represents a more gradual ascent to a plateau which reveals the true summit beyond.

Symphony no. 3

After a brief post-climactic transition, the final element of the main movement is an intense unison string line, curling chromatically to rise through horizontal interval-pairing of semitones and tones (Ex.7:11b), separated by dense *ad libitum* passages on a 4-note chord of minor thirds and perfect fifth (F,G#,D#,F#). This is also transitional, leading to the epilogue at Fig.84, where the most memorable thematic idea of the work is exposed. The upper strings continue in unison to play a broad cantando theme (Ex.7:11c) characterised primarily by the melodic interval-pairing of minor thirds and perfect fifths (3+7, rather than 3+5, as perfect fourths are not used in this case).

Ex. 7: 11

The image shows a handwritten musical score for Ex. 7: 11, consisting of several staves of music. The notation is in treble clef with a 3/2 time signature. The score is divided into sections labeled a), b), and c).

- Staff a):** Measures 75 to 76. It shows a unison string line with notes: F#4, G#4, A4, Bb4, B4, C5, D5, E5, F#5, G#5, A5, B5, C6, D6, E6, F#6, G#6, A6, B6, C7. The notes are marked with 'x' and 'f'.
- Staff b):** Measures 81 to 83. It shows a divided passage (divisi) with notes: F#4, G#4, A4, Bb4, B4, C5, D5, E5, F#5, G#5, A5, B5, C6, D6, E6, F#6, G#6, A6, B6, C7. The notes are marked with 'x' and 'f'. Above the staff, there are markings: "divisi", "lento", and "unite".
- Staff c):** Measures 84 to 86. It shows a cantando theme. Measure 84 is marked "p cantando". Measure 85 is marked "f". Measure 86 is marked "f". Above the staff, there are markings: "divisi", "unite", "divisi", and "unite".

The score ends with a measure marked "86" and "(after Fig. 87)".

Symphony no. 3

Dramatically the most potent idea of the Third Symphony is the continuation of this cantando theme between Figs. 86-7 (Ex. 7:12; also see Ex. 4:35 for a breakdown of the interval combinations in this line). Several features of this passage contribute to its powerful and memorable effect: *senza espressione* sonority of sustained open-string G, which eventually rises to G# after Fig. 87; tension created by the minor ninth between low F# (timpani) and G (strings); melodic ascent in phrases that grow by adding only minor thirds and perfect fifths; transfer of notes from the developing line into thickening string harmony as notes are sustained, building a sonority of superimposed diminished triads; non-adjacent melodic emphasis on minor ninths; further intensification when the descending line (still interval-classes 3+7) eventually arrives at its destination on G#. The psychology of this passage is masterly, particularly the inevitability of arrival on G#, as a consequence of the melodic sequence just prior to Fig. 86 (see Ex. 7:11c). This type of melodic line, combining only minor thirds and perfect fifths, is a feature shared by the Third Symphony and *Chain 2*. Harmonically, the same combination of intervals also appears in chords strongly featured in *Partita* and *Chain 3*.

Ex. 7: 12

(86)

(87)

Symphony no. 3

The string recitativo reappears at Fig.89, but intensified by the overlapping of separate harmonic and polyphonic strands played by upper and lower strings. The rising line still progresses through sequential treatment of three-note cells in the 1+2 melodic interval-pairing, but the interesting feature of this passage is the way Lutosławski differentiates the polyphonic strands by set-complementation.

Example 7:13 shows a section of the aleatory polyphony after Fig.90. The violins use the hexachord covering the notes within a perfect fourth from G to C, while the lower strings use the complementary hexachord covering the notes within a fourth from Db to Gb. Within each polyphonic bundle the texture changes from a clearly focused unison line, chromatically ascending, to the harmonically blurred effect of rapid semiquaver groups played by the divided string section. The layers also cross each other, for example, where the violas and cellos begin their line on C#, above the divided violins.

Ex. 7: 13

The image displays a musical score for Example 7:13, featuring string parts for violins and violas/cellos. The score is divided into two main sections. The first section is marked 'vivo' and shows the violins (vni I and II) and violas/cellos (vle and vc) playing a chromatically ascending unison line. The second section is marked 'Presto' and shows the strings playing rapid semiquaver groups. The violas and cellos begin their line on C#, above the divided violins. The score includes various markings such as 'uniso', 'div.', and 'Presto'.

Symphony no. 3

Set-complementation also applies to the babbling texture of two clarinets, celesta and harp between Figs.91-92, where the subdivision of pitch-classes leads to an emphasis on interval-classes 1 and 3 derived from permutations of pc set 0,1,4: clarinet 1, D,Eb,Gb; clarinet 2, G#,A,C; celesta, F,E,Db; harp, B,A#,G. A period of repose and aural relaxation is provided by the return of the woodwind refrain between Figs.92-93, thus forming a reference to the first movement. This time it is played by cor anglais, two clarinets and bassoon migrating downwards by interlocking semitones and tones with middle C as a focal pitch.

At Fig.93 the cantando theme of the epilogue also returns, this time played by solo horn against a developing harmonic background, strongly rooted on E, which gradually builds a widely spaced 12-note extended chord whose euphony derives from the seven perfect fifths embedded in the sonority. The beginning of this section is shown in Example 7:14; eventually it leads to a triumphant delivery of the cantando theme by strings and woodwind, supported by brass and percussion from Figs.97-99. The 3+7 vertical interval combination is typical of the late style and is featured in *Partita*, *Chain 2*, *Chain 3* and the Piano Concerto.

Ex. 7: 14

$$\begin{matrix} \textcircled{93} \\ 2 & & 3 \\ 2 & d=44-50 & 2 \end{matrix}$$

cor. 2. *P ma distinto*
 pl. *p*
pda (sino al.)
 vc. div. a.3. *pp*
 cb. div. a.3. *pp*

Symphony no. 3

The fast Coda that follows reverses the kind of chordal acceleration used to reach to climactic points of the Second Symphony and *Livre*, instead stretching repetition of chords by the insertion of more and more beats rest (1-2-3-5-7-9-11), whilst the combined forces of tuned percussion emerge into the foreground with a jubilant display of superimposed lines that emphasise interval-classes 2, 3 and 5, mostly in pentatonic patterns (Ex. 7: 15). Although the patterns are not exclusively pentatonic sub-sets, the overall harmonic colour of the percussion section is determined by pentatonic relationships, hence the quasi-gamelan effect of this part of the coda.¹¹ It is also worth noting that the bright, joyful sound of the percussion polyphony conveys a psychological mood of optimism, an aspect of the Third Symphony that contrasts very strongly with the brooding, uncertain ending of the Second Symphony. The Double Concerto also features the percussion at an equivalent moment near the end of the coda in the finale; thus Lutosławski was developing an idea already tested in the earlier work.

Ex. 7: 15

(101)

Musical score for Ex. 7: 15, measures 101-102. The score includes parts for xil., mar., cmp-li, vibr. s.m., primo, pf. 4 m., and secondo. It features 'marcato' markings and 'cresc.' dynamics.

(102)

Musical score for Ex. 7: 15, measures 103-104. The score includes parts for xil., mar., cmp-li, vibr. s.m., primo, pf. 4 m., and secondo. It features 'tutta forza' markings.

Symphony no. 3

The Third Symphony is a curiously hybrid work, combining some densely textural features typical of Lutosławski's earlier orchestral works, and yet with an abundance of melodic features that have now become established as typical of his later style. This mixture is not surprising when one considers the period of time over which the work was composed. Not all the early sketch material was discarded, however. The form bears a striking resemblance to the original outline scheme: the introductory section corresponds to the 'invocation'; the 'cycle of etudes' relates to the eventual alternation of episodes and refrains; the cantando theme of the epilogue fulfils the function of the planned 'hymn'. The original 'toccata' section did not survive, although the general intention of fast, motoric material is realised to some extent in the main movement.

The most notable omission from the Third Symphony is the kind of dense, 12-note chord-aggregate harmony that has been discussed in Chapter Three. There are 12-note chords in the symphony, but many of the original pre-compositional sketches of pitch material (see Ex.3:9) were discarded. In place of the 12-note chord-aggregate harmony typified by the first section of *Mi-Parti*, one finds greater use of set-complementation procedures that allow more scope for the generation of interesting melodic and polyphonic lines. These procedures were not new to Lutosławski in the early 1980s, but he appears to have rediscovered their potential for yielding harmonically separated lines that are not merely arpeggiated chord figurations.

The most notable addition to Lutosławski's style in the Third Symphony is the number and variety of melodic ideas. This is best appreciated if one compares and contrasts the Second Symphony with the Third. The former is a work of dense harmonic textures that inevitably are perceived in terms of their resultant sound-mass rather than specific harmonic sonorities. The latter is a work of more transparent harmonic sonorities that enable the listener to detect melodic and polyphonic detail. This difference has much to do with the more limited scope of aleatory procedures in the Third Symphony. It has already been noted that Lutosławski's main stumbling block had been with the 'toccata' section of his original scheme, which was intended to be co-ordinated largely by aleatory means.

Symphony no. 3

The Second and Third Symphonies deserve special attention as a pair, not because they each adhere to any conventions of symphonic form, but because their overall performing times of between 29 and 32 minutes present different realisations of Lutoslawski's approach to long-term dramatic shaping. For example: the Second lasts 32' with a decisive climax late in the form at 0.86 of the overall duration; the Third lasts 30' with an abortive climax much earlier at 0.7. Whereas the Second accelerates to an *ad libitum* climax, the Third accelerates through and beyond a metred climax. The Second has very little *battuta* co-ordination, whilst the Third is largely metred; consequently, the Third has a greater sense of harmonic and rhythmic pace, whilst the Second is predominantly static. The Second has *ad libitum* episodes, whereas the Third has *battuta* episodes. The Third ends fast and *fortissimo*, whereas the Second ends slow and *pianissimo*. In spite of the above differences, these symphonies share their form more than their content.

CHAPTER EIGHT

Chain 1 and Chain 3

Three of Lutosławski's late works bear the same generic Polish title of *łańcuch*, which translates into English as 'Chain'.¹ This designation indicates that each of these works makes some use of a technique by which the composer overlaps phrases of the musical material, so that the component 'links' neither begin nor end at the same time. Lutosławski's purpose in exploring and exploiting this principle has been the search for some alternative methods of building his large-scale forms that might serve to replace conventional structuring in clear-cut sections. Apart from the connection of sharing this abstract technical procedure, the three Chains are not related to each other in any cyclic way and do not form a group of any kind. Although the title 'Chain' indicates the use of that technique for some part or parts of a work, it should not be assumed that absence of this title implies that the technique is not used. Several works bearing other kinds of title make use of the principle of overlapping strands or sections, the earliest example being in the third movement of the Concerto for Orchestra: *Passacaglia, toccata e corale* (where the passacaglia theme and the episodes operate in overlapping cycles).² The last movement of the Piano Concerto also makes use of chain technique where it is applied to a chaconne theme in the orchestral parts overlapping with various episodes played by the soloist (see Table 10:4).

Both the instrumentation and ensemble treatment in each of the three Chains are very different. *Chain 2*, subtitled 'Dialogue for violin and orchestra' is really a violin concerto in all but name, and will be discussed in the following chapter together with its sister work, *Partita*. Although *Chain 1* and *Chain 3* differ from each other in many respects, particularly their requirements for instrumental forces (chamber orchestra and full orchestra, respectively), it is nevertheless appropriate that they should be considered together in the same chapter, as neither has the *concertante* focus that is central to the musical identity of *Chain 2*, and in spite of their considerable differences of content, they share a significant formal feature: their overall time-span. Both works last approximately ten minutes in performance and therefore as a pair they offer an opportunity to compare different solutions to the issues of dramatic shaping raised in Chapter Two (see Table 2:3).

CHAIN 1

Chain 1 was composed in 1983 in response to repeated requests from Michael Vyner for a piece which the London Sinfonietta might include as a regular component of their repertoire. During the 1960s and 70s most of Lutosławski's work had been for large forces; exceptions being *Jeux vénitiens*, the String Quartet, *Paroles tissées*, Preludes and Fugue, and a modest *pièce d'occasion*, the Sacher Variation. Vyner was keen to programme Lutosławski's work in concerts by the London Sinfonietta but even with an enlarged ensemble most of the works were beyond the ensemble's resources. Lutosławski had to wait until finishing the Third Symphony before embarking on the new project. The resulting ten-minute piece was completed on 20 July 1983 and first performed in London on 4 October. Its dedication, to the commissioner and his ensemble, made the work a natural choice for performance at the Michael Vyner Memorial Concert on 6 May 1990. ♪

Chain 1 can be regarded either as a large chamber piece or as a small orchestral piece, although in reality it is somewhere between the two. The title does not use the term 'chamber orchestra', although that would be an accurate designation. Instead, the composer specifies 'for fourteen instruments', thus giving implicit emphasis to the soloistic nature of ensemble playing that he had previously exploited in Preludes and Fugue (similarly specified as 'for thirteen strings'). The nature of the ensemble treatment, however, suggests that *Chain 1* should be considered in relation to Lutosławski's other orchestral rather than chamber works, particularly as it requires a conductor (it does not apply the kind of notation in self-contained boxes that is used in the String Quartet, the duo sections of the Double Concerto or the *ad libitum* sections of *Partita*). Aleatory 'mobiles' occupy the greater part of the piece, and in this respect the polyphonic treatment of the ensemble is closer in concept to the style of Preludes and Fugue than to the other late works which use a greater proportion of metred polyphony. The fourteen instruments are (strictly speaking, the number fourteen refers to the number of players rather than instruments, because of the requirements for doubling): flute (doubling piccolo and alto flute); oboe (doubling cor anglais); clarinet; bassoon; trumpet; horn; trombone, percussion (marimba, xylophone, cymbals, gong, tam-tam); harpsichord; two violins, viola, cello, and double bass. ♫

Chain 1

Although *Chain 1* unfolds through its ten-minute duration as one unbroken span it can nevertheless be divided into three distinct formal stages. The first, as one expects with Lutosławski, is fragmented and introductory in character, consisting of overlapping links in the chain technique indicated by the title. The second stage does not use chain technique, but delivers a continuous network of *cantabile* melodic lines. This stage builds towards and includes the climax of the work, represented by a densely clustered 12-note chord just before Fig.47. At that point a *fortissimo* stroke on the tam-tam interrupts and abruptly concludes the second stage. Stage three is merely the aftermath, the period of winding down that occupies the last 55 seconds of the piece. Table 8:1 is a structural segmentation of *Chain 1* showing these formal stages and their various subdivisions. Changes of instrumentation within the first stage are particularly important, as they show the composer involving and featuring each of the fourteen members of the ensemble. The main harmonic staging posts, being either interval- or chord-aggregates, are numbered from 1 to 8.

Table 8:1 *Chain 1*, formal scheme

<u>Figs.</u>	<u>Section</u>	<u>Sub-sections</u>	<u>Instrumentation</u>
1- 3	STAGE 1	Aggregate 1	<i>tutti</i> (except double bass)
3- 6		Link 1	clarinet solo
4- 7		↓ Link 2	strings, cembalo, marimba, bassoon.
6- 9		Link 3 ↓	oboe, piccolo, clarinet.
7-13		↓ Link 4	strings, bassoon, marimba.
9-13+		Link 5 ↓	horn, trombone, trumpet.
13-15		↓ Link 6	strings
14-17		Link 7 ↓	cembalo, xylophone.
15-20		↓ Link 8	clarinet, trumpet, horn, trombone.
17-24		Link 9 ↓	strings
21-29		↓ Link 10	flute, clarinet, bassoon, marimba.
24-32		Link 11 ↓	horn → trumpet → oboe → horn.
30-34		↓ Link 12	cembalo/violins.
32-38		Link 13 ↓	flute → cello → flute
34-38		↓ Link 14	oboe, clarinet, bassoon, trumpet → strings
38-40		Concluding	<i>tutti</i> (except bassoon, double bass)
40-42	STAGE 2	Bundle (8 parts)	alto fl., cl, c. ing., fag, 2vl, vla, vlc
42-43		<i>molto cantabile</i>	+ trombone, flute <i>tacet</i> , (8 parts)
43-44		Aggregate 2	+ flute, horn, trumpet, bass (12 parts)
44-45		Aggregate 3	no change (12 parts)
45-46		Aggregate 4	no change (12 parts)
46-47	Climax	Aggregates 5-7	bass <i>tacet</i> (11 parts)
47-51	STAGE 3		percussion → winds → marimba/cembalo
51-end		Aggregate 8	strings (only)

Chain 1

Rehearsal figures in the above table do not in every case indicate the precise moment where a particular link begins or ends, but are provided as the nearest reference points in the score. Where a link begins or ends with a solo instrument, that part is usually co-ordinated with a subsidiary cue of the kind that does not bear a rehearsal number. Within the column for instrumentation a distinction is made between groups of instruments that play simultaneously and those that play successively, transferring a melodic link from one instrumental timbre to another. The latter method is shown with the symbol of a horizontal arrow.

Changes to the level of harmonic density are crucial to the unfolding of the form, which is articulated primarily by the presence and strategic placing of chord-aggregates: one at the beginning of the first stage and several as stage two builds towards the overall climax. Sparing use of the full chromatic density provided by 12-note chords is a feature of the late style, and *Chain 1* is fully representative of the late works in this respect.

Stage one opens with an introductory gesture played by almost the whole ensemble (minus double bass). Beginning on a unison it diverges to a widely-spaced 12-note chord-aggregate, laid out in three harmonic strands, before converging onto a different unison. The effect of divergence followed by convergence, thus established at the outset, is a feature of the work as a whole, operating as an underlying and unifying principle which governs the composer's treatment of the form. Stage two also begins on a unison (from Fig. 40, the violins' and violas' open-string G); but whereas the divergence onto a widely-spaced 12-note chord-aggregate happens very quickly at the beginning of the work, in the second stage this process of intervallic expansion occurs much more gradually. Initially, a bundle of eight parts from Figs. 41-42 gradually develops into a 12-note line covering a range of slightly less than two octaves, extending upwards from the violins' open-string G. This is then followed by the first of the aleatory sections marked *cantabile*, from Figs. 42-43, including all twelve pitch-classes with octave duplications, extending upwards from the violas' open-string C over a range of two and a half octaves. Thereafter, the aleatory sections are governed by vertically planned chords.

Chain 1

Example 8:1 is a partial harmonic reduction showing the eight chord-aggregates deployed. The first of these occurs at the beginning of the piece and is subdivided into three harmonic strands, each containing a particular four-note chord (K-F-J.). It also displays a feature untypical of complex aggregates: vertical symmetry of intervals (3-3-5-1-4-3-4-1-5-3-3). Properties of intervallic symmetry have been noted in Chapter Three, but it is uncommon for such construction to be applied to a complex chord-aggregate containing more than three interval classes and subdivided into three harmonic strands. The other seven chords are different in construction and occur in the build-up towards the climax and in its aftermath. Of these only nos.5 and 8 contain less than all twelve pitch-classes; the former having eleven pitches, whilst the latter has only ten. Chords 6 and 8 are both subdivided into four harmonic strands (of three notes each) rather than the usual three (of four notes each): no.6 is produced by the superimposition of three diminished triads, plus a three-note cell on top; no.8 contains twelve notes (although two of these - A and C#/Db - are duplicated, hence there are only ten pitch-classes), and is subdivided into four harmonic strands in which major triads predominate. Chord no.7, occurring at the climax of the work, is an 'elementary' 12-note chord of eleven adjacent semitones densely clustered within one octave.

Ex. 8: 1

The musical score for Example 8:1 is presented on a grand staff (treble and bass clefs). It consists of eight numbered chord aggregates:

- Fig. 1:** A complex aggregate at the beginning, subdivided into three strands. It features vertical symmetry of intervals (3-3-5-1-4-3-4-1-5-3-3). Annotations include 'unison' and 'Fig. (1a)'.
- Fig. 2, 3, 4:** Other chord aggregates following Fig. 1.
- Fig. 5:** A chord with 11 pitches.
- Fig. 6:** A chord labeled 'CLIMAX' with 11 pitches.
- Fig. 7:** A 'cluster chord' with 12 notes but only 10 pitches.
- Fig. 8:** A chord with 10 pitches.

Additional annotations include 'unison' in several places, 'Fig. (51)', and '12 notes but only 10 pitches' near Fig. 8.

Chain 1

Chords 2, 3 and 4 are clearly part of the gradual process of intervallic expansion which governs the second stage. Their outer notes are successively wider apart and this results in some of the internal intervals being 'stretched'. A different process, however, can be observed in the climactic aleatory section between Figs.46-47: instead of only one chord there are three (nos.5, 6 and 7); instead of continuing to expand there is a contraction onto the elementary cluster chord. The unison also makes a reappearance, for the fourth and last time in the work (this time on B flat) as it separates chords 5 and 6. B flat plays a special role within the section, operating as a focal point which unites the succession of chords: it is the lowest note of no.5; it defines the upper half of no.6; and it marks the top note of no.7. In view of the problem of harmonic stasis, it is interesting, and unusual, to find an aleatory section with more than one genuine change of harmony. In this case there are three changes altogether: from chord 5 converging onto the unison; from the unison diverging to chord 6; and from the latter collapsing onto chord 7.

The chain technique of stage one (ie. Figs.3-40) is absent from the harmonic reduction in Example 8:1. This is because several of the overlapping links are here produced by horizontal rather than vertical methods of pitch organisation, and therefore are not reducible simply to chords. Table 8:2 summarises the methods used.

Table 8:2 Chain 1: methods of pitch organisation in stage 1

<u>Link</u>	<u>Harmonic material</u>	<u>Link</u>	<u>Melodic material</u>
		1	interval-pairing 1+6
2	4-note chords (types J-G-K-H)	3	interval-pairing 1+6
4	interval-pairing 1+2	5	interval-pairing 1+6
6	5-note chords	7	4-note broken chords (type F)
8	6-note and 5-note patterns	9	interval-pairing 1+6
10	3-note chords (not triads)	11	interval-pairing 1+6
12	3-note mobiles (+ cembalo)	13	interval-pairing 1+6
14	4-note mobiles		

Chain 1

In assigning notes to the various chain links, Lutosławski does not adopt here the simple method of partitioning the chromatic whole into complementary hexachordal sets (ie. 6+6) to be maintained throughout each link, as he was later to do in *Chain 3* (see Table 8:6). Such a method would have been impractical here, as it would have restricted the range of lines generated by the particular melodic interval-pairings chosen. Melodic pairing of semitones with tritones is certainly the predominant feature of the first stage in the form, and has already been noted as a method characteristic of several other works by Lutosławski (see Table 4:4, and Exx. 4:24-27, 6:1, 7:1).

There is some pitch complementation between the overlapping links, although they have to be broken down into short, localised fragments for this to be seen. Table 8:3 shows the division of pitch-classes operating in links 6-14 inclusive. Even where all twelve pitches are present in a particular link, eg. Figs.24-29, there is little simultaneous duplication of notes between the overlapping polyphonic strands.

Table 8:3 *Chain 1*: pitch complementation in stage 1

<u>Figs.</u>	<u>Link</u>	<u>Pitch-classes</u>	<u>Link</u>	<u>Pitch-classes</u>	<u>Totals</u>
13-14	6:	B, C, C#; F#, G			.
14-15	6:	F#, G, G#; C#, D	7:	D#, E, F; A, A#, B, C	5+7=12
15	8:	F#, G, G#; C#, D, Eb	7:	F, A, C, E	6+4=10
16	8:	Ab, B, Bb; Eb, E, F	7:	G, B, D, F#	6+4=10
17	8:	G, Ab, A; C, Db, D	9:	all 12	(6+12)
18	8:	F, F#, G; Bb, B; D	9:	all 12	(6+12)
19	8:	C, Db, D; Ab, G	9:	A, A#, B; D#, E, E#, F#	5+7=12
20	8:	A, Bb, B; Eb, E	9:	F, F#, G, G#, A; B, C, C#, D	(5+9)
21-22	10:	G, C, F#	9:	C#, D, D#, E, F; G#, A, A#, B	3+9=12
22-24	10:	C#, D, Eb	9:	all 12	(3+12)
24-29	10:	C#, D, Eb	11:	all 12	(3+12)
30	12:	B#, C#, D	11:	D#, E, F, Gb, G, Ab, A, A#, B	3+9=12
31-	12:	G, G#, A, Bb, B	11:	D, Eb	5+2=7
	12:	A, Bb, B	11:	D, Eb, G#	3+3=6
-32	12:	F#, G, G#, A, A#, B, C, C#	11:	D, Eb	8+2=10
32-	12:	D, F, Gb	13:	all 12	(3+12)
	12:	A, Bb, B, C; D; E, F, F#	13:	G, Ab	8+2=10
-33	12:	A, Bb, D	13:	Eb, E, F, F#, G, Ab; B, C, Db, D	(3+10)
33-34	12:	D#, E, F	13:	G#, A, A#, B, C, Db, D	3+7=10
34-35	14:	Eb, E; A, Bb	13:	C, Db; F#, G, G#, A	4+6=10
35-36	14:	A; C#, D, D#	13:	Bb, B, C; E, F, F#, G, Ab	4+8=12
36-37	14:	C; F, F#, G	13:	D, Eb, E; Ab, A, Bb, B	4+7=11
37-38	14:	A, A#, B	13:	C, C#, D, D#, E, F, F#, G, G#	3+9=12

Chain 1

Three-note cells of adjacent semitones are often used on their own to provide kinds of harmonic accompaniment, for example in link 10 (Figs.22-29), link 12 (Figs.30 and 33-34), and link 14 (Figs.37-38). These may be presented in a closely clustered position or in a variety of more widely spaced sonorities resulting from octave displacement. Such cells are also used as constituent sub-sets in larger pitch collections, for example the six-note and five-note patterns used in link 8 (Figs.15-20). Where such cells of adjacent semitones occur in the above table they are separated from other pitches in the same group by a semicolon.

Just before Fig.13 the two links that overlap (nos.4 and 5) are each generated by a different melodic interval-pairing. Aural separation between these superimposed layers is therefore produced, not by set-complementation of harmonic strands, but by the contrast between intervallic combinations (1+2 and 1+6, respectively). Even so, there is no simultaneous duplication of pitch-classes between the two layers.

From the beginning of the clarinet solo which opens link 1, up to Fig.12, the ensemble is coordinated in metred bars. This enables Lutosławski to control precisely the vertical alignment of parts and to establish in this part of the work a (comparatively) brisk harmonic rhythm that avoids undue harmonic stasis whilst still avoiding duplication of pitch-classes between layers. For these reasons it is impractical for links 1-5 to be represented in harmonic reduction. Any such diagram or table would need to be as full in detail as the score itself, an exercise in notational transliteration that would be pointless to present.

It is worthwhile, however, illustrating in some detail the horizontal method of pitch organisation that extends from these links through to the concluding passage of stage one between Figs.38-40. There are many examples in the first stage to illustrate Lutosławski's use of melodic interval-pairing of semitones and tritones (1+6), such as the clarinet solo that provides the first link in the chain (Ex.8:2a), and which is then transferred to the *staccato* oboe line that begins link 3 (Ex.8:2b).

Chain 1

Ex. 8: 2

a)

b)

The above examples are relatively simple, undeveloped lines, hardly of the kind to be regarded as memorable melodic material. Link 11, on the other hand, has a long solo for the horn which is transferred to the trumpet and then the oboe before returning to the horn. Although the line is passed from one instrument to another, at no point is the horizontal interval-pairing of semitones and tritones broken. This approach also enables the composer to develop the line across different registers and makes the ensemble playing interesting and challenging for the performers, who have to negotiate the points of transfer with care. The whole of link 11 is shown in Example 8: 3.

Ex. 8: 3

Chain 1

The section that immediately follows link 11 also has a line which passes from one instrumental timbre and one register to another. Link 13 (Ex. 8:4) begins with the flute just at the point where link 11 finishes, taking up and continuing the same note (at the same register). It contains far more semitones than tritones with the result that many of the patterns are simply segments of the chromatic scale, either rising or falling, albeit disguised by octave displacement. When the line is transferred to the cello an interesting change takes place. Although the same melodic interval-pairing of semitones with tritones is retained, the cello part is marked *cantabile* and has *acciaccature* to convey the effect associated with the *dolente* type of melody discussed in Chapter Four (see Ex. 4:15). The cello passage consists of two phrases: one which descends in the upper register from a high C; the other rising from the low open C string back to the original pitch so that the flute can then regain possession of the line, carrying it even higher with an octave displaced chromatic scale. The cello's rising phrase has more tritones, giving a more balanced relationship between the two intervals within the pairing.

Ex. 8: 4

The musical score for Ex. 8:4 consists of five staves. The first two staves are for the Flute (fl.), and the last three are for the Violoncello (VC.).

- Staff 1 (fl.):** Starts with a circled number 32 above a downward-pointing triangle. The music begins with a forte (*f*) dynamic and features a trill (*tr*) on a high note.
- Staff 2 (fl.):** Continues the melodic line with a piano (*p*) dynamic and includes another trill (*tr*).
- Staff 3 (VC.):** The cello part begins with a pianissimo (*pp*) dynamic and is marked *cantabile*. It includes the instruction *Stesso movimento* and a mezzo-forte (*mf*) dynamic.
- Staff 4 (VC.):** Features a *poco acc.* (poco accelerando) marking followed by a *poco rit.* (poco ritardando) marking. The dynamic is mezzo-forte (*mf*).
- Staff 5 (VC.):** Continues with a *pocof* (poco feroce) marking and ends with a pianissimo (*pp*) dynamic.
- Staff 6 (fl.):** The flute returns with a forte (*f*) dynamic, continuing the chromatic scale.

Chain 1

The unfolding of stage two has more in common with some earlier works, such as the Cello Concerto or Preludes and Fugue, than with other late works. It begins at Fig. 40 with the open-string unison G of the violins and viola, from which a bundle of polyphonic lines develops. These are complementary variants of the same melody, combined in *ad libitum* counterpoint to give a texture harmonically thickened by the horizontal line accompanying itself. Notes are gradually added to the melodic phrase (Ex. 8:5a), until it appears in its complete form with all twelve pitches used in the first violin part just before Fig. 42 (Ex. 8:5b). The intervallic structure of this line comprises two three-note cells (A, G, G#; C#, D, C) of interlocking tone and semitone, with the connecting interval between the cells being the perfect fourth from G# to C#. The remaining notes are semitone pairs (F, F#; B, A#; D#, E), also with the connecting interval of the perfect fourth. Thus only interval classes 1, 2 and 5 are used in all the variant and incomplete fragments of this line as it develops within the bundle of parts. The only apparent deviation from this scheme is due to a misprint in the published score: the Gb appearing in the clarinet part (Ex. 8:5a) should be an Ab.

Ex. 8: 5a

Musical score for Ex. 8: 5a, showing multiple staves for Fl. alto, c. ing., cl., fg., vno I, vno II, vla, and VC. The score features polyphonic lines with dynamic markings like mp, pp, and ppp, and a vertical dashed line indicating a structural point.

Ex. 8: 5b

Musical score for Ex. 8: 5b, showing a single staff with a melodic line and figured bass notation below it, including circled figures 41 and 42.

Chain 1

Whereas the initial eight-part bundle is melodically conceived, the *ad libitum* sections that follow are harmonically based, organised by means of the chords and chord-aggregates shown above in Example 8:1. The change to vertical methods of pitch organisation means that, in stage two, one does not find the restricted interval content to the melodic lines that formed the basis for the chain technique in stage one. The initial bundle is comparatively restricted in its range, covering an overall compass of less than two octaves, but subsequent *ad libitum* sections become much more widely spaced, enabling the component parts to become progressively more disjunct as they elaborate arpeggiated patterns from the chord-aggregates.

The next eight-part *ad libitum* section, beginning at Fig.42 (Ex.8:6), introduces the expressive marking *molto cantabile*. This is no longer a bundle in the sense of superimposed variants of the same melodic line (in the same register), but expands to cover a range of two and a half octaves.

Ex. 8: 6

42

fl. alto muta in fl. grande in do

c. ing. *f molto cantabile*

cl. *f molto cantabile*

fg. *f molto cantabile*

trbne *ppp* *poco f molto cantabile*

vnoI *f molto cantabile*

vnoII *f molto cantabile*

vle *f molto cantabile*

vc. *f molto cantabile*

Chain 1

All twelve pitch-classes are used between Figs. 42-43. Eight of them appear at more than one octave, only A, C, E and Gb are not doubled. Due to the large proportion of octave doubling in the harmony of this section, it does not produce a specific kind of 12-note chord-aggregate in the way that the ensuing passages do. Thus it fulfils a kind of intermediary step in the evolution of the second stage, strictly speaking neither a polyphonic bundle nor a chord, but a combination of the two.

As well as becoming more angular in its disjunct lines, the 12-part *ad libitum* section from Fig. 43 introduces the expressive marking *sempre appassionato*, but only in the string parts (Ex. 8:7). Meanwhile, the woodwind and brass instruments continue to play *molto cantabile* in lines which are less angular. From Fig. 44 these roles are reversed; the strings revert to *cantabile* playing whilst most of the woodwind and brass play *appassionato* (except for the trumpet and trombone which would perhaps disrupt the balance of the ensemble if directed to play in a more strident manner). Although Lutosławski chooses to differentiate these *cantabile* and *appassionato* elements of the ensemble by dynamic and rhythmic means, he does not introduce any sub-division of the pitch organisation or separation into self-contained harmonic strands. Both the *appassionato* and *cantabile* parts have access to all notes of the vertical harmony.

Ex. 8: 7

The image shows a musical score for five string instruments: Violin I (vno I), Violin II (vno II), Viola (vla), Violoncello (vc), and Contrabasso (cb.). The score is written on five staves. The key signature has one sharp (F#) and the time signature is 4/4. The music is characterized by disjunct, angular lines. Expressive markings are present: 'sempre f appassionato' is written above the first three staves (vno I, vno II, vla), and 'f appassionato' is written below the last two staves (vc, cb.). There are also some dynamic markings like 'p' and 'f' and accents throughout the score.

Chain 1

The climax of *Chain 1* is a feature that invites both comparison with some earlier works and contrast with other late works. As in the String Quartet or Preludes and Fugue, there is no specific moment of climax common to all parts. Instead, there is a highpoint to each of the constituent lines within the aleatory section where the climax occurs. Each player reaches an individual highpoint, not necessarily at exactly the same moment. Unlike the String Quartet, *Chain 1* has a decisive end to the climactic passage, at the point when the percussionist (inactive since Fig. 40) plays a *fortissimo* stroke on the tam-tam.

Although the climax ends decisively and abruptly, the very last chord of the piece does not. The nature of the gesture which this chord is used to convey is a kind of evaporation, such as occurs at the end of *Les espaces du sommeil*. The chord contains only ten rather than all twelve notes (B and G# omitted), and is laid out in four rather than the customary three harmonic strands (Ex. 8:8). Of these four strands, the odd one out is the that assigned to the viola part, because it is the only one which does not contain a simple major triad. The psychologically inconclusive effect produced by this type of evaporating *ad libitum* ending is another feature suggesting a closer relationship between *Chain 1* and Lutosławski's work of the 1970s than with the other late works of the 1980s. The Double Concerto, the Third Symphony, *Partita*, *Chain 2*, the Piano Concerto and *Chantefleurs et Chantefables* all have a clear-cut, quasi-cadential ending.

Ex. 8: 8

The image shows a musical score for five string instruments: Violin I (Vno I), Violin II (Vno II), Viola (Vla), Violoncello (VC), and Contrabass (cb). Above the first staff, there is a circled number '51' with a downward-pointing triangle. The score includes various dynamic markings such as *pizz.*, *ff*, and *p*, and articulation markings like *rit.*. The notation shows complex rhythmic patterns and articulation for each instrument, with some notes marked with accents or slurs. The bottom of the page features a wavy line indicating the end of the section.

Chain 1

In view of the fact that the chamber orchestra instrumentation provides plenty of opportunity for soloistic writing, it is surprising that Lutosławski did not avail himself of the associated opportunities for projecting more highly developed melodic lines against harmonic backgrounds. There is a little of this kind of approach in stage one, but far less than one would expect by comparison with other late works.

Relentless use of melodic interval-pairing 1+6 in stage one can be said to have imposed a particular kind of harmonic colour on that section of the piece, but it has perhaps been overused. The fact that successive (and sometimes overlapping) links in the chain technique are generated by the same interval-pairing means that the listener is not able to detect any appreciable difference in the character of many sub-sections in the form. This bleak uniformity of interval-pairing contrasts strongly with the differentiated interval-pairings that he had used in *Epitaph* and *Grave*, and which he was to use in the second movement of *Chain 2*.

One of the comparisons that must be made between *Chain 1* and both earlier and later works concerns the proportion of the piece composed in *ad libitum* sections of aleatory counterpoint. A striking feature of the late works is that they have a far smaller proportion composed in this way and a correspondingly larger part is played by conventionally metred sections. Even the Third Symphony has a considerable number of metred passages which help to convey pace and rhythmic energy, contrasting with the static quality which is usually unavoidable with the *ad libitum* technique. *Chain 1* makes very little use of metred co-ordination or a *battuta* conducting. A possible explanation is that the composer's main intention was to provide an opportunity for soloistic music-making amongst the fourteen players of the London Sinfonietta, hence the consideration of rhythmic pace took second place to the generation of independent melodic lines. Another is that stasis may not be such an important problem in a short piece of only ten minutes duration. Had it been conceived as operating over a longer time span, the composer would presumably have adjusted the pace to fulfil the requirements of more extended dramaturgy.

CHAIN 3

Whereas *Chain 1* conveys an introductory effect in performance, akin to the function of a concert overture, *Chain 3* gives an impression of greater musical substance. This contrast in character can be attributed only partially to the difference of sonority associated with the instrumental forces required. It is certainly not due to any great difference in performance duration. It can be explained, however, by the presence of two particularly memorable ideas in *Chain 3*: a long, expressive cantando line for the violins that occupies most of the second stage of the form; and the emphasis given to an expansive section of aleatory polyphony for the brass section, functioning as the main destination point of the second stage. Whereas the former gives a strong sense of linear progression through the period of build-up towards the highpoint of the work, the latter provides a distinctive harmonic and instrumental sonority that is individual to this work, and that can remain in the memory of the listener even after the piece has ended.

Chain 3 was written in 1986 and is one of only two non-*concertante* works for large orchestra composed by Lutosławski since 1979; the other being the Third Symphony.⁵ As the latter is curiously mixed, even hybrid in style, something of a throwback to the style of the 1970s when it was first conceived, one is left with only *Chain 3* as an example of the composer's treatment of orchestral large-scale form conceived in its entirety since the change in harmonic language of 1979. Chain technique is used in the early part of the piece, but is treated in an introductory manner, as a means of introducing and contrasting instrumental groups, rather than as a means of travelling towards the destination of the form. Lutosławski's declared aim in *Chain 3* was to feature the brass section in a way that would focus on their ability to produce a *cantabile* sound.⁶ Hence the piece is structured to arrive at Fig.37 where the brass section plays polyphonically, with a euphonious 'singing' passage that elaborates a 12-note chord. This contrasts strongly with earlier works, in which the brass instruments were used either individually or collectively to perform a strident, gestural role, for example in the early part of the Cello Concerto, and in the passage immediately following the climax of *Mi-Parti*.

Chain 3

Table 8:4 shows a structural segmentation of Chain 3. Instrumentation is of significance, particularly in the first stage where contrasted groups are used as one of the methods employed in order to differentiate the overlapping links of chain technique.⁷

Table 8:4 Formal scheme of Chain 3

Fig.	Stage	Section	Coordination	Instrumentation
0	ONE	introduction	<i>a battuta</i>	w. winds; strings; bells
1		link 1	<i>ad libitum</i>	3 flutes
1		link 2	<i>ad libitum</i>	4 double basses
2		link 3	<i>ad libitum</i>	3 violins/xylophone
3		link 4	<i>ad libitum</i>	3 clarinets
4		link 5	<i>ad libitum</i>	4 cellos
5		link 6	<i>ad libitum</i>	celesta/harp/piano
6		link 7	<i>ad libitum</i>	2 trumpets/2 trombones
7		link 8	<i>ad libitum</i>	bass cl./3 bassoons
8		link 9	<i>ad libitum</i>	4 violins
9		link 10	<i>ad libitum</i>	3 trumpets
10		link 11	<i>ad libitum</i>	3 violins
11		link 12	<i>a battuta</i>	harp/3 flutes
12		extension	<i>ad libitum</i>	3. 3. 3. 3; 0. 3; hp. cel. pft.
13	TWO	Presto 3/4	<i>a battuta</i>	tutti
17		cantando 9/4	<i>a battuta</i>	violins (<i>uniti/divisi</i>) etc.
23		3/2	<i>a battuta</i>	tutti
27		cantando 3/2	<i>a battuta</i>	violins (<i>uniti/divisi</i>) etc.
31		3/4	<i>a battuta</i>	tutti
37	THREE	<i>Cantabile</i>	<i>ad libitum</i>	brass polyphony
38			<i>ad libitum</i>	strings
43			<i>ad libitum</i>	strings/brass/winds
44		Climax	<i>ad libitum</i>	tutti
45-46		Presto	<i>a battuta</i>	tutti

The form is shown divided into three structural stages. The first uses the chain principle in twelve overlapping links: The *ad libitum* technique is used for nearly all of stage one, conventional metre being used only in link 12. The static, introductory character of this opening section is comparable with the first movement of the Second Symphony, *Hésitant*. In terms of their purpose in relation to the overall dramatic shape, they perform the same function, only the time scale is different. The episodic nature of the overlapping links in *Chain 3* is similar to the seven episodes of the Second Symphony. Another similarity lies in the contrasted instrumentation chosen for the links of one and the episodes of the other.

Chain 3

Stage two is marked *Presto* and extends from rehearsal figures 13-37 in an unbroken span of conventionally metred *a battuta* writing. Whereas the *ad libitum* technique provided the hesitant, harmonically static character of the introductory first stage, the second proceeds with greater rhythmic energy and a faster harmonic rhythm, two of the factors which invest this stage with the function of driving towards the points of main destination (at Fig.37) and overall culmination (at Fig.44) which constitute the third and final stage of the form.

The 10-11 minute time-span over which *Chain 3* operates is comparable only with that of *Chain 1*. Of all the late works only these two have similar proportions. Even if one compares them with transitional and mature works of the 1950s and 60s, the closest to their time-scale are considerably different in other respects: *Jeux vénitiens* and *Muzyka żałobna* (see Table 2:3). The former has a four-movement scheme of 12½-13 minutes, whilst the latter has ostensibly a one-movement scheme (although with four clearly defined and sub-titled sections) of approximately 13½ minutes.

In terms of the placing of an overall climax within their respective dramatic schemes, at first glance *Chain 1* and *Chain 3* appear to be remarkably similar. They each arrive at this point comparatively late in the form (0.9 and 0.95, respectively). This comparison reveals close correspondence, but it also masks a contrast which is the decisive difference between their treatments of large-scale form. Whereas the second stage of *Chain 1* moves inexorably towards its sole highpoint, fulfilling dual functions as both destination and culmination point, in *Chain 3* these functions are separated and occur at different moments.

If one were to identify the beginning of the brass *cantabile* passage (instead of the chord reached at Fig.44) as the climax of *Chain 3*, then this would place the highpoint in a ratio of 0.73 in relation to the overall duration. Interestingly, in view of their similar status as non-concertante orchestral works, this would establish a similarity between the structural proportions of *Chain 3* and the Third Symphony (see Table 2:2).

Chain 3

Table 8:5 summarises the pitch organisation of *Chain 3*, showing the placing of the 12-note chord-aggregates that are used (stage two is mostly linear, hence only the bare outline of that section is shown).

Table 8:5 *Chain 3*: pitch organisation summary

Fig.	Section	Pitches		Plane	Aggregate	
		no.	classes		type	chord(s)
[0]	opening	12	all	vertical	complex	C-H-C
1-	link 1	6	Gb, F, E, Eb, D, Db	oblique		
1-	link 2	4	G, G#, A, Bb	oblique		
2-	link 3	4	D, C#, C, B	oblique		
3-	link 4	6	F, E, Eb, Ab, G, Gb	oblique		
4-	link 5	6	D, Db, C, B, Bb, A	oblique		
5-	link 6	4	D#, E, F, Gb	oblique		
6-	link 7	4	Bb, A, Ab, G	oblique		
7-	link 8	6	B, C, Db, D, Eb, E	oblique		
8-	link 9	6	Bb, A, Ab, G, Gb, F	oblique		
9-	link 10	4	B, C, C#, D	oblique		
10-	link 11	4	D#, E, F, F#	oblique		
11-13	link 12	12	all(+doublings)	vertical	complex	C-H-C
13	3/4					
17	9/4			horizontal	(six-note)	3+7
23	3/2					
27	3/2			horizontal	(six-note)	3+7
31	3/4					
37-39		12	all(+doublings)	vertical	complex	C-H-C
39-41		8	A#, E, G#, C#; G, C, D#, F#	vertical	complex	B-K
41-44		12	all(+many doublings)	vertical	elementary	
44-45	Climax	7	A, C#, E, G#, B, D#, F#	vertical		Amaj ¹²
45-46	Presto	6	F, Gb, G, A, Bb, B	vertical		

The first stage, like that of *Chain 1*, begins with a *tutti* passage elaborating a 12-note chord-aggregate. But unlike *Chain 1*, which has less dense harmony at the end of stage one, *Chain 3* has another 12-note chord-aggregate at this point. Between these structural landmarks the successive links of chain technique are overlapped. Although the chord at Fig.12 contains many octave doublings, its basic construction is of a similar type to that at the opening and between Figs.37-39; the recurrence of this sonority establishes the formal framework of the piece. Chord-aggregates of the C-H-C type (see Ex.3:12) are as crucial to the long-range harmonic organisation of *Chain 3* as they are to the planning of *Chain 2* (see Ex.9:33 and Table 9:7). Example 8:9 presents a harmonic reduction of stage one, including the 12-note chords and the complementary chain links.

Chain 3

Ex. 8: 9

The image shows a sequence of 12 musical figures, labeled I through XII, arranged in two systems. Each figure is represented by a staff with notes and a circled number. The first system contains figures I through IX. The second system contains figures X through XII. Figure XII is a complex, dense chord with many doublings, shown in a larger staff with multiple lines. The notes in Figure XII are arranged in a way that suggests a major/minor chord A#-C#-F# (Gb-A) in the upper register and a minor-seventh chord E-G-B-D in the lower register.

From Fig.11, the twelfth link gradually accumulates notes until all twelve pitch-classes are present prior to Fig.12 (in Ex.8:9 each newly added pitch-class is shown with a black note-head). By the time Fig.12 is reached there are so many octave doublings present in the chord that the aggregate structure is obscured. All the doublings are the result of notes from the middle harmonic strand being used an octave higher and lower (i.e. the major/minor chord A#-C#-F#/Gb-A). Horizontally these doublings appear in the instrumental parts as auxiliary notes in relation to the arpeggiated patterns of the main harmony notes. Although the sound is much more dense than the clear sonority of the opening chord-aggregate, the upper and lower harmonic strands are kept registrally distinct. The four notes of the upper strand (the minor-seventh chord F-Ab-C-Eb) appear only in that register; similarly, none of the notes from the lower strand are doubled (the minor-seventh chord E-G-B-D).

Chain 3

The two chord-aggregates occurring early in the second stage are quite unlike the C-H-C constructions which govern the long-range harmonic scheme. Lutosławski's purpose in deploying them (twice) at the beginning of this section is presumably to achieve an effect structurally equivalent to a development section separating the 'exposition' of C-H-C chords in stage one from the 'recapitulation' of the same type of chord at the beginning of stage three. They are played as an interconnected pair, oscillating from one to the other with six notes remaining the same whilst six move up or down by semitone. Acoustically, the most decisive difference between them and the C-H-C aggregations is the presence of a tritone at the bottom of the first of the pair. This tritone establishes a sonority of harmonic instability at the bottom of the chord, and contrasts strongly with the reinforced perfect fifth sonority present in the other chord-aggregates.

An expansive elementary 12-note chord of adjacent semitones (Figs. 41-44) immediately precedes the climactic harmony of the work at Fig. 44. The latter will be discussed in detail later in the present chapter (see Ex. 8: 18).

Whereas the beginning and end of the first formal stage are both marked by all twelve notes played together in chord-aggregates, the overlapping links of the chain technique which occupy the formal section between them represent a subdivision of the chromatic whole into complementary sets. None of the links uses more than six pitch-classes, and these are assigned by the composer to the contrasting instrumental links in such a way that no pitch duplication can occur between them. The melodic patterns used for the twelve links are mostly derived from 3-note cells of adjacent semitones. In some cases there are two together, making a band of six adjacent notes; in other cases there is a different connecting interval. This type of procedure illustrates that the composer is at pains to establish certain bands of pitch, clearly defined in layers, which can then be assigned to the contrasted instrumental groupings. Table 8:6 reduces the pitch organisation of all twelve chain links to the underlying scheme of set-complementation. Because the principle involved is very simple, there is no need to translate the pitch information into integer notation.

Chain 3

Table 8:6 Chain 3: set-complementation in stage one

Chain	Pitch classes											
Link	A	A#	B	C	C#	D	D#	E	F	F#	G	G#
1					C#	D	D#	E	F	F#		
2	A	A#									G	G#
3			B	C	C#	D						
4							D#	E	F	F#	G	G#
5	A	A#	B	C	C#	D						
6							D#	E	F	F#		
7	A	A#									G	G#
8			B	C	C#	D	D#	E				
9	A	A#							F	F#	G	G#
10			B	C	C#	D						
11							D#	E	F	F#		
12	A	A#	B	C	C#	D	D#	E	F	F#	G	G#

Example 8:10 shows the first link beginning at Fig.1, scored for three flutes that play a polyphonic bundle consisting of rhythmic variants of the same line (note that there are misprints in the score; these have been marked in Ex.8:10). It is interesting also to observe that the composer makes use of the first note of the work (middle D natural) as a focal pitch both before and after the initial chord-aggregate, and that this D is sustained by the violas and a tubular bell to overlap and link with the flute bundle of which it is also the lowest note.

Ex. 8: 10

The image shows a musical score for three flutes (fl. 1, 2, 3). At the top left, there is a circled '1' and a tempo marking '♩ = ca. 112'. The score consists of three staves with various musical notations including notes, rests, and dynamic markings. Above the first staff, there is a circled '2'. The score is annotated with '(ie., D#)' and '(ie., Eb)'. The tempo markings include 'piu vivo', 'sostenuto', and 'rit.'. Dynamic markings include 'p', 'mf', and 'f'. There are also markings for 'espr.' and 'P espr.'.

Chain 3

In the case of the overlap between links 4-5 (three clarinets and four cellos, respectively; Ex. 8:11) and 8-9 (Ex. 8:12) the pitch is organised in complementary hexachordal sets; other overlaps result in less than twelve notes. Selective treatment of pitch partition contrasts with works of the 1960s and 70s where all twelve notes were used much of the time, thus giving a rather colourless effect to the whole. The other effect of this selective use of bands of pitch (in certain clearly defined registers) is equatable to a change of harmonic colour.

(misprint: δ should be A^6)

Ex. 8: 11

Three staves of woodwinds (1, 2, 3) and four staves of strings (4VC soli). The woodwinds play a rhythmic pattern of eighth notes. The strings play a sustained harmonic texture with notes marked 'p cantabile' and 'graz'. A tempo marking $\text{♩} = \text{ca. } 112 \text{ (}\text{♩} = 112\text{)}$ is present. A circled '8' with a downward arrow points to the start of the woodwind part.

Example 8:12 shows the beginning of link 9 (a bundle of four violin parts in their high register), overlapping with the end of link 8 (a four-part bundle of bass clarinet and three bassoons). Here, as with all the other overlapping links of the first stage, the contrasts of instrumental tone colour, dynamic attack, rhythmic patterning, and performance gesture are just as important as the set-complementation procedure in establishing differentiation between overlapping strands.

Ex. 8: 12

Four staves of woodwinds (cl. basso, 1, fg. 2, 3) and four staves of violins (2 vni I soli, 2 vni II soli). The woodwinds play a melodic line with notes marked 'pp' and 'muda in cl. 3'. The violins play a complex rhythmic pattern in their high register. A tempo marking $\text{♩} = \text{ca. } 160 \text{ *}$ is present. A circled '8' with a downward arrow points to the start of the woodwind part.

Chain 3

In contrast to the aleatory technique used for the polyphonic bundles of the first stage, the second stage is conducted in metre up to the brass polyphony at Fig.37. Although the leading role for most of stage 2 is performed by the violins' cantando line, the supporting harmony is worth close examination. Example 8:13 is a harmonic reduction of stage two, beginning with the chord-aggregates that appear in alternation at Fig.13.

Ex. 8: 13

The musical score for Example 8:13 is presented in three systems, each with a treble and bass staff. The first system contains measures 13, 16, 17, 18-20, 21, 23, and 25. The second system contains measures 27, 28, 29, 31, and 33. The third system contains measures 37, 41, and 44. Annotations include 'elementary clustered chord' and 'climax chord' with arrows pointing to specific chord structures. The score uses various accidentals (sharps, flats, naturals) and articulation marks (accents, slurs) to indicate the harmonic and melodic details.

Although it is primarily the unfolding of the cantando line that invests this stage of the form with linear coherence, there are also subsidiary horizontal connections of voice-leading between chords of the harmonic accompaniment. For example: the rising chromatic line in the top part between Figs. 17-23 (G, Ab, A, Bb, B); and the rising chromatic progressions of superimposed minor thirds contained in the inner parts ('alto' and 'tenor' registers) of the chords that lead to the 12-note chord-aggregate at Fig.37. One should also note the relationship between the latter and the chord-aggregate at Fig.25.

Chain 3

After Fig. 17 the cantando line is delivered in accordance with division of pitches between the melodic line and the supporting harmony. At Fig. 18 the first of several six-note chords is introduced. They are all constructed from superimposed minor thirds and perfect fifths, thus using the vertical pairing of interval-classes 3+7. Each of these six-note chords can be regarded as an aggregate of two three-note chords containing one minor third and one perfect fifth. Between these three-note harmonic strands there are three minor ninths: for example, the six-note chord at Fig. 18 which reads from the bottom as A/C, G/Bb, Db/Ab, is constructed in order to give the minor ninths A/Bb, C/Db, G/Ab. This type of sound emphasising minor ninths contrasts with the sonority of the 8-note chord at Fig. 17 which contains several major sevenths (it is an aggregate of a major seventh chord, type F, in the low strand, and a minor triad with major seventh, type E, in the middle strand). Thus the composer seems to be exploiting the contrasting effects of major sevenths and minor ninths between strands of the supporting harmony (see Ex. 3:5).

Horizontal interval-pairing of minor thirds and perfect fifths (as distinct from perfect fourths) has already been discussed in Chapter Four in connection with types of melodic line occurring in the Third Symphony and *Chain 2* (see Exx. 4:35-36 and Exx. 7:11-12). Vertical interval-pairing 3+7 is a feature of the epilogue of the Third Symphony (see Ex. 7:14) and also occurs in chords placed at significant points in *Partita* (see Exx. 9:3 and 9:10), the Piano Concerto (particularly the beginning of the slow movement) and *Chantefleurs et Chantefables*. Thus one can identify this particular sonority as characteristic of the late works and therefore a feature of the late style. Lutosławski's 12-note chord-aggregates are inevitably rich in major and minor thirds because of the interval content of the four-note chords on which they are based (see Tables 3:3 and 3:4). For the same reason they are also likely to contain perfect fifths and perfect fourths. But aggregates containing all twelve pitch-classes inevitably also contain many other intervals between non-adjacent notes. The significance of the composer's recent emphasis on interval-classes 3+7 in chords of only four, six or eight notes is that he maximises the warm sonority of his chosen intervals (including minor ninths) whilst reducing the number of other intervals that would dilute the desired aural effect.

Chain 3

The long, central section of *Chain 3* after Fig.13, the second stage of the form, is occupied by an expressive melodic line complemented by recurrent chord configurations that provide harmonic accompaniment. The melodic line begins at Fig.17 and is delivered exclusively by the first and second violins playing mostly in unison, but also with *divisi* interpolations (Ex.8:14). Whereas the *unite* phrases have a sustained intensity, with clear melodic focus, the *divisi* passages create a blurring of the line that relaxes the degree of intensity by changing the listener's aural focus. Eighteen years earlier, in the final chapter of *Livre pour orchestre*, Lutosławski had used the idea of a continually unfolding cantabile line for the strings, but delivered through bundles of aleatory polyphony that blurred the entire line. Here, in *Chain 3* one can observe the composer reworking the same idea but co-ordinated strictly in metre. Thus he is able to control not only the rhythmic pace of the accompanying harmony, and co-ordinate the harmony precisely with the melodic line, but also to control precisely the degree and duration of melodic blurring. This is another example of Lutosławski employing traditionally conducted ensemble playing instead of the aleatory solution that he would no doubt have adopted had the piece been composed before 1979.

Ex. 8: 14

The image displays a musical score for two violins (vni I and vni II) in three systems. The notation includes various rhythmic values and rests. The first system shows the beginning of the piece with 'unite' markings above the notes and 'div.' markings below the notes. The second system continues the piece with 'unite' markings above the notes and 'div.' markings below the notes. The third system shows the end of the piece with 'unite' markings above the notes and 'div.' markings below the notes. The score is written in a standard musical notation with a treble clef and a key signature of one flat.

Chain 3

Example 8:15 presents a melodic reduction of most of the second stage with the *uniti* phrases shown as open note-heads and the *divisi* linking phrases shown as black note-heads. The first section, which extends from Figs. 17-23, breaks down into nine phrases. The second section, from Figs. 27-31 (bb. 66-80) has a further six phrases, giving fifteen overall from Figs. 17-31. The *uniti* phrases emphasise eight rising, disjunct intervals (Maj 3rd, Tritone, Min 7th, Maj 7th, Tritone, Perfect 5th, Tritone, Perfect 4th), whilst the *divisi* links contain two distinct four-note cells that have been labelled 'a' and 'b': the former is a group of three adjacent semitones (pc set 0,1,2,3); the latter is a group containing two semitones and one perfect fourth in various permutations (pc set 0,1,2,7). The *uniti* passages also exploit the three-note cell of interlocking tone/semitone.

Ex. 8: 15

cell 'a' = pc set 0,1,2,3
 cell 'b' = pc set 0,1,2,7

Chain 3

In Lutosławski's earlier works the destination point of a large-scale form was usually synonymous with the point of climax. In the late works this is no longer necessarily so. The Third Symphony, for example, reaches its main point of destination (the epilogue) only after its collective *fortissimo* climax. In *Chain 3* the point of destination to which the second formal stage leads is the expansive *cantabile* passage for the brass section, played *ad libitum*, between Figs. 37-38 (Ex. 8:16). The overall climax, however, does not occur until the *fortissimo* chord at Fig. 44. One might also apply here the topographical analogy used in Chapter Seven to contrast the formal schemes of the Second and Third Symphonies: ascent to a high plateau beyond and above which the peak then becomes visible; as opposed to the direct ascent of a mountain peak. On the first hearing, the listener is unable to predict which of these solutions will occur, or whether an entirely different solution will be used. A listener familiar with Lutosławski's music will expect a particular sequence of events, which, if delivered entirely according to expectation, may be disappointingly predictable. In *Chain 3* the *cantabile* passage for the brass section placed at this point in the form is a compositional gambit that had not been used in Lutosławski's previous works. The significance of the C-H-C chord-aggregate between Figs. 37-38 has already been stressed (woodwinds supply the top register of the chord). But it should also be noted that this chord is strongly rooted by the reinforced perfect fifth between A and E in the low register, and that the climactic harmony at Fig. 44 is rooted in the same way to the same notes.

Ex. 8: 16

The image shows a musical score for brass instruments, specifically for the section labeled 'Chain 3'. The score is arranged in a system of staves. The instruments listed on the left are: 1. trbe 2 (Trumpet 2), 3. cor. (Cornet), 4. trbni 2 (Trumpet 2), 3. tuba (Tuba), and tuba. The notation includes various musical symbols such as notes, rests, and dynamic markings. The score is written in a standard musical notation style, with a key signature of one flat and a time signature of 3/4. The music is characterized by a mix of melodic lines and harmonic textures, typical of Lutosławski's style.

Chain 3

Between the brass polyphony of Figs.37-38 and the climactic harmony at Fig.44 there is densely textural section of string polyphony that begins at Fig.41. It begins with a solo viola covering a narrow band of pitch within the perfect fourth from E to A. Subsequent canonic entries cover similar bands of pitch, fanning out into the upper and lower registers (Ex.8:17). By Fig.43 the polyphonic texture has thickened to eleven parts that combine to produce an elementary 12-note chord of adjacent minor seconds covering a range of over four octaves. This is the most densely clustered chord to be found in Lutosławski's music, surpassing even the chords that punctuate the first movement of the Second Symphony.

Ex. 8: 17

The musical score for Ex. 8: 17 is written for five string parts: Violin I (vni I), Violin II (vni II), Viola (vle), Violoncello (vc), and Contrabasso (cb). The score is in 4/4 time. At the beginning, there is a circled number 42 and a 4/4 time signature with the instruction 'I. ca. 40'. The score features multiple staves, each with a 'pp non vibrato' marking. A circled number 43 is placed above the final measure of the score. The notation includes various rhythmic values and dynamic markings, indicating a dense, polyphonic texture.

Although the above passage illustrates a textural approach to harmonic density that is similar to the massed string sonorities in the second movement of the Second Symphony, it is interesting to note that in *Chain 3* Lutosławski chose to build up this effect with polyphonic entries that are metred rather than aleatory. Hence, even though a static aleatory sound mass is sustained between Figs.43-44, the vertical co-ordination of individual canonic entries is strictly controlled.

Chain 3

The climactic harmony at Fig.44 comes as a surprise for a listener familiar with Lutosławski's earlier works who might reasonably expect to hear a dense 12-note chord or chord-aggregate. In fact it only contains seven pitch-classes with octave doublings (Ex.8:18). The root of the chord (A) is strongly reinforced, as is the fifth (E). This reveals a traditional approach to harmonic sonority that recognises the acoustic properties of the harmonic series and strengthens the notes in a way that corresponds closely to the upper partials of the fundamental tone. The whole chord is basically a vertical projection of superimposed perfect fifths, but collapsed slightly with the inner notes re-ordered. It can also be regarded as an A major triad with the following upper extensions: major seventh, major ninth, sharp eleventh, and sharp thirteenth. Expressed tonally (not that a tonal interpretation is particularly valid here) one could describe the chord as a subdominant thirteenth in E major. However one chooses to describe or label the chord, its bright sound is due to the combination of interval-classes 5 (7) and 2 (the latter also as non-adjacent intervals).

Ex. 8: 18

The image shows musical notation for Ex. 8: 18. It consists of two staves, treble and bass clef. The treble staff has a circled '44' at the beginning. The notation shows a chord structure with notes in both staves. Annotations include 'harmonic series of A' and 'Partials' with numbers 1 through 13. The notes are connected by lines, showing their relationship to the harmonic series. The chord is primarily composed of notes from the harmonic series of A, specifically the 4th, 5th, 6th, 7th, 8th, 9th, and 10th partials, with some octave doublings.

In view of the emphasis given in the latter part of *Chain 3* to chords rooted on A, one is tempted to propose a long-term relationship with the focal pitch of D that opens the work and underpins the first link in the chain (a dominant implication at the end of the piece, for example). The ten-minute time-scale is perhaps short enough for this connection to have some significance, although the aural reality for most listeners is that the intervening musical substance of the work eradicates from the memory any retention or recollection of the opening note. It is possible, however, that the long-term pitch relationship has some significance for Lutosławski who still retains perfect pitch.

Chain 3

The first stage of *Chain 3*, introductory in character, seems to be conceived in a way similar to the first movement of the Second Symphony, *Hésitant*. The latter's scheme of six episodes (alternating with five refrains) is also identified with particular small instrumental groupings strongly contrasted against each other. Chain technique is not used in the first movement of the Symphony, however; there the episodes and refrains do not overlap but are self-contained and clearly audible as sectional.

Some aspects of the orchestration in *Chain 3* are worthy of attention. Two of these have already been mentioned, the cantabile passage for the brass section from Fig.37 and the contrasted instrumentation for the twelve chain links in the first stage of the form. In terms of the pitch organisation there are also some local details which illustrate the composer's sensitivity not only to the identity and character of the chord types he assigns to the three harmonic strands, but also to the need for these local harmonies to be detected by the ear as much as the eye. At Fig.16, for example, the eight woodwind parts (3 flutes, 3 oboes, 2 clarinets) produce a deliberately blurred passage which is the result of thickening a single monodic line. Blurring is achieved by rhythmic differentiation in each of the six parts, although using the same notes. The four main harmony notes in this passage (F, Db, Bb, Gb), form a major-seventh chord (type F). The presence in the individual horizontal lines of many passing and auxiliary notes means that this four-note chord may not be heard clearly, so the composer has highlighted the four pitches in the xylophone part.

Although *Chain 1* and *Chain 3* both cover a similar ten-minute time-span and use chain technique for the first formal stage, there are considerable differences between their respective second and third stages. *Chain 1* has its network of *cantabile* lines, played in *ad libitum* bundles, whilst *Chain 3* has its long *cantabile* string line played in a conventionally metred way; the former is prone to stasis, whereas the latter has greater pace. *Chain 1* makes little use of pitch differentiation between chordal and linear features, whilst *Chain 3* depends largely on this principle both for the second stage and the overlapping links of the first stage.

Chain 3

Both works have their overall climax very late in the form: *Chain 1* reaches this point at 9/10ths; *Chain 3* reaches it only slightly later (see Table 2:3). Although the placing of the climax is at a similar point when expressed in terms of its proportion to the overall duration, neither the means of reaching the overall climax nor the way of leaving it are similar. *Chain 1* reaches its highpoint within an *ad libitum* section, akin to the String Quartet where each of the four players reaches an individual rather than collective moment of climax. The climax itself is one of maximum harmonic density achieved by a widely-spaced 12-note chord-aggregate converging onto an elementary 12-note chord of minor seconds densely clustered within one octave. *Chain 3* has a collective climax on a chord which does not contain all twelve notes but has a more open sonority heard as a strongly rooted A major triad with upper harmonic extensions (7th, 9th, 11th and 13th). This chord is played *fff* by the whole orchestra but loudness must not be confused or equated with harmonic density.

Although *Chain 3* conveys an impression of greater musical substance than *Chain 1*, this feature is structurally as problematic as it is positive. Ultimately, the comparisons that obtain with the Second Symphony are to the disadvantage of the later work, because one expects the formal scheme to be presented over a longer time-span than ten or eleven minutes. Thus there can be a sense of premature culmination at Fig. 44; a psychological effect of disappointment that the piece is constrained within the limits of a concert overture rather than being allowed to develop on a more symphonic scale. In spite of these reservations, *Chain 3* can be regarded as a significant addition to Lutoslawski's body of orchestral works, due to the composer's re-alignment of focus towards expressive melodic line, harmonic sonorities emphasising minor thirds and perfect fifths, and greater control exercised over the application of aleatory procedures.

CHAPTER NINE

Partita, Interlude, Chain 2

The presence of two similar *concertante* pieces by Lutosławski is a puzzle that requires some comment and explanation. Even the most cursory glance at his list of major works (excluding short *pièces d'occasion*) reveals that he has tended to avoid duplicating instrumental or vocal forces. Hence there is only one Cello Concerto, one Piano Concerto, one work for tenor and orchestra, one for baritone and orchestra and so on. Although there are three symphonies there is no real duplication between them as each is from a different stylistic period and reveals a different approach to large-scale form. Even other orchestral works such as *Livre pour orchestre* and *Mi-Parti* differ greatly in form or content, or both. The three 'Chains' share the same generic title but each has very different instrumentation. Against this background it appears strange that there are two *concertante* pieces for violin and orchestra: *Partita* and *Chain 2*.¹

Partita was composed in the autumn of 1984 for the St. Paul Chamber Orchestra in Wisconsin. When Lutosławski began work on the project he sketched a piece for violin with orchestra instead of the piano. Although offered the larger piece the orchestra declined, and maintained their request for a chamber piece.² Putting to one side the sketches that were to become *Chain 2*, he honoured the commitment and turned his attention to a duo for violin and piano. Meanwhile, Paul Sacher, who had already commissioned the Double Concerto, heard of the plans for another *concertante* work and commissioned Lutosławski to complete it.³ By the time *Partita* received its première on 18 January 1985, Lutosławski was already working on *Chain 2* which he completed later that year and dedicated to Sacher. Thus he found himself in the position of composing two similar pieces at the same time, albeit through force of circumstance rather than design. After the première of *Chain 2* with Anne-Sophie Mutter, Lutosławski began to think of orchestrating *Partita* so she could perform both works together in the same programme. Other projects prevented him from carrying this out immediately, but after completing *Chain 3* and the Piano Concerto, he turned his attention to the new orchestral version of *Partita* which he dedicated to Mutter. Paul Sacher then commissioned a short orchestral piece to link the two *concertante* works. *Interlude* was written in the autumn of 1989, and the first performance of the triptych, embracing *Partita*, *Interlude* and *Chain 2*, was given in Munich on 10 January 1990.⁴

PARTITA

It has been an interesting feature of Lutosławski's later work that he has turned once more to the resources of chamber music. This has come as something of a surprise after the ensemble pieces of the 1960s and 1970s, particularly in view of the fact that both the application of aleatory counterpoint to polyphonic textures and his dense harmonic language of 12-note chords are more suited to orchestral than chamber forces. To a large extent this return to chamber music has been accidental, due to circumstances rather than planning. Both *Epitaph* and *Grave* are *pièces d'occasion* written as memorial tributes, whilst *Partita* resulted from a fortuitous misunderstanding over the precise nature of the instrumental forces proposed by its commissioners.

Due to its unusual birth, *Partita* has hitherto been overshadowed by its sister, *Chain 2*. One should not look upon the duo, however, as in any way inferior either to its sibling or to the later and inevitably more colourful orchestral version. In fact, *Partita* can be seen as occupying a central position in the evolution of Lutosławski's late style, and even more significantly, a compositional breakthrough for the composer in several respects: it is his most substantial piece of chamber music since the String Quartet; its lyrical treatment of the violin paved the way for the emphasis on melody that characterises *Chain 2*; and perhaps most important of all, he found a satisfactory way of writing for the piano, an instrument conspicuously absent from his catalogue of works composed since the adoption of aleatory procedures. Once explored and exploited in *Grave* and *Partita*, this directly enabled him to compose the Piano Concerto. *

It is not merely coincidental that the evolution of Lutosławski's late style since 1979 has been very closely connected with his preoccupation with *concertante* works. In turn, each of these has been preceded by a chamber piece acting as a kind of compositional essay for the larger piece to follow. Thus completion of the Double Concerto for oboe and harp was preceded by *Epitaph* for oboe and piano. Due to the highly developed and soloistic nature of the instrumental writing for both violin and piano in *Partita*, this piece stands in a similar relationship to both *Chain 2* and the Piano Concerto.

Partita

Both *Partita* and *Chain 2* display the various harmonic and melodic features of Lutosławski's late style, but they also reveal another characteristic which is perhaps even more readily perceived by those listeners already acquainted with his earlier works: a considerable reduction in the proportion of each work written according to the *ad libitum* technique of aleatory counterpoint, and a corresponding increase in the amount of conventionally notated metre. This has given the late works more pace, more rhythmic energy, and less of the static quality associated with *ad libitum* writing. This was first shown in the Double Concerto, and in *Partita* and *Chain 2* the clear division between aleatory and metred writing corresponds to the structural subdivision into separate, self-contained sections.

Partita consists of five movements. The first, third and fifth carry the main weight, whilst the second and fourth are conceived as interludes. Each of the main movements is metred and notated with bar-lines and time signatures, whilst the second and fourth movements are both played according to the *ad libitum* technique. In addition, there is a strategically placed passage of *ad libitum* playing near the end of the final movement which acts as the overall climax of the work.

Each of the main movements can be subdivided into clear formal stages. The first and third movements each consist of four stages, the last of which moves towards its highpoint and then subsides. The final movement has five stages: three preceding the overall climax; the climax itself; then a fast, exuberant Coda. As one tends to expect with the music of Lutosławski, not only is the work as a whole goal-orientated, but each of these main movements has its own highpoint. In the case of the first and third movements, however, these highpoints are managed in such a way that they do not rival or undermine the effect of the more decisive overall climax in the final movement.

Table 9:1 is a structural segmentation showing the division of *Partita* into its five movements and subdivision into their respective formal stages.

Partita

Table 9:1 *Partita*: formal scheme

<u>Movement</u>	<u>Metre</u>	<u>Bar/Fig.</u>	<u>Section</u>	<u>Function</u>
FIRST	metred	1- 28	stage 1	
		29- 49	stage 2	
		50- 65	stage 3	
		66-107	stage 4	build-up, highpoint, subsides
SECOND	<i>ad. lib.</i>			interlude
THIRD	metred	1- 21	stage 1	
		22- 46	stage 2	
		47- 65	stage 3	
		66- 82	stage 4	build-up, highpoint, subsides
FOURTH	<i>ad. lib.</i>			interlude
FIFTH	metred	1- 39	stage 1	
	metred	40- 57	stage 2	
	metred	58- 90	stage 3	build-up, <i>pp-ff</i>
	<i>ad. lib.</i>	91	stage 4	CLIMAX
	metred	92-118	stage 5	Coda

Structural subdivisions in *Partita* are easier to identify than in some other late works as the composer does not use his chain technique of overlapping phrases or sections. In *Chain 2* the soloist and orchestra often represent the links that begin and end at different points. In *Partita*, however, the violin and piano parts both coincide at all the main structural points without any deliberate blurring or overlapping between the formal components.

The subdivisions within the first movement correspond to and are largely determined by the different methods of pitch organisation employed. Of these the most important is the principle of pitch separation whereby the chromatic whole is partitioned into complementary sets, a certain number of pitch-classes being assigned to each instrument. Each of the four stages uses this principle to some extent, and it governs nearly all of the first stage which depends for its differentiation between melodic line and harmonic accompaniment (violin and piano, respectively) on pitch separation between the two instrumental timbres. Table 9:2, below, shows how the twelve available pitch-classes are partitioned between violin and piano. The only overlap between the two parts is in bars 17-20, where the piano plays a succession of four-note chords which duplicate a few of the notes used in the violin line. All the rest of this section adheres rigorously to the principle of pitch complementation.

Partita

Table 9:2 Partita : pitch division in the first movement, stage one

Bars	Pitch classes		Pitch division
	Violin	Piano	
1- 5	-- (tacet)--	F, F#, G; B, C, C#	0 + 6 = 6
6-10	G, G#, A; C#, D, Eb	F, F#, G; B, C, C#	6 + 6 = 12
11-12	G#, A, Bb; D, Eb, E	F, F#, G; B, C, C#	6 + 6 = 12
12-14	E, F, F#; A, Bb	B, C, Db, D; G, Ab	5 + 6 = 11
14	Bb	Eb, E, F, Gb	1 + 4 = 5
15	E, F; A, Bb	B, C, Db, D; G, Ab	4 + 6 = 10
15-16	A, Bb; C#, D	Eb, E, F, Gb	4 + 4 = 8
17-18	D, Eb; Ab, G	C#, G, Bb, D	[duplication]
19-20	[3-note cells]	[4-note chords]	[duplication]
20-23	A#, B, C, C#, D, D#, E	F, F#, G, Ab, A	7 + 5 = 12
24	B, C, Db; E	G, G#, A, Bb	4 + 4 = 8
25	C#, D, Eb, E	F, Gb, G, G#, A, Bb, B, C	4 + 8 = 12
26-28	G, Ab, A, Bb	B, C, C#, D, D#, E, F, Gb	4 + 8 = 12
28	Bb	G, Ab, A; C, D, Eb	1 + 6 = 7

Strict division into complementary hexachordal sets can be observed from the outset. Example 9:1 shows the first page of the score, including the five-bar piano introduction, followed by the first four bars of the initial violin line.

Ex. 9: 1

I. ALLEGRO GIUSTO
 J. c. 100

The image shows a musical score for the first movement of the Partita. It includes a tempo marking of 'I. ALLEGRO GIUSTO' and a metronome marking of 'J. c. 100'. The score is divided into two parts: a five-bar piano introduction and the first four bars of the violin line. The piano introduction is written in G major and 3/4 time, featuring a series of arpeggiated chords. The violin line begins on bar 6 and consists of four bars of eighth-note patterns. The score is presented in a standard musical notation format with a treble clef for the violin and a grand staff for the piano.

Partita

In bars 6-10 the piano supplies six pitches (E, F, F#; Bb, B, C), whilst the violin supplies the complementary hexachord (G, G#, A; C#, D, Eb). The subdivision of the chromatic whole is not merely into two groups of six notes but operates in four layers, each comprising a three-note cell of adjacent semitones. These four layers are then assigned to the two instruments so that their lines interlock: E, F, F# (piano); G, G#, A (violin); Bb, B, C (piano); C#, D, Eb (violin). In bars 6-10 the pianist plays arpeggiated patterns which make use of the six pitches assigned to this part whilst ascending through sequential transpositions from a low to a high register.

A similar method of pitch organisation is used for the first five bars, played by the piano alone. Here we find the same type of pitch division with six notes assigned to the piano (although the remaining six notes are not used). This hexachord is also derived from two three-note cells: F, F#, G; B, C, C#; the distances between them imply two other three-note cells that are not stated, thus subtly creating two void areas which the entry of the violin will fill. One of the piano's three-note cells appears clearly with the notes immediately adjacent: B, C, C#. The other is split with only F/F# appearing in the right-hand part complemented by the sustained low G below. Repeating the low G at a higher register would also introduce octave relationships vertically, an effect which the composer seems to be at pains to avoid, at least in this context.

The unfolding of the piano figurations in the first five bars works through the six available notes in ascending order applying two four-note semiquaver patterns: the first (a) has two notes rising balanced by two falling; the second (b) is a repeated note figure. These patterns multiply in three stages as follows: a+b ; a+a+b ; a+a+a+b. The effect of growth is due not only to the multiplication of pattern 'a' but also to the extension of pattern 'b' which, on its third appearance is ten semiquavers long, growing by the addition of another semiquaver each time: 4+4 ; 8+4 ; 12+10 (1+2+3+4=10). For the composer, these piano figurations have both rhythmic and tactile associations which represent a kind of allusion to some aspects of Baroque music, hence his choice of title. Similar tactile pianistic figurations are found in the second movement of the Piano Concerto.

Partita

The first five bars are 'rooted' on G natural. This is also the first note of the initial violin entry in bar 6, the open G string. At the same point the piano's lowest note changes from G to low F#, so that the violin entry on G emphasises a minor ninth above the bass note. The composer's predilection for the minor ninth has already been discussed in Part One (see Exx. 3:5 and 4:35), and the interval continues to play an important role in his later harmonic language.

Minor ninths (or augmented octaves) appear as an important feature later in the first stage, between bars 20 and 23. There in the piano part we find a five-note group of adjacent minor seconds forming a simple chromatically rising line (F, F#, G, G#, A), but distorted and disguised by the use of octave displacement. The resulting minor ninths are played in four canonic phrases covering a very wide register of five octaves. If one takes this segment of the piano layer out of context, divorcing it from the violin line, then the effect of this combination of minor ninths and canons overlapping in stretto is strongly reminiscent of Webern. It is perhaps inevitable that a harmonic language which habitually combines interval classes 1 and 6 should at times evoke Webern's music. When this happens in Lutosławski's work it would seem to be a perfectly natural outcome of the interval disposition and does not suggest that the composer is consciously intending to activate any association with other composers' music or to play on any allusions. 6

The second formal stage of the first movement begins at bar 29 where there is an abrupt change, both harmonically (in the piano part) and melodically (in the violin line). The melodic foreground for the violin is marked *cantabile* for the first time, although it is still based on the principle of pitch separation, in this case covering six notes (including quarter-tone passing notes) from B-E inclusive (Ex. 9:2).

Ex. 9: 2



Partita

A more significant change takes place in the background harmony, introducing a type of chord which has implications for the structure not only of this movement but of the work as a whole. The piano plays six notes (four pitches) superimposing two minor third intervals a minor ninth apart: F#-A in the low register, and G-Bb in the middle register. The chord is both conspicuous and memorable: it decisively interrupts the fast pace we have had so far, and is then sustained for six whole bars, thus allowing its distinctive intervallic character to be stored securely in the memory. When the chord does change (b.35) it begins a gradual ascending sequence which eventually arrives six bars later on another, similar chord transposed a minor third higher. This passage of twelve bars (Ex.9:3 shows a reduction) introduces a type of minor third harmony which plays an important role in the middle of the third movement and much of the final movement, including both the climactic *ad libitum* section and the end of the Coda.

Ex. 9: 3

The image shows a musical reduction of a twelve-bar passage. It consists of two staves. The upper staff is a single melodic line with various accidentals (sharps, flats, naturals) and note values. The lower staff shows a series of chords, with some notes marked with accidentals. Below the lower staff, there are rhythmic markings: '3+4', '3', '4', '3+4', '3', '4', '3', '4', '3+4', '3', '4', '3+4'. These markings likely indicate the duration of the notes or chords in the lower staff.

In each of the three main movements a similar chord of superimposed minor thirds appears at a comparable stage in the form. In the first movement it marks the beginning of the second stage (bar 29f). In the third movement it also marks the beginning of the second stage (bar 22f). In the final movement it provides the background harmony for bars 13-21, reappears from bars 35-39, is transformed in stage 2 (bars 40-57) into a chord of superimposed *major* thirds, governs all the harmony of the entire climax section (stage 4, bar 91), and finally is used to conclude the work. Clearly, this material is of primary significance to the overall dramatic shaping of the work and may be regarded as the most important aspect of the vertical pitch organisation, complementing the ubiquitous three-note cells that predominate in the horizontal plane.

Partita

The third stage begins with a passage of three-note cells of melodic interval-pairing 1+2, played *pianissimo* and *dolcissimo* by the violin in its highest register (Ex. 9:4). Beneath this line, the piano plays a chromatically descending sequence of five-note chords. There is no duplication of pitches between these two levels, the separation into foreground and background is decisive and complete.

Ex. 9: 4

The musical score for Ex. 9:4 consists of two staves. The top staff is for the violin, marked with a *5^o* (5th position) and *8va.* (8va) above the staff. The music begins with a whole note chord, followed by a series of eighth notes. The bottom staff is for the piano, showing a chromatically descending sequence of five-note chords. The tempo is marked *sub pp* and *dolcissimo*. The key signature has one sharp (F#) and the time signature is 3/4.

The fourth and final stage drives towards the highpoint of the first movement and includes its aftermath, a brief passage of subsidence. Stage 4 begins with canonic imitation (Ex. 9:5) between the violin as leader and the piano as follower (*dux* and *comes*). Beginning at bar 66 there is a six-note phrase projecting melodic interval-pairing 1+6. The first entry is in the violin part: G, C#, D, G#, A, D# (interval classes 6-1-6-1-6). The second entry (D#, A, A#, E, F, B) follows in the piano part at the distance of only one crotchet, in *stretto* with the first entry. Third and fourth entries follow in bars 68-70, also in *stretto*: E, A#, B, F, F#, C; and C, F#, G, C#, D, A#. Here the relationship between horizontal and vertical planes is particularly interesting: whereas the former is generated by interval-pairing 1+6, the latter provides combinations according to the pairing 2+5.

Ex. 9: 5

The musical score for Ex. 9:5 is a three-staff score. The top staff is for the violin, the middle for the right hand of the piano, and the bottom for the left hand. The tempo is marked *Tempo I*. The key signature has one sharp (F#) and the time signature is 3/4. The score shows a series of six-note phrases in the violin part, with corresponding entries in the piano part. The violin part includes interval class numbers (6, 1, 6, 1, 6) above the notes. The piano part includes interval class numbers (2, 5) below the notes. The score ends with a final chord in the piano part.

Partita

The final build-up to the climax of the movement (bars 84-98) is divided into three layers. The high harmonic strand is occupied by the violin which plays driving, motoric triplets made from three-note cells of melodic interval-pairing 1+2. At the ends of phrases, where the violin line pauses briefly to 'breathe', the piano contributes cells in the same register so that the perpetual motion is almost unbroken. The middle strand plays the leading role in this passage and plays a succession of 34 chords linked by melodic interval-pairing 2+5 (Ex. 9:6). Only one horizontal interval does not conform to interval-pairing 2+5: the minor third E-G just before the end of the sequence.

Ex. 9: 6

The image shows a musical score for three staves, labeled with bar numbers 84, 92, and 98. The top staff is in treble clef and contains a series of chords and melodic fragments. The middle staff is also in treble clef and continues the sequence. The bottom staff is in bass clef and provides a low register accompaniment. The notation includes various rhythmic values, accidentals, and dynamic markings.

Vertically, there are only two or three notes, several containing only one pitch class with one octave doubling. It is, however, reasonable to consider the whole passage as a chord sequence because when other pitches are present (due to thickening of the melodic line caused by the retention of a note or notes from the previous chord) these are always in accordance with interval-pairing 2+5 when read vertically from the top note downwards. Thus the method of pitch organisation in the middle strand is primarily horizontal but also determines the vertical as well. The low strand supplies various three-note chords produced by interval-pairing 3+7 (minor third and perfect fifth). This obtains until bar 91, after which the low strand supplies an ascending sequence of minor ninths and semitones derived from three-note cells.

Partita

The apparent destination of this whole passage is the chord at bars 99-100 and a repeated B natural played in the violin's top register. One would normally describe such an effect as climactic, except that the composer carefully manages this stage in the form to ensure that the overall effect is anti-climactic. The true destination of the passage is the whole bar's rest (102) which interrupts the driving triplet semiquaver momentum. At this point in the form, instead of silence, one would normally expect Lutosławski to deploy a 12-note chord-aggregate, played *fortissimo*. But the listener's expectation is denied. The violin resumes its repetition of B natural, but quietly (as a high natural harmonic), followed by a 12-note chord-aggregate played *pianissimo*. This chord has already been quoted in Chapter 3 (Ex. 3:13c) as one of the few examples in *Partita* of a complete aggregate of all twelve pitch-classes, and is of the kind which uses the same chord type in each of the outer strands (type B) with a complementary configuration in the middle strand (type K). After further repetition of the note B in the violin part, *pianissimo* and at a lower octave, the piano plays a chord-aggregate of only eight pitches (chord types K and J), complemented by the remaining four notes from the violin presented as an arpeggiated diminished-seventh chord (type A). The movement ends crisply with a three-note chord of two adjacent semitones, yet another use of the ubiquitous 1+2 cell. The succession of chords is shown in Ex. 9:7.

Ex. 9: 7

The image shows a musical score for two staves: a piano part (bottom) and a violin part (top). The piano part begins with a *pp* dynamic marking and a *Rd.* (ritardando) marking. The violin part features a triplet of semiquavers. Two vertical boxes highlight specific chord aggregates: the first box is at the end of the first system, and the second is at the end of the second system. Dashed lines connect notes between the piano and violin parts, indicating harmonic relationships. The score concludes with a three-note chord in the piano part.

Partita

Lutosławski's avoidance of a decisive climax in the first movement sheds an interesting light on his general approach to the dramatic shaping of large-scale forms. In this case, a strong climax so early in the work would undermine the effect of any later climax. In fact, the first and third movements each have their own highpoint, but the climactic combination of full chromatic density and dynamic intensity which results when a 12-note chord-aggregate is played *fortissimo* does not occur at all in *Partita*, even in the *ad libitum* section of the final movement.

The *ad libitum* second movement is intended as an interlude between the more rigorously structured first and third movements. It acts as a period of relaxation, of relative repose. Whilst the first movement is rhythmically energetic and fast moving, the third is emotionally highly charged and expressive. By contrast with the movements on either side of it, the second is melodically less expressive, harmonically more static, rhythmically more relaxed and emotionally more neutral. The notation used is like that of the String Quartet, whereby each player reads from the notes written within a self-contained box. This overrides the conventional rhythmic coordination of notes vertically aligned on the page. 7

Both instrumental parts in the second movement can be divided into two sections. These are clearly identifiable in each individual part, although the absence of precise rhythmic co-ordination means that the change is highly unlikely to occur at the same moment in both parts. In the first section the piano has only five pitches (F, A, C, Db, E), playing quick demi-semiquaver groups in both high and middle registers. The beginning of the second section in the piano part is marked by the introduction of a sixth note, Ab, and by the use of low bass notes underpinning arpeggiated chords which are sustained with the pedal. In the violin part, the first section has little scurrying figures played *pianissimo* in a high register using the six pitches which do not occur in the piano part (F#, G; A#, B; D, Eb). The second section continues to use the same pitches but in phrases which outline rising arpeggios of five-note chords drawn from the six available notes (B, D#, F#, G, A#; then G, B, D, Eb, F#).

Partita

The third movement, like the first, consists of four formal stages. Certain similarities between these movements are apparent in the treatment of the second and third stages: the former (bb.22-46) reintroduces harmony based on superimposed minor thirds; the latter (bb.47-65) begins with more repose than the preceding stages. Similarities cannot be found, however, in the composer's treatment of the first and last stages, and particularly not in the relationships which exist between them. Overall, the structure of the third movement is simply A-B-C-A, but not in the sense of just returning to the opening material near the end. To suggest mere repetition would be misleading. Similar material is used, establishing aural recognition for the listener, but transformed and transposed.

This slow, central movement of *Partita* has a powerful combination of *cantabile* melody, regular rhythmic pulsation, and chromatically shifting chords, which makes it one of Lutosławski's most memorably expressive pieces. These three elements, appearing together from the outset (Ex. 9:8), establish an effect which is quite untypical of his music from the 1960s or 70s, although similar passages can be found in other late works, particularly the Coda of *Epitaph* (see Ex. 6:1f) and the slow movement of the Piano Concerto.

Ex. 9: 8

Violin

Piano

f cantabile

f

$\text{♩} = \text{c. } 50$

5

Partita

These opening eight bars illustrate how the composer exploits his favourite principle of separation into three distinct harmonic layers, although in this case they do not supply the complementary four-note chord patterns which would make up a 12-note chord-aggregate. The middle strand, however, is the closest to this approach, presenting a succession of three-note chords some of which appear to be four-note chord types with one of the notes omitted, eg. the second and third chords of bar 5.

The way these chords move reveals a predilection of the composer for voice-leading by gradual semitone alterations that create a genuine progression of harmony rather than mere succession of unrelated chords. It is possible that this type of harmony derives from Lutosławski's admiration for the innovative pianistic harmony of his most distinguished musical compatriot, Chopin. There are many examples of such harmony in Chopin, for example the A minor Mazurka op.17 no.4, the E minor Prélude op.28 no.4, and especially the F minor Mazurka op.68 no.4. •

It is no accident that a possible influence of Chopin surfaces in *Partita*. As Lutosławski's most exposed piece of piano writing since the Dance Preludes of 1954 and the Five Songs of 1957, the piece inevitably relates to his own experience as a pianist, in which the piano works of Chopin played such an important part. Hence the tactile associations of certain types of chords and chord progressions are just as important to this work as the tactile allusions to Baroque music conveyed by the rhythmic figurations at the opening of the first movement.

The middle strand of harmony, supplied by the pianist's right hand, has three phrases determined by the presence of particular repeated notes which act as focal points, holding together the chromatically shifting patterns surrounding them. The first phrase, covering the first eleven chords (bb.1-4) has a repeated G#; the second phrase, of eighteen chords (bb.4-9), has a repeated B; and the third phrase, comprising eleven chords (bb.9-13), has a repeated E. There is also an overlap each time this inner pedal note changes; two chords share both G# and B (chords 10-11), whilst three chords share both B and E (chords 27-29).

Partita

The upper strand, supplied by the violin's *cantabile* melody, revolves around certain three-note cells: A, Bb, Cb; C#, D, Eb; G, F#, F; with the addition of Ab used only twice as a passing note. These pitches used to generate the violin line do not all occur close together, so the composer is still able to ensure that there is no duplication of pitches between the three harmonic strands. The low strand fulfils primarily a rhythmic function in opposing the pattern of regular pulsation set up by the chords in the middle strand. The low notes, all with octave doubling, always change on the off-beat, providing a rhythmic effect which deliberately contradicts the crotchet-based metre of the other harmonic and melodic layers. The use of regular pulsation in this way, albeit contradicted, is an unusual feature to encounter in Lutosławski's music after 1960. It is the second of two rhythmic allusions to baroque music implied by the title of the work, the opening bars of the first movement providing the other.

The second formal stage of the third movement reintroduces the type of harmony based on superimposed minor thirds (linked by perfect fifths) which was first heard in the corresponding position in the form of the first movement. Complete separation of pitch applies throughout bars 22-32, where the background harmony is static, consisting of repetitions of the same four-note chord (F/Ab - Eb/Gb) which rise in pitch through two octave transpositions. One of the clearest illustrations of the kind of pitch separation which Lutosławski employs in the late works is provided by bars 30-32 (Ex. 9: 9). Here the piano sustains its four-note chord whilst the violin uses six of the remaining pitches contained within the band A-D.

Ex. 9: 9

The musical score for Example 9: 9 consists of three staves. The top staff is for the violin, marked *pp non vibrato flautando*. It features a melodic line with eighth and sixteenth notes, including some triplets. The middle and bottom staves are for the piano, showing a static four-note chord (F/Ab - Eb/Gb) in the right hand and its octave doubling in the left hand. The piano part is marked with a forte dynamic (f) and a fermata over the notes.

Partita

In the third stage of the form the leading role is taken by a particular kind of melody with grace notes, often encountered before in Lutosławski's work, which has already been referred to as *dolente* (see Ex. 4:15). It uses melodic interval pairing of minor and major seconds, and begins in a low register at bar 51, gradually creeping higher and higher, accompanied by a chromatic rising line underneath. Eventually this long *dolente* line reaches a symmetrically spaced seven-note chord of superimposed minor thirds around an unstated axis of F natural (Ex. 9:10).

Ex. 9:10

The musical score for Ex. 9:10 is presented in two staves, Treble and Bass clef, in 7/4 time. The bass line consists of a chromatic rising line: G2, A2, B2, C3, D3. Each note is accompanied by a grace note and a '5' fingering. The treble line consists of a melody of interlocking minor and major seconds: G3, A3, B3, C4, D4, E4, F4. Each note is accompanied by a grace note and a '5' fingering. Dynamics are marked as 'poco f' and 'mf' with hairpins. Pedal points are indicated by 'Ped.' markings with lines connecting the notes G, G#, and D.

This chord, however, is not the climactic destination of the gradual build-up that has taken place. The *dolente* line then continues, leading to a loud C major chord at bar 66, announcing the return of the opening material as the fourth and last stage in the form. Both the E natural at the top of this C major chord, and the G at the bottom, are a logical consequence and continuation of the chromatic lines which have preceded them. The *dolente* line rises to E, curling through its interlocking minor and major seconds, whilst the complementary line falls through semitones to arrive on G. The point of arrival is made dramatically decisive by the sudden intervallic contrast between the interval pairing of the *dolente* melody and the third-based harmony to which it leads. Just as certain repeated pedal notes bind together the falling chromatic progression of the opening section, here the gradually rising progression has three notes which act as focal points: G, G#, then D.

Partita

There is a highpoint (literally) to the movement, but even though it is dynamically climactic in the piano (*fff*), the overall effect is anti-climactic due to the violin's sudden decay on top C (*ffp - ppp*). The chord at this highpoint is yet another of those in which minor thirds are superimposed (see Ex.9:3), although here the connecting intervals are minor sevenths rather than the perfect fifths which obtain elsewhere. This six-note chord is sustained through to the end of the movement (Ex.9:11), and as it dies away the violin line subsides, *non vibrato*, through the remaining six pitches (C-F). The melodic line and harmonic accompaniment, hitherto separated by pitch division, are reconciled in the violin's final three-note figure (played three times) which duplicates the F#/Gb at the bottom of the chord (note the consistent use of pc sets 0,1,2 and 0,1,5 for all the earlier cells in the violin line).

Ex. 9: 11

The musical score for Ex. 9: 11 is presented in two staves. The upper staff is for the violin, starting at measure 78. It begins with a six-note chord marked *ppp* and *8va*. The melodic line is marked *non vibrato* and *Morendo*. The lower staff is for the piano, showing a six-note chord sustained through the end of the movement, marked *fff* and *Ped*. The score concludes with an asterisk.

The fourth movement, played *ad libitum*, is short and harmonically static. In both respects it contrasts with the movements on either side of it and achieves the composer's objective of providing merely an interlude, a period of relative relaxation. The pitch is organised vertically by separation and subdivision of the chromatic whole into four layers, each containing a three-note cell: D#,E,F (piano); F#,G,Ab (violin); A,Bb,B (piano); C,C#,D (violin). The only apparent deviation from this scheme is due to a misprint in the printed score: the fourteenth note on the third staff of the violin part should read Ab rather than A natural.

Partita

Melodically, the pitch organisation of the violin line in this interlude is not subject to any particularly systematic horizontal pairing of intervals. Rigorous application of this principle is precluded by the restrictions determined and imposed by the vertical pitch separation into complementary hexachordal sets of 6+6 and sub-division into four three-note cells. Even so, Lutosławski does tend to use some interval patterns more frequently than others which are also available. For example, there is an emphasis on interval classes 1 and 6 in much of the line. Tritones are particularly emphasised by the repeated oscillation between C/F# and G/Db; semitones are plentiful due to the intervallic nature of the sub-division into three-note cells.

Although harmonically static, there is an impression of dynamic growth as the interlude becomes progressively more agitated. It begins with the violin alone, *pianissimo*, playing in an expressionless way without vibrato. The dynamic level increases as the violin climbs higher and higher. Rhythmic agitation in the violin part is set against and compounded by an obstinate oscillation of two notes in the piano part (D#,E), making a crescendo from *pianissimo* to *fortissimo*. Thus even a short, supposedly relaxed interlude displays Lutosławski's instinct for goal-orientated schemes as it proceeds, without a break, directly into the beginning of the final movement.

The final movement of *Partita* can be subdivided clearly into five formal stages. The first (bars 1-39) is a vigorous Presto propelled by the motoric use of three-note cells used melodically. The second (bars 40-57) is slower and more reposeful, with the violin mostly playing quietly in its highest register above arpeggiated six and seven-note harmonies sustained by the piano. The third stage (bars 58-90) is a Presto which drives towards the climax of both this movement and the work as a whole. The climax in this case is not just a passing moment, but occupies a self-contained section of the piece (stage 4; bar 91), and is the only section within any of the three main movements to be performed according to the *ad libitum* technique. The fifth and final stage is a fast Coda (bars 92-118) which drives to a clear and decisively cadential ending.

Partita

Pitch organisation in the final movement is treated through a combination of horizontal and vertical methods. Even the *ad libitum* section which forms the climax is organised vertically (by set-complementation). The first two Presto sections, stages 1 and 3, and the latter part of the Coda, are organised mainly through the manipulation of three-note cells used melodically. These cells dominate the violin part, mostly in fast triplet patterns, but they also appear often in the piano part (both horizontally as melodic figuration and vertically as three-note chords). Stages 2 and 4 are both organised vertically through kinds of set-complementation: the former through an unequal division of five pitches for the violin and seven for the piano; the latter through an equal division of complementary hexachords for each instrumental timbre.

Several features illustrate the close relationship between *Partita* and *Chain 2*. For example, the latter part of stage 1 (bars 30-39) has the violin playing harshly aggressive three-note chords (Ex. 9:12b) derived from 1+2 cells in a way that recalls the *rude* passages from the second movement of *Chain 2* (see Ex. 9:19a). This effect contrasts strongly against a memorable passage from the violin line earlier in the movement (Ex. 9:12a) where the expressive quality is determined almost entirely by the same melodic interval pairing which provides the *soave* passages in the second movement of *Chain 2* (Ex. 9:19b): interval-classes 2+5 (see also Ex. 9:6).

Ex. 9: 12a



Ex. 9: 12b

Musical notation for Ex. 9: 12b. It consists of two staves in treble clef, 5/8 time signature. The dynamic marking "[f]" is below the first measure of the top staff. The top staff (violin) features a series of aggressive, harsh-sounding three-note chords, many of which are triplets. The bottom staff (piano) provides accompaniment with similar rhythmic patterns and chords.

Partita

The other ingredient during this first formal stage is the reappearance of chords containing superimposed minor thirds and perfect fifths (3+7). They first enter at bar 13 beneath the 2+5 melodic interval-pairing, and then re-enter between bars 35-39 where they become ambiguous due to alternation of the minor thirds with major thirds. The composer later exploits this ambiguity in the final bars of the work (similar play between minor and major thirds occurs in the Piano Concerto).

Stage two is slower and more reposeful. The principle of pitch separation applies throughout (bars 40-57) with varying distribution of notes between the violin and piano but no duplication of pitch. Harmonically this section is static, mainly due to the repetition of a seven-note chord. Appearing three times, it consists of superimposed major thirds in four harmonic layers. The lowest three have the perfect fifth as the connecting interval, hence the chord can be regarded as a variant of the minor third / perfect fifth chord which pervades the whole work.

Stage three drives towards the highpoint of the movement, which is also the overall climax of the work as a whole. Beginning *pianissimo* it gradually builds-up in dynamic to *fortissimo*, at the same time climbing from low to high registers. Rhythmic propulsion is achieved by means of three-note cells used motorically by both violin and piano in fast triplet patterns. These develop and extend the patterns introduced in stage one.

Set-complementation in the final movement is at its clearest in stage 4, the climax. Here the division is of the simplest kind, each instrument having a band of six pitches covering a perfect fourth: B, C, C#, D, D#, E assigned to the violin; F, F#, G, G#, A, A#, B assigned to the piano. This division into two comparatively wide pitch bands contrasts with the subdivision into complementary 3-note cells encountered elsewhere (eg. the beginning of the first movement, and the fourth movement) with alternate cells assigned to each instrument. No other method of pitch organisation is applied in this section, apart from an informal emphasis on horizontal use of semitones and major sevenths in the violin part and vertical use of superimposed minor thirds in the piano part (Ex. 9:13). Both these features are typical not only of this movement but of the work as a whole.

Partita

Ex. 9: 13

The musical score for Ex. 9: 13 consists of two staves. The upper staff is a violin line, and the lower staff is a piano part. The piano part features a complex texture of chords and intervals, primarily using 2+5 intervals. The violin line is more melodic, with a series of notes that ascend through perfect fourths. The piece concludes with a double bar line, a fermata, and an asterisk.

The fast Coda which ends *Partita* starts with three bars in which the pitch is organised horizontally (mostly intervals 2+5) in three layers, two in the piano part and one in the violin line (Ex. 9: 14). The middle layer, played by the pianist's right-hand, works through the total chromatic by ascending in whole-tone scale segments. These segments contain only five notes each and are linked to the next by perfect fourth (bar 92), then by minor thirds (bar 93) and eventually by semitones (bar 94). The presence of all twelve notes throughout this passage means that pitch separation to differentiate the layers harmonically is not possible. The upper layer, played by the violin, ascends through seven notes all in perfect fourths. The bottom layer adds notes which complement the whole-tone scale segments, either by duplication or by adding the sixth note of the scale.

Ex. 9: 14

The musical score for Ex. 9: 14 is divided into two systems. The first system covers measures 92 and 93. Measure 92 is marked 'Presto (♩. = c. 168)' and 'pp'. The piano part (left hand) plays a chromatic scale in segments of five notes, while the violin part (right hand) plays a series of notes in perfect fourths. Measure 93 continues this texture. The second system covers measure 94, where the piano part continues its chromatic scale and the violin part continues its perfect fourths. The piece ends with a double bar line.

Partita

After these three bars the pitch is again separated. Bars 95-103 comprise six phrases corresponding harmonically to the piano pedal markings. None of these provide the chromatic whole and each partitions a number of pitches less than twelve: 4+6; 5+6; 4+6; 3+6; 2+6; 4+6 (violin + piano). After the full chromatic density of the climactic section that precedes the Coda, Lutosławski appears deliberately to be avoiding the use of full twelve-note harmony. At bar 104 the three-note cells return: the piano repeating an ostinato pattern of F-Gb-E whilst the violin line expands upwards adding a note with each successive phrase (3+4+5+6+7+8 quavers). From the end of bar 107 to the conclusion of the work in bar 118 the three-note cells are transformed vertically into chords of superimposed minor thirds (Ex.9:15). An effect of instability is maintained by changing several times between chords of major and minor thirds. At the end of bar 114 we reach a chord of three superimposed minor thirds placed minor ninths apart (see Ex.9:11). The violin then plays three three-note chords, each of which has open E at the top and one of the piano's three minor third intervals underneath. The final cadence resolves the harmonic and intervallic conflict of this highly dissonant sound, rich in minor ninths, and the last chord decides in favour of the minor third F#-A, with A-E above (vertical pairing 3+7).

Ex. 9: 15

PARTITA, V, bb 107-118

8va.

111

p *ff*

Partita

The harmony of *Partita* is very distinctive. Based on the superimposition of minor thirds and perfect fifths (like the second stage of *Chain 3*; see Ex. 8:13) treated as a specific type of vertical interval pairing, a particular harmonic colour is created that is both instantly recognisable at each reappearance and lends itself to being contrasted against other types of intervallic combination. The way this harmony is used illustrates the composer's general approach in the late works. As the chords usually contain either four or six notes, at the most, the harmonic density of the supporting strand is not great and is sufficiently transparent to allow for the complementary pitches to be perceived as a horizontal strand with enough notes to allow for the composition of genuinely melodic lines.

The melody of *Partita* is both rich and varied. There are many examples of the principle of horizontal interval-pairing, the most common being that of minor and major seconds used to generate various types of line. The ubiquitous three-note cells appear in many guises, slow and lyrical, fast and motoric, quiet and scurrying. Although the composer does not consider himself to be a linear composer, *Partita* appears to demonstrate that, faced with the prospect of writing for a chamber music medium offering little opportunity for dense textural and harmonic effects, he is still able to respond to that challenge with musical material based on melody as its prime ingredient with harmony in a secondary and supporting role.

Aleatory polyphony in *Partita* is severely restricted, even by comparison with other late works. This is hardly surprising as two instruments can provide little scope for the characteristic 'going astray' which is part of Lutosławski's purpose in exploiting the technique. Whether by design or accident, the indirect result of restricting the *ad libitum* polyphony to self-contained sections has been to infuse the main movements of the work with a regularity of pulse and generally faster harmonic rhythm that avoids the static quality of earlier works and achieves both forward propulsion and rhythmic energy. These differences between the mature and late styles are clear if one contrasts *Partita* against Lutosławski's only other substantial chamber work composed since 1960, the String Quartet. The approach to large-scale form is different; the harmonic language and the role of the *ad libitum* technique are both radically different.

Partita

The orchestration of *Partita* evidently presented the composer with one major problem: how to translate the piano part of the *ad libitum* sections into orchestral terms without re-composing the aleatory counterpoint. His solution was to retain the duo partnership for these passages; thus the piano plays an important *obbligato* role in the orchestral version. The notation used is similar to the solution devised by the composer's wife for the score of the String Quartet. The part for each instrument is written in a self-contained box, overriding the conventional rhythmic co-ordination of notes aligned vertically on the printed page. This similarity of notation is perhaps the only parallel which can be drawn between Lutosławski's two most significant chamber works.

Comparing the instrumentation of *Partita* and *Chain 2*, one finds that the former has no oboes or untuned percussion, but unlike *Chain 2* it does require a harp. Apart from these slight differences the instrumentation is similar, and both pieces share an absence of horns. The use of tuned percussion to contribute foreground embellishments to the background harmony (glockenspiel, xylophone, marimba, vibraphone, celesta and piano) is common to both pieces and thoroughly characteristic of Lutosławski. The scoring is mostly light and transparent, with no risk of the soloist being overpowered by the weight of orchestral texture. The general level of textural and harmonic density is strictly controlled also to ensure that the solo part projects without undue difficulty.

When the orchestral version of *Partita* is followed in performance by *Interlude*, the listener's perception of both works is determined largely by the manner of proceeding from one piece to the other. For the first few hearings of the combined set, including the initial group of performances in Munich and the United Kingdom première, a clear break was made, allowing for applause and its acknowledgement by the performers. Whilst this break was not inappropriate to the decisively cadential ending of *Partita*, it did have the unfortunate effect of undermining the atmospheric beginning of *Interlude*. There appears to be a strong argument for performing the group of three works without any breaks between them. •

INTERLUDE

As is invariably the case with Lutosławski's goal-orientated large-scale forms, both *Partita* and *Chain 2* are structured in relation to the drive towards a decisive overall climax. In marked contrast to this dynamic approach, the *Interlude* which now forms the central panel in a triptych, linking the other two together in concert performance, provides a central five-minute period of calm, repose and relaxation.

Absence of the violin soloist, for whom the melodic richness of both *Chain 2* and *Partita* was developed, ensures that the focus of attention is no longer directed towards expansive horizontal lines. Instead, Lutosławski concentrates on harmony. As there is no overriding necessity in this case for him to restrict the harmonic density, in order to allow for the projection of melodic material, he is able to use the strings to provide a succession of slow-moving chords which are harmonically dense by comparison with those used in *Partita*. Against this subtly shifting harmonic background of muted *pianissimo* string sound, other instruments enter occasionally to play fragmented little embellishments set in relief. The overall effect is not unlike *The Unanswered Question* by Charles Ives, one of the earliest examples (1908) of contrasted instrumental groupings being co-ordinated in a way similar to Lutosławski's system of conducted cues. In *Interlude*, however, there is no *ad libitum* playing, the piece consisting of eighty bars in conventional metre.

The strings are sub-divided into eight parts, with basses doubling the second group of cellos (an octave lower) to form the lowest part. These eight parts combine to deliver a harmonic texture of 8-note chord-aggregates. Each individual part alternates between two notes of the chord in one of four clearly defined harmonic strands: high, upper-middle, lower-middle, or low. As two parts are assigned to each strand, each alternating between their given notes, the whole chord can be sustained for much of the time, even though the individual parts are not static. The change from one chord to another is deliberately blurred by altering the notes only very gradually, and at different moments in each part. Further harmonic blurring is caused by the use of auxiliary notes.

Interlude

Lutosławski's use of 8-note rather than 12-note chord-aggregates in *Interlude* is in keeping with the general approach to pitch organisation revealed throughout his late works. If the string chords had contained all twelve notes, the resulting pitch duplication between the occasional foreground embellishments and the omnipresent background harmony would produce the type of problem which led the composer to be dissatisfied with the first stage of *Mi-Parti* (see Chapter Four). Sensitivity towards this issue continues to guide his decisions on the relationships between melodic line and supporting harmony, and the various methods of pitch division used to separate these two planes.

By the time the various parts have entered, and the first 8-note chord is complete (bar 9), one hears a distinctive sonority which will re-appear regularly throughout the piece as part of an underlying sequential progression. In the lowest of the four harmonic strands, cellos and basses combine to play the perfect fifth E-B. Above this, in the lower-middle harmonic strand, subdivided violas play another perfect fifth, G-D. The sum of these two strands is the minor-seventh chord E-G-B-D (four-note chord type C). In the upper-middle strand, subdivided second violins play the minor sixth A#-F#, whilst in the highest strand the subdivided first violins play another minor sixth, C#-A. The sum of the upper strands is the major/minor chord A#-C#-F#-A (four-note chord type H).

The combination of four-note chords C and H is encountered in many of Lutosławski's mature works (see Ex.3:13), although usually as components of a full 12-note chord-aggregate, together with their four-note set complement, another minor-seventh chord. As this type of aggregate is used to provide the main events in the dramatic scheme of *Chain 2* (see Ex.9:28), it is entirely appropriate that the harmony of *Interlude* should prepare the ear for the types of chord and sonority which are to follow.

Gradually the parts move, changing pitch at different times so that the overall change of harmony is so blurred as to be almost imperceptible. But by bar 13 all parts have risen a semitone, to produce an exact upward transposition of the first chord, introduced in bars 1-10.

Interlude

Example 9:16a provides a harmonic reduction of *Interlude*. The underlying progression (here it is more than mere 'succession') contains fifteen 8-note chord-aggregates, each consisting of chord types C and H in the low and high harmonic strands, respectively. These minor-seventh chords and major/minor chords are shown below, first with their spacing as in the score (maintaining the original spelling of accidentals), then reduced to a compact format (with enharmonic changes to accidentals) in order to show clearly the identity of each four-note chord type.

Ex. 9: 16a

The image displays a musical score for Ex. 9: 16a, illustrating 15 chord aggregates. The top section shows the original notation with two staves (treble and bass clef) and 15 measures, each containing a chord aggregate. The bottom section shows a compact format of the same 15 chord aggregates, with enharmonic changes to accidentals to clarify their identity. The chord aggregates are numbered 1 through 15.

Ex. 9: 16b

The image displays a musical score for Ex. 9: 16b, showing an 18-note bass line. The bass line is written on a single staff in bass clef, starting with a three-note cell and extending sequentially with rising minor thirds to form groups of 4, 5, and finally 6 notes. The bass notes always provide the root of a minor-seventh chord, except for the last three (B, D, F).

Horizontal progression between the 8-note chords is determined by an eighteen-note bass line (Ex. 9:16b), which follows an ascending, sequentially extended pattern determined by interval-pairing 1+3 (minor seconds and minor thirds). This pattern grows from a three-note cell of minor second and minor third, extended with additional rising minor thirds to make a group of 4, then 5, and finally 6 notes. Each group begins on the penultimate note of the preceding group. Bass notes always provide the root of a minor-seventh chord, except for the last three (B, D, F). By that time, as we approach the end of the piece, the separate harmonic strands have converged and overlapped to such an extent that identification of individual chord types would no longer be meaningful.

Interlude

Curiously, the harmonic blurring achieved by changing the rhythmic values at different times in each of the eight parts, seems to show Lutosławski aiming for an overall polyphonic result more characteristic of *ad libitum* counterpoint than a *battuta* co-ordination; and yet the piece is metred throughout. He could easily produce a rhythmically complex background texture by aleatory means, although this would inevitably restrict the changes of harmony and result in the problem of harmonic stasis discussed in Chapter Five. *Interlude* provides an interesting example of Lutosławski apparently confronting this problem, deciding on a solution which maintains a slow-moving but fairly constant underlying harmonic rhythm.

In order to maintain control over the polyphony, Lutosławski adopts a method of rhythmic canons involving all eight parts. His treatment of this method, however, is not strictly systematic. Instead of allowing the method to generate all the rhythmic values with repetitive consistency, he overrides it, deliberately introducing discrepancies. His prime reason for doing this may be deduced from observing the overall result: a complex polyphonic texture of superimposed rhythmic layers whose synchronisation is prevented.

Discrepancy is introduced in the number of durations within each rhythmic phrase (*talea*): most consist of fourteen notes, but some contain only thirteen. The first note of each *talea* is always the longest, beginning with a value of thirteen semiquavers for the initial entry in each part. Thereafter, each *talea* has a pattern of successively shorter durations. Discrepancy is also introduced in the pattern of foreshortening.

Table 9:3 shows the order of entries, with the rhythmic value of each duration expressed in multiples of the lowest common denominator, the semiquaver. For each part, only the first four rhythmic phrases have been shown below. At the end of each line an additional column is provided, giving the overall duration of each phrase in terms of semiquavers. Thus we see that the phrases become progressively shorter, although not by equal amounts. The duration of the first phrase is slightly different in each part, ranging from 102 semiquavers (Violins I B) to only 90 (Cellos B).

Interlude

Table 9:3 Rhythmic canons in Interlude

Order of entries	Value of 13-14 rhythmic durations (in semiquavers)														Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Violas A	13	12	12	9	8	6	6	6	6	6	6	5	5	4	(93)
	11	10	10	8	7	5	5	5	5	5	5	4	4	-	(84)
	13	8	8	7	6	4	4	4	4	4	4	4	3	3	(76)
	9	8	8	7	6	4	4	4	4	4	4	4	3	-	(69)
Violins I B	13	12	12	9	8	6	6	6	6	6	6	6	6	-	(102)
	11	10	10	8	7	5	5	5	5	5	5	5	5	-	(86)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
	9	8	8	7	6	3	5	4	4	4	4	4	3	3	(72)
Cellos A	13	12	12	9	8	6	6	6	6	5	5	4	4	4	(100)
	11	10	10	8	7	5	5	5	5	4	4	4	3	3	(84)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
Violins IIB	13	12	12	9	8	6	6	5	5	5	5	4	4	4	(98)
	11	10	10	8	7	5	5	4	4	4	4	4	3	3	(82)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
Violins I A	13	12	13	9	7	5	5	5	5	5	5	4	4	4	(96)
	11	10	10	8	7	4	4	4	4	4	4	4	3	3	(80)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
Violas B	13	12	12	8	7	5	5	5	5	5	5	6	6	-	(94)
	11	10	10	7	6	4	4	4	4	4	4	4	3	3	(78)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
Violins IIA	13	12	10	8	7	5	5	5	5	5	5	4	4	4	(92)
	11	10	8	7	6	4	4	4	4	4	4	4	3	3	(76)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
Cellos B	13	10	10	8	7	5	5	5	5	5	5	4	4	4	(90)
	11	8	8	7	6	4	4	4	4	4	4	4	3	3	(74)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)
	9	8	8	7	6	4	4	4	4	4	4	4	3	3	(72)

However intriguing it may be to unravel such disguised techniques, it must be stressed that this rhythmic organisation is, in itself, of no aural significance whatsoever. It is simply a practical means of generating a particular degree of textural complexity for the string background. No aural connection between these rhythmic layers could possibly be made by the listener, who perceives the overall effect, the sum of the parts, rather than the intricate detail. The absence of systematic rigour in the organisation of rhythm shows that Lutosławski treats this parameter as subservient to his chosen method for the organisation of pitch.

Interlude

Melodic embellishments to the background string chords are provided by various combinations of the other instrumental tone colours, grouped in pairs (apart from bar 8 where the harp assists the cellos and basses by strengthening the lowest note of the initial 8-note chord). These pairs each consist of wind instrument(s) and a percussive instrument. In this context the harp can be regarded as 'percussive' in that it has a plucked attack followed by an immediate decay (like the piano which is also a percussion instrument with strings). Table 9:4 shows the eight pairs and the order in which they enter.

Table 9: 4 Instrumental pairs in *Interlude*

Bars	Foreground embellishments		Background harmony	
	Instrument pairing	Pitches	Chord	Set complement
1-10			1	F, Ab, C, Eb
11-12	1: piccolo/xylophone	F, C, Eb; F#, A, E		
13			2	F#, A, C#, E
19-20	2: oboe/marimba	D#, F#, A, C#, E	4	F#, A, C#, E
25	3: trumpet/harp	Gb, D, F		
26	" "	Bb, Db, F, Ab	6	Bb, Db, F, Ab
29	4: 2 clarinets/celesta	C#, E, G#, B, D#	7	C#, E, G#, B
30	" "	Db, F		
31	5: trombone/vibraphone	Bb, Db, F, Ab, C		
32			8	Bb, Db, F, Ab
37	6: cor anglais/glock.	D, F#, A, C, G#		
38			10	D, F, A, C
47	7: trombone/tub. bells	G#	12	G#, B, D#, F#
48	" " "	D, F#		
61-62	8: bassoon/piano	A, C, E, G	15	A, C, E, G

Lutosławski's choice of pitches for the foreground embellishments is determined mainly by the principle of set complementation in relation to the 8-note chords of the harmonic background. Where the foreground pairs coincide with one of the chords shown above in Example 9: 16a, they add the four-note set-complement. Where they do not coincide, but occur midway between the gradual transition from one chord to another, they make use of notes from the set-complements of both the previous and the following 8-note chord. For example, the first pair (piccolo/xylophone) uses three pitches from the set-complement of chord 1 (i.e. F, (Ab), C, Eb), as well as three pitches from the set-complement of chord 2 (i.e. F#, A, (C#), E).

Interlude

In the process of distilling the score of *Interlude*, in order to reveal its underlying progression of 8-note chords and their set-complements, it is likely that a misleading impression may have been given. The overall effect conveyed to the listener is not at all one of harmonic clarity, but one of softly focused harmonic haze. In this case it is tempting to make use of the descriptive vocabulary often summoned by those who write in facile manner of Debussy's harmonic language as 'impressionist'. Whilst resisting the temptation to use (or more probably abuse) analogies with painting, there may be some validity in analogies to photographic techniques and projection of photographic images. (As evidence that Lutosławski is conscious of such matters, one should note that amongst his most recent *pièces d'occasion* is an 80th birthday tribute for Elliott Carter entitled *Slides*, an intended photographic reference). Pitch differentiation between the foreground embellishments and the background harmony of *Interlude*, achieved by set-complementation, results in a peculiar aural effect which might be described in extra-musical terms as most closely equatable with focus and field-depth in photography. By rendering the background of 8-note chords rhythmically and harmonically blurred, Lutosławski sets the listener's aural focus on a field-depth which implies and requires something in the foreground. The colouristic highlights provided sporadically by the instrumental pairs enter and occupy this field-depth by supplying notes omitted from the background. By complete contrast with this approach of changing aural focus, the first stage of *Mi-Parti* might be described as 'fixed-focus'. For the listener, both treatments can be of equal validity; but the composer's preference is now clear. His late works demonstrate many different attempts to solve the problem of foreground and background separation. *Interlude* is one of the most interesting and constitutes a study in this one issue.

The overall shape of *Interlude* is one of gradual convergence, from very widely-spaced chords covering the maximum register, onto a central unison. As the number of pitches in each chord is reduced in the final bars, the harmony exposes the minor seconds and minor thirds which have provided the underlying progression for the whole piece, leading inexorably towards a conclusion on the final F.

CHAIN 2

The composer's own commentary on *Chain 2* (subtitled 'Dialogue for violin and orchestra') is characteristically brief, but includes some general remarks on the 'chain' principle, together with a statement concerning the development of his approach to the question of pitch organisation:

I composed *Chain 2* during the years 1984-85. The title of the work relates to its form. Over the last few years I have been working on a new type of musical form, which consists of two structurally independent strands. Sections within each strand begin and end at different times. This is the premise on which the term 'Chain' was selected... In the *ad libitum* movements and in the *ad libitum* section of the fourth movement the element of chance plays a part within fixed parameters. This has been a feature of my style since 1960 and always offers new possibilities. However, in the last few years I have been preoccupied more by the shaping of pitch (ie. melody, harmony and polyphony) than by the organisation of time. In my opinion the traditional scale, with its twelve notes, has not yet been fully exploited in terms of harmony. I believe that there are still many possibilities to be discovered, independently from Schönberg's twelve-tone [*sic*] technique. ¹⁰

Lutosławski's attitude to the resources of the chromatic scale had been steadily developing since *Mi-Parti*, with the decisive turning point marked by *Epitaph*. Yet, of the late works, only *Chain 2* carries such a note from the composer drawing attention to the evolution of his treatment of melody, harmony and polyphony. It is also significant that he lists these three elements in an order which implies renewed importance for melody.

Confidence in the potential of the chromatic scale to yield new and interesting results may explain why Lutosławski, unlike many other composers of the last decade, has not been tempted to flirt with references to the past through neo-romantic forms of expression. The example of Penderecki must be considered here, particularly since his neo-romantic works include several string concertos: the Violin Concerto, Cello Concerto no. 2, Viola Concerto, and a Violin Concerto currently in progress for Anne-Sophie Mutter.¹¹ Whilst Penderecki had reached an impasse at the end of the 1970s, from which he then turned towards his long-standing admiration for the music of Shostakovich and Bruckner, Lutosławski's continuing exploration of pitch organisation methods has enabled him, in *Chain 2*, to find fresh means of melodic expression without reference to the past.¹²

Chain 2

The first movement of *Chain 2*, as usual with Lutosławski's music, is intended to be introductory, fragmented, hesitant; this contrasts very strongly with the rhythmic energy at the beginning of *Partita*. It is not surprising, therefore, to find that the composer uses the *ad libitum* technique for most of this movement, all except ten metred bars. The solo violin plays the leading role throughout, with chordal rather than merely textural harmonic support from differentiated instrumental groups drawn from the orchestral resources available. The orchestra does not play *tutti* at any point in the first movement.

Structurally, there are five main stages in the unfolding of the violin line. The first extends from the opening tremolo between middle C/D to the equivalent tremolo between Db/C after Fig. 2. The second stage ends at Fig. 6 just before the passage of harmonics. The latter begins the third stage which soon develops into rapid, motoric four-note patterns played in microtones which drive towards the beginning of the fourth stage at Fig. 12. The fifth and final stage extends from Fig. 15 to the end of the movement. It must be stressed, however, that these structural subdivisions do not occur in a conventionally sectional manner. The whole idea of the chain principle is that the composer has been at pains to avoid a simple, sectional construction; by definition, sections do not necessarily begin or end at the same moment but are deliberately overlapped thus blurring the structural divisions of the form. We are confronted with a musical fabric woven from various strands, which renders at best artificial, at worst invalid, any analytical approach based on drawing sectional divisions vertically through the whole score. Instead, one should view the solo violin line and the orchestra as two separate elements which engage in the 'dialogue' clearly indicated by the composer's sub-title for the work.

Overlapping with and accompanying these long phrases in the solo line, the orchestra provides certain chords which act as complementary links in the chain. Whereas in other applications of the chain principle the duration of the various links is approximately equivalent, in this movement there is great contrast between the long, expansive phrases of the violin and the short, fragmented contributions to the dialogue by the orchestra. Table 9:5 shows these chords which comprise the orchestral harmony.

Chain 2

Table 9:5 Chain 2: chords used in first movement

Harmony	Fig.	Pitches	Chord-type	pc. set	set name
Tremolo 1	[0]	C, D, C#		0, 1, 2	3-1(12)
Tremolo 2	1	F#, G#, G		0, 1, 2	3-1(12)
Chord 1	2	Bb, D, F#, A	3. G	0, 1, 4, 8	4-19
Chord 2	3	Bb, C#, E, A	4. J	0, 1, 4, 7	4-18
Tremolo 3	4	F, G, F#		0, 1, 2	3-1(12)
Chord 3	5	A, C#, E#, G#	3. G	0, 1, 4, 8	4-19
Chord 4	6	A, C, Eb, Ab	4. J	0, 1, 4, 7	4-18
Unison	7	F			
Unison	8	Bb			
Unison	9	B			
Chord 5a	10	Bb, D, F, Ab; C, Db, E, G	2. D; 4. J	0, 1, 2, 4, 5, 7, 8, 10	8-27
Chord 5b		E, G#, B, C#; D#, F#, G, Bb	2. C; 4. H	0, 1, 2, 4, 5, 7, 9, 10	8-26
Chord 5c		Bb, D, F, Ab; F#, A#, C#, E	2. D; 2. D	0, 1, 3, 4, 5, 7, 9	7-26
Chord 6a	11	B, D, F#, A#	3. E	0, 1, 4, 8	4-19
Chord 6b		B, D#, F#, A#	3. F	0, 1, 5, 8	4-20(12)
Chord 7a	12	C, F#, A#, D		0, 2, 4, 8	4-24(12)
Chord 7b		C, F#, A#, D#	2. B	0, 2, 5, 8	4-27
Chord 7c		C, F#, A#, E		0, 2, 6, 8	4-25(6)
Chord 8a	13	C#, F#, A#, D	3. G	0, 1, 4, 8	4-19
Chord 8b		C#, F#, B, D#		0, 2, 4, 7	4-22
Chord 8c		C#, G, B, D#		0, 2, 4, 8	4-24(12)
Chord 8d		C#, G, C, E	4. J	0, 1, 4, 7	4-18
Chord 9a	14	C#, Ab, C, E, B		0, 3, 4, 5, 8	5-Z37(12)
Chord 9b		F, Ab, C, E, B		0, 1, 4, 7, 8	5-22(12)
Chord 9c		F#, G, C, E, B		0, 1, 3, 7, 8	5-20
Chord 10		B, C, D, Eb		0, 1, 3, 4	4-3
Chord 11		C, Eb, F#, E		0, 2, 3, 5, 6, 8	6-Z23(12)
Chord 12		Ab, E, G, Bb, C#, F		0, 1, 3, 4, 6, 9	6-27
Chord 13	15	C, Bb, C#, B		0, 1, 2, 3	4-1(12)
Chord 14	16	A, D, B, E		0, 2, 5, 7	4-23(12)
Chord 15	17	Ab, Gb, A, G		0, 1, 2, 3	4-1(12)
Chord 16	18	F, Bb, G, C		0, 2, 5, 7	4-23(12)
Chord 17	19	A, G, A#, G#		0, 1, 2, 3	4-1(12)
Chord 18	20	F#, B, G#, C#		0, 2, 3, 7	4-14
Chord 19	21	F, G, G#, C#		0, 1, 3, 7	4-29
Chord 20	22	F#, G#, B, C#		0, 2, 5, 7	4-23(12)

Much of the significance to be drawn from the above table lies in what the composer has excluded. There are no 12-note chords. Most are four-note chords, providing various kinds of harmonic background which allow the remaining eight pitches to be used in the soloist's melodic line, according to the principle of pitch separation into complementary sets. The orchestral harmony becomes more dense only in the succession of arpeggiated seven- and eight-note chord-aggregates that occur after Fig. 10.

Chain 2

Forte's integer notation of pitch-class sets may be convenient for the four, five, and even six-note chords, but is not helpful when dealing with eight-note chords, the identities of which are obscured if reduced to the compact format required in order to establish the appropriate Forte numbering.¹³ Each of the eight-note chords in the above table consists of two distinct types of self-contained four-note chord, superimposed in the Stravinskian manner so typical of Lutosławski.¹⁴ Hence it is necessary to retain the column which identifies these four-note chords individually, in accordance with the information given in Chapter Three (see Table 3:3). It is also necessary to preserve the genuine distinction between four-note chords types 3.E and 3.G. According to Forte's principle of inversional equivalence these are both the same pc set and therefore represented by the same set name. Yet the aural difference is obvious. Example 9:17 is a harmonic reduction of the first movement, showing the same chords listed above in Table 9:5. Circled numbers are the rehearsal figures from the score. Uncircled numbers above the staff give the chord numbering. Numbers next to chords 13-20 show their interval-class content.

Ex. 9: 17

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

Chord no.: 1 2 3 4 5 5a 5b 5c

⑪ ⑫ ⑬ ⑭

6a 6b 7a 7b 7c 8a 8b 8c 8d 9a 9b 9c 10 11 12

⑮ ⑯ ⑰ ⑱ ⑳ ㉑ ㉒

13 14 15 16 17 18 19 20

5 2 3 2 5 3 2

5 2 3 2 5 3 2

Chain 2

Familiar harmonic features abound. The tremolo figure with which the soloist opens the work, oscillation between middle C and D, curls into itself with C# completing a three-note cell pattern. This is repeated, transposed at Figs. 1 and 4, and again at the beginning of the second movement. Lutosławski's four-note chord types are much in evidence. Chords 1, 2, 3, 4, 5a, 5b, and 5c consist exclusively of the four-note configurations already identified in Chapter Three. The progression of twelve chords from 6a-9c introduces other intervallic combinations, but its point of departure at 6a is four-note chord type 3.E.

So many examples of pitch separation present themselves in the first movement it is not feasible to discuss each one in detail. One passage, however, may be chosen to illustrate not only this technique but also the use of melodic interval-pairing (Ex. 9:18). At Fig. 15, the strings and piano play a four-note chord (shown above in Table 9:5 and Ex. 9:17 as Chord 13), which is sustained beneath a memorable phrase for the soloist generated by interval-pairing 2+5. There is no duplication of pitch classes between the foreground melodic line and the background harmony, the separation between them is complete. The four-note chord contains Bb-B-C-C#, complemented by the violin line which contains all eight remaining pitches between D-A, inclusive. Melodic pairing of major seconds and perfect fourths/fifths is used by Lutosławski for some of the most lyrical passages in both *Chain 2* and *Partita*. Here it marks the beginning of the last formal stage in the movement.

Ex. 9: 18

The musical score for Ex. 9: 18 is presented in five staves. The top staff is for the solo violin (vno solo), which begins with a tremolo figure (C, D, C#) and then moves to a melodic line. The string accompaniment (vni II, vle, vc, cb) consists of a sustained four-note chord (Bb-B-C-C#) in the piano (pp) and other strings, marked with 'arco'. The solo violin part is marked with 'sostenuto', 'poco acc.', and 'rit.'. A bracket above the solo violin line indicates the interval-pairing 2+5. A bracket below the piano part indicates the chord 0, 1, 2, 3, 4.

Chain 2

Chain technique is not really demonstrated by the first movement, except in the most general sense, and even then somewhat tenuously. It is in the second movement that we find the most striking example of the principle, operating in terms of links forged by the soloist overlapping and interlocked with those of the orchestra. Table 9:6 provides a structural segmentation of the second movement, in accordance with the overlapping links of chain technique. The subdivision into four clear formal stages is determined by the placing of particular 12-note chord-aggregates, played *tutti*. Both the first and second stages drive towards such a chord after which there is an abrupt change of material marking the beginning of a new section. The third stage drives directly to the highpoint of the movement.

Table 9:6 *Chain 2*: formal scheme of second movement

Bars	Figs.	Section	Violin	Orchestra	Melody	Harmony
1- 18		STAGE 1	---	Link 1		[<i>rude</i>]
6- 14	23- 25	↓	Link 2	↓	<i>rude</i> 1+6	
15- 22	25-	↓	Link 3	↓	<i>soave</i> 2+5	
18- 29	26-	↓	↓	Link 4		
23- 33	27-	↓	Link 5	↓	<i>rude</i> 1+6	
29- 41	28-	↓	↓	Link 6		
33- 41	29-31	↓	Link 7	↓	<i>soave</i> 2+5	
41- 54		↓	↓	Link 8		
42- 51	31-	↓	Link 9	↓	<i>rude</i> 1+6	
51- 59	33-	↓	Link 10	↓	[<i>soave</i>] 2+5	
54- 76	34-	↓	↓	Link 11		
60- 64		↓	Link 12	↓	[<i>rude</i>] 1+6	
65- 75	35-37	↓		↓		C-H-C
76-114	37-48	STAGE 2	---	Link 13		
79-114	38-48	↓	Link 14	↓	[<i>soave</i>] 2+5	
114-124	48-50	↓	---	Link 15		C-H-C
125-134	50-56	STAGE 3	---	Link 16		
127-136	-54	↓	Link 17	↓	<i>pesante</i>	
135-142	-56	↓	↓	Link 18		
137-155	-59	↓	Link 19	↓	<i>espressivo</i>	
142-155	56-59	↓	↓	Link 20		
156	59-60	STAGE 4	Climax	Climax		D-D-J
157-163	60-61	↓				

Whereas the first movement is co-ordinated almost entirely *ad libitum*, the second is mostly metred (except for its highpoint). Whilst the first is relaxed, meandering and introductory, the second is rhythmically energetic and goal-orientated. Whereas the first contains no 12-note chord-aggregates, the second is organised around and articulated by three such harmonies of full chromatic density (see Ex.9:28).

Chain 2

In the first stage of the formal scheme the successive violin links are highly distinctive and strongly differentiated by means of Lutosławski's method of contrasting two types of melodic interval-pairing (cf Chapter 4). The composer assigns to these interval pairings particular Italian terms which indicate their different modes of expression. The first, *rude*, is harnessed to two and three-note chords (Ex.9:19a) derived from the ubiquitous three-note cells of two adjacent semitones. Also embedded in such passages are similarly dissonant chords comprising minor ninths and tritones (interval-pairing 1+6). The second mode of expression (Ex.9:19b) is indicated by the Italian word *soave*. The difference between these two modes of expression is achieved by the principle of strongest intervallic contrast. Whilst *rude* is conveyed primarily by interval-pairing 1+6, *soave* is identified with interval-pairing 2+5 (see Table 4:3).

Ex. 9: 19a



Ex. 9: 19b



There is one other piece which makes use of strong intervallic contrast together with the Italian terms *soave* and *rude*: the last of the Five Songs to poems of Kazimiera Iłłakowicz, *Dzwony Cerkiewne* (see Ex.3:16). The poet describes two attributes of Orthodox *zvon* ringing: "*Lubimy dzwony cerkiewne kiedy są śpiewne*" (We like the Orthodox Church bells when they are singing) ... "*Ale lubimy także dzwony cerkiewne kiedy są gniewne*" (But we also like the Orthodox Church bells when they are angry).¹⁵

Chain 2

These two contrasting effects are represented in the song by two chords of different interval content. The first is divided into three harmonic strands with four-note chord types A-B-D in the high, middle and low strands, respectively. This gives an aggregate in which major and minor thirds predominate, producing a 'warm' sound, equatable with the *soave* designation. The second chord is divided into four harmonic strands, each containing the three notes of a 1+2 cell, the overall aggregate comprising major and minor seconds with minor ninths very strongly emphasised. The actual intervalllic contrast used in *Dzwony Cerkiewne* is not the same as in the second movement of *Chain 2*, but the principle is similar. Whereas the song contrasts vertically conceived 12-note chord-aggregates, the violin piece contrasts 'links' that are conceived alternately in the vertical and horizontal planes, harmonically then melodically.

The 12-note chord-aggregate reached at Fig.35 is the most important landmark so far, being the first 12-note chord not only of the movement but of the work as a whole. Rhythmically it is a continuation of the eleventh link, begun by the orchestra in the bar before Fig.34, which in turn takes its triplet quavers from the violin line. We hear it not once but twice, as the rising arpeggiated figures in bars 65-68 lead to a repetition of exactly the same harmony at Fig.36. The structure of the chord is worth noting, as it comprises four-note chord types C-H-C in the three harmonic strands. A similar construction occurs at Fig.48 as the destination point of the second formal stage in the movement. We will hear this type of aggregate again as the climactic harmony of the final movement and thus the destination point for the whole work (see Ex.9:28). Not only is the construction similar but the actual notes and their configuration are identical to the harmony at Fig.35. As a clear example of long-range harmonic thinking and compositional planning this is by no means unique in Lutosławski's output, but the role played by this aggregate in both the *allegretto* movements of *Chain 2* demonstrates the importance to the composer of recurring chord structures at specific pitch levels in his late works. The C-H-C chord-aggregate also plays an important role in the long-range harmonic organisation of *Chain 3* (see Table 8:4, Exx.8:9 and 8:13).

Chain 2

In the works of the 1960s and 70s, the psychological effect on the listener of repeating a particular 12-note chord which has been heard before is not particularly meaningful, owing to the large number of such chord structures and the way they pervade the musical fabric. In the late works, however, we find the composer using them sparingly, recognising that the potency of their effect in any given work may be in inverse proportion to the frequency of their use. It would be quite impossible, for example in the Second Symphony, for even the most sophisticated ear to recognise, remember or recall any particular 12-note chord, the listener's mind being swamped by the amount of dense chromatic harmony.

Stage two, beginning at Fig.37, introduces a feature which is strongly reminiscent of the second movement of the Concerto for Orchestra, *Capriccio Notturmo*. Flutes and oboes highlight the ends of four-note melodic cells played by the violins. These highlights consist of major triads rooted successively on Bb, Db, E, G, Eb, B, D, F, Db and A (Ex.9:20a). Here there is a clear relationship between the vertical and horizontal planes of the pitch organisation. Triads, by definition, each consist of one major and one minor third, vertically, whilst the horizontal progression consists of rising minor thirds and falling major thirds. When reduced to a single line within one octave (Ex.9:20b), the manipulation of intervallic cells (sequential and inverted) is more clearly exposed as an example of melodic interval-pairing 1+2. These four-note cells have the same intervallic pattern as those used in the Overture for Strings (see Ex.4:13). Within each four-note group there is a three-note cell of interlocking tone/semitone. When the four-note pattern is used in inversion, falling, the sequential transposition gives further three-note cells, overlapping.

Ex. 9: 20

The image displays two musical staves, labeled 'a)' and 'b)', illustrating the concepts discussed in the text. Staff 'a)' shows a sequence of four-note chords (triads) on a staff, with measures 37, 38, and 39 circled. Staff 'b)' shows a single-line melodic line with four-note cells and overlapping three-note cells.

Chain 2

Example 9:21 shows the comparable passage from the opening of *Capriccio Notturmo e Arioso*, the second movement of the Concerto for Orchestra.

Ex. 9: 21

II
CAPRICCIO NOTTURNO
E
ARIOSO

Vivace (J. 172)

The musical score is divided into three systems. The first system (measures 172-177) features Flauti I and II, Violini I, and Violoni. The Flauti part has a 3/4 time signature, while the Violini and Violoni parts have a 4/4 time signature. Dynamic markings include *pp marcato* and *f*. The second system (measures 178-183) includes Flauti I, Ob. I, Violini I, and Violoni. The Flauti and Ob. parts have a 4/4 time signature, while the Violini and Violoni parts have a 3/4 time signature. Dynamic markings include *p*, *f*, and *pp*. The third system (measures 184-189) includes Ob. I, Violini I, Violini II, and Violoni. The Ob. part has a 4/4 time signature, while the Violini and Violoni parts have a 3/4 time signature. Dynamic markings include *pp*, *f*, and *pp marcato*. Performance instructions include *arco div.* and *pp marcato*.

Chain 2

Meanwhile, the solo part re-enters at Fig.38, beginning a long, lyrical line of 35 bars generated from melodic interval-pairing 2+5 (Ex.9:22), which extends right through to Fig.48 and the twelve-note aggregation which is the destination point of this second stage in the form. Although the composer marks the violin line *espressivo* and later *dolce*, rather than *soave*, the melodic pairing of major seconds and perfect fourths/fifths is clearly heard as a development of the shorter *soave* links which appeared earlier in the movement (see Ex.9:19).

Ex. 9: 22

The musical score for Ex. 9: 22 consists of seven staves of music for a violin, starting at measure 77 and ending at measure 111. The music is in 3/4 time and features a melodic line with various dynamics and articulations. The score is marked with circled numbers 38 through 48, indicating specific measures. The key signature has one sharp (F#). The score includes markings such as "Espresso sempre", "espressivo", "dolce mp", and "pp". The music is characterized by a melodic line with various intervals, including major seconds and perfect fourths/fifths.

From Figs. 47-48 the soloist plays together with piccolo flute, xylophone and subdivided first violins. Piccolo and xylophone chase each other in short canonic phrases, whilst the first violins repeat a C major triad. All are playing in similar triplet patterns, and all are united by the same interval pairing. Rather than just show the solo part for this passage, the last four bars in the above example represent a compression of violin, piccolo and xylophone parts reduced to a single line.

Chain 2

The triadic accompaniment continues throughout the entire passage, being transferred to: *glissando* strings (Figs.39-41); arpeggios played by flute and clarinet with violins *pizzicati* (Figs.41-43); piano, vibraphone, glockenspiel and strings (Figs.43-45); then three violins (Figs.45-48). It has already been suggested, in Chapter Four, that the composer tends to avoid simple triadic patterns in the horizontal interval pairings used to generate melodic lines. This is certainly not to suggest that he avoids triadic patterns altogether, but that they are the result of a vertical approach which can accompany the horizontal line.

Having alternated *rude* and *soave* phrases in the first stage, stage two extends and develops the latter, *espressivo*. The beginning of the third stage returns to the rough, abrasively dissonant sound of the *rude* passages, this time marked *pesante*. The intervallic character after Fig.50 contrasts very strongly with what has just gone before, consisting mainly of minor seconds and three-note cells, with two prominent *glissandi* in the solo part covering major seventh and minor ninth, respectively. From Fig.53 onwards there are two methods employed in the orchestral parts in order to achieve the gradual build-up towards the highpoint of the movement at Fig.59. First, a progression of four-note string chords rising chromatically, followed by five-note chords in the strings and woodwind. Second, from Fig.56 onwards, a rising chromatic scale distributed around the orchestra and through all registers by means of octave displacement. Both techniques are very simple, but nonetheless effective in creating the sensation of continually rising pitch level with a relatively fast harmonic rhythm. Meanwhile the soloist maintains an appropriate degree of rhythmic energy with fast, motoric three-note patterns which eventually develop into three-note cells and diverging scales leading to the highpoint.

It has already been noted in Chapter Two that Lutosławski is usually careful to ensure that mid-term highpoints in the unfolding of a large-scale form do not undermine the effect of the overall climax of the work. *Chain 2* is no exception. The 12-note aggregate which marks the highpoint of the second movement quickly subsides, both in dynamic intensity and harmonic density, so that the listener's appetite is only partially and temporarily satisfied; exhilarated but not exhausted.

Chain 2

As the dynamic level quickly drops, the upper harmonic strand is thinned out, thus reducing the chord-aggregate from twelve notes to ten, then eight. Chord type J is retained in the low harmonic strand and then rises by a semitone. The 8-note chord then converges rapidly by string *glissandi* onto a 4-note chord of superimposed minor thirds, *fortissimo*, connected by a perfect fifth and encompassing a minor ninth. The same minor ninth appears in the final 6-note chord of superimposed major thirds. This succession of five chords from Figs. 59-61, making up the final stage of the second movement, is shown in Example 9:23.

Ex. 9: 23

Comparison of the 12-note aggregate at Fig. 59 with others of the same type, ie. having similar four-note configurations in two of the three harmonic strands, has already been made in Chapter Three (see Ex. 3:13 for those with chord-type 2.D in each of the outer strands, and Ex. 3:14 for those with 2.D in both the middle and upper strands). Whilst this 12-note chord-aggregate does not recur elsewhere in *Chain 2* (unlike the C-H-C aggregate which does recur), the 8-note chord which follows it at Fig. 60 also occurs in the final movement. There it is used as a mid-term staging post in the form, providing a point of relative harmonic density, and yet not so dense that it would risk undermining the effect of the C-H-C aggregates around which the overall dramatic shaping is planned. This type of 8-note chord, comprising 4-note chord types K and J marks at Fig. 100 the end of stage one in the form of the last movement, and the beginning of the second stage (see Table 9:7, below).

Chain 2

The third movement, like the first, is written almost entirely according to the *ad libitum* technique. Its construction is simpler than that of either the second or fourth movements and is determined by the leading role performed by the solo violin line. The orchestra supports and accompanies, providing various kinds of harmonic and timbral background, nearly always complementing rather than duplicating the pitches used by the solo line.

Three distinct types of melody are used in alternation. Each moves freely and naturally into the other to effect a smooth yet changing melodic flow. The first is a *cantando* melody of the *dolente* type, moving in three-note cells of interlocking tones and semitones linked by grace notes (see also Ex. 4:15 for a comparison of this passage with other melodic lines of the similar type). The initial phrase (Ex. 9:24a), played *molto cantabile* on the G string, is followed by the second type of melodic line, consisting of faster, 'scurrying' three-note cells played *punta d'arco* (Ex. 9:24b). Melodic interval pairing of semitones and tones is common between the two, hence they flow quite naturally from one to the other. Yet there is a marked difference in character between them.

Ex. 9: 24a



Ex. 9: 24b



Both kinds of melodic line, above, can be found in other works by Lutosławski. A third type, however, can be found so far only in *Chain 2* and the Third Symphony (see Exx. 4:35 and 4:36). It occurs three times during the course of this movement and is one of the most hauntingly memorable melodic ideas in the work.

Chain 2

The first time it appears (Ex. 9:25a), there are just two phrases, each rising through minor thirds and perfect fifths, and falling through perfect fifths and major thirds. Although presented melodically, it is really organised vertically, as two diminished triads superimposed in such a way that several minor ninths will be emphasised in the line. The second time it appears (Ex. 9:25b), there are three phrases, the last of which is extended up to the violin's highest register. When we encounter the idea for the third time we find it has been transformed (Ex. 9:25c): the intervals have been contracted so that the melodic outline appears flattened, allowing scope for the successive phrases to open out again until it regains its original interval structure at Fig. 89.

Ex. 9: 25a

Musical notation for Ex. 9: 25a. It consists of a single staff with two phrases. The first phrase starts at measure 67 and ends at measure 68. The second phrase starts at measure 68 and ends at measure 69. The notation includes a violin (V) marking, dynamic markings of *mf*, *p*, and *poco f*, and various intervallic structures indicated by brackets and numbers (3, 5).

Ex. 9: 25b

Musical notation for Ex. 9: 25b. It consists of two staves. The first staff contains three phrases, starting at measure 72 and ending at measure 74. The second staff continues the melodic line, starting at measure 74 and ending at measure 74. The notation includes dynamic markings of *f* and *sub. p*, and various intervallic structures indicated by brackets and numbers (3, 5).

Ex. 9: 25c

Musical notation for Ex. 9: 25c. It consists of three staves. The first staff contains two phrases, starting at measure 86 and ending at measure 87. The second staff contains two phrases, starting at measure 87 and ending at measure 89. The third staff contains two phrases, starting at measure 89 and ending at measure 90. The notation includes dynamic markings of *pp*, *mp*, and *mf*, a *cresc. poco a poco* marking, and various intervallic structures indicated by brackets and numbers (3, 5).

Chain 2

Interval-pairing of minor thirds and perfect fifths (3+7) is also a feature of both *Partita* and *Chain 3*, although there the intervals are superimposed in chords rather than stretched out in melodic lines. We also find the intervals superimposed vertically during the central section of the third movement in *Chain 2* (Ex. 9:26). At Fig. 78 the piano plays *fortissimo* in the low register a 4-note chord doubled in octaves, sustained with the help of violas, ^{cellas} and double basses. At Fig. 79 it then plays a simple six-note figure of rising semitones, again doubled in octaves, and with octave displacement used to transfer the pitches from middle to low register. Extension of this chromatic sequence would lead to D#, duly reached at the bottom of the 8-note chord at Fig. 80, played *fortissimo* by the whole orchestra. The harmonies at Figs. 78 and 80 are both symmetrical axis chords derived from the same pair of intervals and yet have different properties. Octave doubling within the first chord introduces other intervals which partly obscure the type of construction. As the intervallic pattern of the second chord is opened out, without octave doublings and with twice the number of pitches, it has double the harmonic density. Both chords are rich in minor sevenths, but the second also has a more harshly dissonant effect due to the presence of several minor ninths.

From Figs. 81-84, the top half of the 8-note chord is transferred up two octaves to a very high register, played *pianissimo* by strings and celesta. This 4-note chord then collapses into itself, as the upper of the two remaining minor thirds progresses downwards, converging onto a 4-note chord of adjacent semitones contained within the minor third B-D.

Ex. 9: 26

The musical score for Ex. 9: 26 consists of two systems of staves. The first system contains six measures, each with a circled figure number: (78), (79), (80), (81-82), (83), and (84). Figures 78, 79, and 80 are in the bass clef, while 81-82, 83, and 84 are in the treble clef. Figure 78 shows a 4-note chord in the bass clef with intervals of 3 and 7. Figure 79 shows a six-note figure in the bass clef with intervals of 1, 2, and 3. Figure 80 shows an 8-note chord in the bass clef with intervals of 3 and 7. Figures 81-82, 83, and 84 show chords in the treble clef with intervals of 3 and 7. The score includes various musical notations such as notes, rests, and dynamic markings like *ff* and *pp*. There are also some handwritten annotations and markings above the staves, including '8va' and '3 7'.

Chain 2

The third movement ends with an expressively potent development of the opening *dolente* melody (Ex.9:27), played first by the soloist climbing through the upper register (Figs.90-92), then joined by the other violins in unison as they gradually climb even higher to the top E harmonic, *fortissimo*. The soloist concludes the movement alone. Throughout this passage there is an obvious process of intervallic growth, beginning from the same kind of narrow three-note cells of semitone/tone heard at the opening of the movement, then widening as the intervals open out and the line expands, ascending. F#/Gb is the focal point of this process, the hinge on which the intervals turn. It maintains this role even as the soloist plays the final groups of six, four and three notes. Inevitably, the final note has to be F#. The Gb which begins the soloist's line at Fig.90 is a direct consequence of the previous phrase (see Ex.9:25c). The process of intervallic growth is part of the gradual and continual intervallic expansion of the line which began at Fig.86.

Ex. 9: 27

The musical score for Ex. 9: 27 consists of four staves. The top staff is for the solo violin (vno solo), starting with a forte (*f*) dynamic. It features a melodic line with various intervals and dynamics, including markings for "Un poco meno mosso" and "ancora poco meno mosso". The second and third staves are for the first (vni I) and second (vni II) violins, which enter in unison with a fortissimo (*ff*) dynamic. The bottom staff is for the solo violin again, concluding the piece with a piano (*pp*) dynamic and a final *ppp* marking.

Chain 2

The final movement, like the second, evolves through overlapping strands of melodic and harmonic material in dialogue between the soloist and the orchestra, according to chain technique. As we would expect to find with Lutosławski, the final movement is goal-orientated and drives towards a highpoint which is the climax, both of this movement and of the work as a whole. Propelling the music towards that climax are three formal stages, each beginning with a *tutti* passage followed by a certain number of chain 'links' (nine, seven, six, respectively). Table 9:7 presents a structural segmentation of the fourth movement. The subdivision into formal stages is determined primarily by the strategic placing of certain chords. Of these, the 8-note chord which begins the second stage at Fig.100 is of a similar type to the one at Fig.60, in the succession of chords concluding the second movement (see Ex.9:23). Stage three begins with a succession of ten 9-note chords.

Table 9:7 Chain 2: formal scheme of fourth movement

<u>Bars</u>	<u>Figs.</u>	<u>Section</u>	<u>Violin</u>	<u>Orchestra</u>	<u>Harmony</u>
1- 2		Stage 1	---	Tutti	One 12-note chord: B-K-B
3- 8		↓	---	Link 1	
5- 9	93	↓	Link 2	↓	
8-13	94	↓	↓	Link 3	
10-17		↓	Link 4	↓	
14-20	95	↓	↓	Link 5	
18-24	96	↓	Link 6	↓	
21-27	97	↓	↓	Link 7	
25-31	98	↓	Link 8	↓	
28-31	99	↓	↓	Link 9	
32-37	100	Stage 2	---	Tutti	One 8-note chord: K-J
37-42	101	↓	---	Link 10	
40-47		↓	Link 11	↓	
43-50	102	↓	↓	Link 12	
47-52	103	↓	Link 13	↓	
50-57	104	↓	↓	Link 14	
53-60	105	↓	Link 15	↓	
57-60	106	↓	↓	Link 16	
61-65	107	Stage 3	---	Tutti	Ten 9-note chords
66-72	108	↓	---	Link 17	
68-83		↓	Link 18	↓	
72-96	109	↓	↓	Link 19	
84-96		↓	Link 20	↓	
97-103	114	↓	↓	Link 21	
98-103		↓	Link 22	↓	
	115	Climax	---	Tutti	One 12-note chord: C-H-C.
	116	Aftermath			
104-125	122	Coda			

Chain 2

The placing of 12-note chord-aggregates in the final movement is crucial to an understanding of the form: one at the beginning and the other at the climax, with no other 12-note chord in between. His use of an 8-note chord, to mark the beginning of the second stage, shows that the composer has deliberately controlled and restricted the harmonic density in order that the climax will not be pre-empted or undermined. Example 9:28 shows all five of the 12-note chord-aggregates used in *Chain 2*: three from the second movement and two from the fourth movement.

Ex. 9: 28

(II) (35) (49) (59) (IV) b.2 (115)

The musical score consists of three staves: Soprano (Svn), Alto, and Bass. Above the staves are five circled labels: (II) (35), (49), (59), (IV) b.2, and (115). The score shows various chord symbols and accidentals across the staves, including notes like C, D, E, F, G, A, B, and their flats and sharps. The aggregates are separated by vertical bar lines.

All five aggregates are of the general type which uses similar four-note chords in two of the harmonic strands (see Exx. 3:13 and 3:14). The most important observation to make, however, is that the first 12-note chord of the work, from the second movement, is virtually the same as the one used at the climax in the final movement. Their different spelling of some accidentals confuses slightly the relationship between them, and the distribution of notes within each strand is not quite the same. But the overall character and effect is the same, especially that there is no transposition involved. Acoustically, the decisive difference between the C-H-C aggregations and the other two (D-D-J and B-K-B) is the use of perfect fifths and octaves at the bottom, as opposed to the tritone. Whether or not the ear of the listener is acute enough to detect that the first and last chords are at the same pitch level (the composer's perfect pitch means that such matters are of significance to him), the harmonic timbre in each strand is distinctive and recognisable upon its return.

Chain 2

Of the three Chains, the second may be judged a more successful piece than either the first or third. The principal reason for this seems to be the suitability of Lutosławski's new methods of pitch organisation to works employing a *concertante* element, either wholly or partly. Both *Chain 1* and *Chain 3* achieve a ten-minute time span in performance as unbroken single movement pieces, whereas the musical material for *Chain 2* is both rich and diverse enough to generate a piece of almost twice that duration.

Because *Chain 1* was conceived for the fourteen players of the London Sinfonietta, all are soloists and there is no real *tutti* or *ripieno* group to act as a background against which these featured solo lines can be projected. *Chain 3* has the resource of the full orchestral sound available, but does not seek to exploit exposed *concertante* parts in the foreground against a *tutti* background. Between these two extremes, *Chain 2* seems to represent a middle way, one which makes both meaningful and effective the composer's considerable change of focus in handling the relative importance of melody and harmony.

In *Chain 2* we once again encounter one of the most important aspects of Lutosławski's late style, pitch organisation which separates melodic foreground from harmonic background by dividing the twelve available notes into complementary sets. Much of the work illustrates this partition into melodic and harmonic layers, or strands, with only five examples of full 12-note chord-aggregates played *tutti*. Compared with the harmonic density of works from the 1960s, such as the *Second Symphony* or *Livre pour orchestre*, or from the 1970s such as *Mi-Parti*, this constitutes a radical departure from Lutosławski's earlier manner of deploying the resources of 12-note harmony and is the method of pitch organisation which has made possible his return to chamber music as well as the late *concertante* works.

The main blemish, perhaps even a flaw, is the final chord. After very many hearings, the present author is unable to experience the ending without unease. The underlying progression as outlined by the bass is quasi-tonal: $i\bar{i} - i\bar{i}b/IV - V - i/I$ (B-D-E-A). The final chord contains five notes expressing triadic ambiguity or conflict between A minor (the lowest three notes - A, E, C) and Ab major (the upper three notes - C, Eb, Ab).

Chain 2

This chordal conflict is of a typically Stravinskian kind whereby the roots of the two triads contradict each other by the interval of a semitone, in this case A and Ab. Stravinsky uses this procedure at many points in *Le sacre du printemps*, the most famous example being the often-quoted aggregate of Fb and Eb⁷ chords at Fig. 13. In other works he exploits the principle of contradiction by tritone, the most notable example being the opposing C major and F# major chords in *Petrouchka*. In Stravinsky's case, such harmonies consisting of two chords superimposed onto each other undoubtedly originated as two-handed pianistic effects resulting from the composer's habit of working out his material directly at the keyboard. Lutosławski has always played his harmonies on the piano, recognising the need to check his ear constantly and to keep in touch with the living sound. It is quite likely that many of his chord structures originate in the Stravinskian way, even the most complex 12-note chord-aggregates, although he would ideally require three hands to play three four-note chords simultaneously, one in each of the three harmonic strands.

It is not easy to explain why the final chord of *Chain 2* sounds less than satisfactory or convincing. Perhaps it is that one does not normally expect such a clear, cadential conclusion to a Lutosławski work (and yet the *Double Concerto* and *Partita* both have satisfactory cadential endings). Perhaps it is because the triadic contradiction is too obvious and contrived. Most probably it is because the sonority of the chord is too heavily weighted towards the top note, G#/Ab, due to the strong unison doubling of the orchestra together with the soloist on that pitch. This undue emphasis makes the Ab/G# sound peculiarly like a tonic (though without the surrounding tonal functions), even though it is undermined by the A natural below.

Melodic richness is undoubtedly the most striking feature of *Chain 2* when one contrasts Lutosławski's late style against the works of the 1960s and 70s. There are many contrasting aspects but surprisingly few which can be compared. Even the use of the *ad libitum* technique, previously taken for granted as an omnipresent feature of Lutosławski's mature work, is radically different, being confined to only two of the four movements plus the climax of the fourth.

Chain 2

The role of aleatory technique in *Chain 2* is significant in being confined to the first and third movements together with the overall climax in the last. Its restriction to self-contained movements is similar to the approach revealed in *Partita*, albeit that the number and order of sections is different. The fact that they are different demonstrates that the composer is still exploring varied treatments and solutions to the question of large-scale form and how its components can be managed.

It is natural that Lutosławski should have chosen to give *Chain 2* much longer *ad libitum* movements than the brief interludes in *Partita*. In the latter, the original duo partnership offered little opportunity for the textural and harmonically timbral effects associated with the aleatory technique in his orchestral works. The instrumentation of *Chain 2*, on the other hand, offered plenty of scope for such effects and we can find them in the first and third movements.

Finally, it is worth noting that when *Partita*, *Interlude* and *Chain 2* are performed together, as a triptych, they have a combined performance duration of at least forty minutes. If they were to be regarded as one work, rather than three separate pieces, this would be Lutosławski's longest composition (the next longest would be *Preludes and Fugue*, at a maximum of c.33 minutes when all the *Preludes* are played with the *Fugue* uncut). Even though the composer does regard them as a set of three separate pieces, the psychological effect on the listener (assuming an absence of applause after *Partita*) is certainly one of a continuing drama, commanding unbroken attention over the whole time span. *There is no comparable work in the repertory of music for violin and orchestra, and there is nothing comparable elsewhere in Lutosławski's catalogue of works. It is without doubt one of his finest achievements.*

CHAPTER TEN

Piano Concerto

Since taking the decisive step in 1979 towards simplification and refinement of his harmonic language, and the consequent shift in emphasis towards expressive melodic line, Lutosławski has progressed to a stage in his career which he has described as ' *odrabiać zaległości* ' (to catch up with arrears).' Completion of the Double Concerto and the Third Symphony made up for much time lost during the 1970s; but the most striking cases of catching up with long-term unfinished business are the concertante works for violin and piano: *Partita*, *Chain 2*, and the Piano Concerto. These pieces represent 'arrears' not from his middle years but from his youth. ²

After finishing the Symphonic Variations in 1938, Lutosławski had plans to compose two large-scale works: a Symphony and a Piano Concerto. He was then twenty-five. Many piano concertos have been written as opportunities for youthful composer-pianists to perform their own work, and Lutosławski's early plans conform to such a pattern; but he was dissatisfied with the sketches he assembled before the war and temporarily postponed work on the project. After the war, he tried again to compose a piano concerto, but it took second place to completion of the First Symphony. During the period of redefinition of harmonic vocabulary and musical language that followed, after 1947, the idea of a concerto was not able to find a place; thus temporary postponement became longer term abandonment. ³

From 1960 to 1979 the piano was conspicuously absent from Lutosławski's work, whilst he concentrated on applying his harmonic and polyphonic techniques in orchestral works. Only after solving the problem of how to compose without the dense harmony which typifies the Second Symphony, *Jeux vénitiens* or the *Trois poèmes d'Henri Michaux*, was he able to consider featuring the piano once more. Within five years of the turning point represented by *Építaph* he had written *Grave*, for cello and piano, then *Partita* for violin and piano. The latter can be seen as particularly significant in preparing the way for the concerto: its harmonic language displays a similar concern for the sonority of superimposed minor or major thirds (see Exx. 9:3, 9:10, 9:13 and 9:15); and its pianism involves frequent octave doubling between harmonic strands.

Piano Concerto

Lutosławski's Piano Concerto is not a vehicle for the display of technical virtuosity in the bravura tradition. Instead, there is a sense of equal participation in a dialogue, similar to the concerted approach suggested by the subtitle for *Chain 2*. In both cases there is a marked contrast with the confrontational treatment of the relationship between soloist and orchestra that characterises the Cello Concerto. The Piano Concerto was composed during 1987 and completed early the next year. Commissioned by the Salzburg Festival, it was first performed there on 19 August 1988, played by Krystian Zimerman.⁴ For the première, Lutosławski provided the following programme note, which includes a brief commentary on the work and the character of its four movements:

My Piano Concerto consists of four movements which are played without any break, despite the fact that each of the movements has a clear ending. The first movement is comprised of four sections. In the first and third, the motifs presented are as if nonchalant, light, sometimes rather wayward, never over-serious. In contrast to the first and third, the second and fourth sections are filled with a broad *cantilena*, finally leading to the highpoint of the whole movement. The second movement is a kind of '*moto perpetuo*', a quick 'chase' by the piano against the background of the orchestra which ends by calmly subsiding in preparation for the third movement. The third movement opens with a recitative for the piano alone, which then intones, also without the involvement of the orchestra, a singing *largo* theme. The middle section, beginning with the entrance of the orchestra, contrasts against the first section with moments of a more sudden, dramatic character. The *cantilena*, without orchestral accompaniment, returns at the end of the movement. The fourth movement, by its construction, alludes to the baroque form of the Chaconne. Its theme (always played by the orchestra) consists of short notes separated by rests and not (as with the traditional Chaconne) chords. This theme, repeated many times, provides only one layer of the musical discourse. Against this background the piano each time presents another episode. These two layers operate in the sense of "Chain-form", i.e., the beginnings and endings of the piano episodes do not correspond with the beginnings and endings of the theme. They come together only once, towards the end of the work. The theme appears again for the last time in a shortened form (without rests) played by the whole orchestra without the piano. There follows a short piano recitative, *fortissimo*, against the background of the orchestra, and a short Coda (*presto*) concludes the work. ■

Although the composer conceived the first movement as being in four sections, the listener is more likely to perceive it in two main stages, divided by the entry of the strings at Fig. 20. In this respect the scheme is not unlike the first movement of the Double Concerto, divided into two

Piano Concerto

stages marked *Rapsodico* and *Appassionato*, respectively. The introductory stage is structured as episodes separated by an orchestral ritornello (here referred to as a refrain). The latter is merely a brief, quasi-cadential gesture that interrupts and punctuates the episodes. Table 10:1 summarises the formal scheme of the first movement.

Table 10:1 Piano Concerto: formal scheme of first movement

Fig.	Stage	Section	Instrumentation (etc)	Coordination
--	One	episode 1	introductory, 'babble'	<i>ad libitum</i>
		refrain 1	strings only	<i>a battuta</i> in 5
Fig. 2		episode 2	piano and 3 flutes	<i>ad libitum</i>
		refrain 2	strings and woodwinds	<i>a battuta</i> in 5
Fig. 5		episode 3	piano and violins	<i>ad libitum</i>
		refrain 3	strings and woodwinds	<i>a battuta</i> in 5
Fig. 8		episode 4	piano and violins	<i>ad libitum</i>
		refrain 4	strings and woodwinds	<i>a battuta</i> in 5
Fig. 11		episode 5	piano, 2 fl, 2 ob,	<i>ad libitum</i>
Fig. 12		cantilena	piano solo	↓
		refrain 5	strings and woodwinds	<i>a battuta</i> in 5
Fig. 13		episode 6	piano and woodwinds	<i>ad libitum</i>
		refrain 6	lower strings only	<i>a battuta</i> in 1
Fig. 17		episode 7	piano and timpani	<i>ad libitum</i>
Fig. 20	Two	cantilena	in 6 rhythmic layers	<i>a battuta</i> in 3
Fig. 24			layers stop. W.w. play	↓
Fig. 28		cantilena	in 9 rhythmic layers	↓
Fig. 29		↓	layers interchange	↓
Fig. 34		climax	chords + fermatae, <i>ff</i>	<i>a battuta</i>
Fig. 35		ending	without fermatae	↓

The scheme of episodes and refrains has been applied in several works, including *Jeux vénitiens*, the Second Symphony, *Livre pour orchestre*, the Double Concerto and the Third Symphony. Here, each of the seven episodes is played *ad libitum*, whereas the six refrains are each conducted. In the first section there are four episodes, including an introductory 'babble' for woodwinds, each terminated by the fast, one-bar refrain. The second section begins with the fifth episode, for piano with two flutes and two oboes, but soon the woodwind instruments drop out leaving the piano to play a decorated Cantilena. The fifth refrain signals the beginning of the third section which leads via the seventh and final episode, for piano and timpani, to the final section. Example 10:1 shows the first appearance of the refrain.

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Ex. 10: 1

5 $\frac{30}{16}$ ♩. = ca 110

Vni I
div.
a 3

Vni II
div.
a 3

vle
div.
a 3

VC.
div.
a 3

The first refrain is a single bar of 5/4 in which a 12-note chord (mostly of minor seconds and minor thirds, with a perfect fourth at the bottom) is collapsed onto a semitone dyad. Each subsequent appearance exploits the effect of symmetrical intervallic expansion and contraction from a three-note cell of adjacent semitones onto a chord of superimposed perfect fourths, and back onto a three-note cell. In the Double Concerto, the equivalent ritornello device (of massed string sound) is delivered by aleatory means. Here, it is significant to note that Lutosławski preferred to exercise more precise rhythmic control over the ensemble. Example 10:2 presents a harmonic reduction of the various appearances of the refrain.

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Ex. 10: 2

The image shows a musical score for piano, labeled 'Ex. 10: 2'. It consists of two systems of music. The first system has two staves. The top staff begins with a key signature of two sharps (F# and C#) and a 3/4 time signature. It contains six circled figures: 1, 2, 5, 8, 11, and 13. Figure 1 is a 12-note chord with fingerings 1, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3, 3. Figures 2, 5, 8, 11, and 13 are 'wedge' shapes, which are chords that expand or contract in intervallic shape. The second system also has two staves and continues the musical material, with figures 11 and 13 circled. The notation includes various chordal textures and melodic lines.

There is also a pattern of growth between appearances of the ritornello gesture. Example 10:2 shows the contraction (from a 12-note chord) that comes at Fig.1, followed by both expansion and contraction prior to Fig.5, with only two interlocking 'wedge' shapes. In the refrain that comes before Fig.8 the idea is slightly extended to include three interlocking strands, each with either an expanding or contracting intervallic shape. This pattern is extended to include four overlapping strands prior to Fig.11, and five in the passage that precedes Fig.13.

The episodes that are separated by these ritornello passages introduce the soloist in concerted combinations differentiated primarily by instrumental timbre. Episode 2 has the piano playing against aleatory mobiles from a static bundle of three flutes that sustain a single three-note cell (Ab,G,F#). The third episode sets the piano against aleatory repeated note motifs played by violins, also derived from three-note cells (although this time with a sequential, chromatically rising progression: D#,E,F; E,F,F#; F,F#,G). The fourth episode also uses upper strings to play three-note cells in rising sequence (C#,D,Eb; D,Eb,Fb). Episode 5 begins with the piano against flutes and oboes (playing a single, static cell of F#,G,Ab), but develops into a more extended piano solo.

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Example 10:3 shows a harmonic reduction of the chords played by the soloist in episode 2 (Figs. 2-4), and a melodic reduction of episodes 3 and 4 (Figs. 5 and 8, respectively). Episode 2 demonstrates the kind of chromatic voice leading that governs the linear progression of harmony in many parts of the Piano Concerto and *Chantefleurs et Chantefables*. Each of the five voices moves through a three-note cell of adjacent semitones (in a straight line), with the notes of the lowest voice being added gradually with each phrase. Episode 3 (Fig. 5) shows horizontal interval-pairing 2+5 being used to generate the leading voice (the soloist also plays a counterpoint to this line, made from triplet patterns of three-note cells that gradually migrate downwards). The beginning of episode 4 is also generated by the 2+5 interval-pairing (Figs. 8-10).

Ex. 10: 3

The image displays musical notation for Example 10:3, consisting of three systems of staves. The first system shows three staves with chords and is labeled with circled numbers 2, 3, and 4. The second system shows a single staff with a melodic line and is labeled with circled numbers 5 and 8. The third system shows a single staff with a melodic line and is labeled with circled numbers 8 and 10. Fingerings are indicated by numbers 1-5 below the notes.

At the entry of the soloist in episode 2 there is duplication of the three-note cell played by the bundle of three flutes and the G#-G-F# cell delivered at the bottom of the piano chords. Thus there is no strict separation of pitch material as found in much of *Partita* and *Chain 2*. There is, however, an emphasis on minor ninths played by the pianist's right hand (D-Eb, D#-E, E-F). Episode 3 begins with complete separation of pitch between the piano and the supporting layer of strings, although by the end of this section the three-note cells played by the pianist's left hand migrate downwards to meet (on F, F#, G) the ascending sequence of cells played by the violins. Hence it would appear that the composer sought to establish places where the instrumental strands are reconciled. Phrases diverge from and converge onto these points of pitch duplication.

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Whereas the first three sections are predominantly static and interrupted by the refrain, the fourth is continuously metred, is not disrupted by the refrain, and is cumulative in its gradual build-up towards a climax. This build-up takes place through a polyphonic texture of rhythmic layers provided by the strings. From Figs. 20-24 the string polyphony is in five parts (4-note chords with the bottom pitch doubled at the low octave), with the slowest layer at the bottom and the quickest at the top (the soloist adds additional rhythmic layers). Between Figs. 24-28 the harmonic strand is transferred to woodwinds and harp. From Fig. 28 until the highpoint of the movement at Fig. 34, the polyphonic texture is thickened to seven parts, with the layers interchanging. At the beginning of each section of string polyphony, the harmony consists of superimposed minor thirds and perfect fifths (interval-pairing 3+7). The significance of this combination of intervals has already been noted in relation to the Third Symphony, *Partita*, *Chain 2* and *Chain 3*; its use in these late works establishes the sonority as a harmonic characteristic of the late style. Example 10: 4 shows the twenty-six 4-note chords from Figs. 20-24 and Figs. 24-28 (twice thirteen), and draws attention to the chromatic voice leading that governs the horizontal progression. In order to reinforce the changes in the string harmony, woodwind and brass instruments are used to double the appropriate notes. At Fig. 24 the soloist ceases to play a cantabile line, and also ceases to double the harmonic accompaniment, instead adding decorative embellishments in the upper register that complement the woodwind chords.

Ex. 10: 4

The image contains two systems of handwritten musical notation. The first system, labeled 'strings', consists of two staves. The top staff is in treble clef with a 3/8 time signature and contains a melodic line with notes and rests, starting at measure 20 and ending at measure 24. The bottom staff is in bass clef and contains a harmonic accompaniment of chords, also starting at measure 20 and ending at measure 24. The second system, labeled 'harp & W. Wind', also consists of two staves. The top staff is in treble clef and contains a melodic line with notes and rests, starting at measure 24 and ending at measure 28. The bottom staff is in bass clef and contains a harmonic accompaniment of chords, also starting at measure 24 and ending at measure 28. Both systems show chromatic voice leading in the upper voice of the top staff.

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Example 10:5 presents a melodic reduction of the cantabile line played by the soloist against the progression of chords between Figs.20-24. Unlike equivalent passages in *Chain 2*, where there is usually a clear separation between harmonic and melodic strands (identified with violin and orchestra, respectively), here the soloist is able to perform a dual function and doubles the string harmony whilst adding the melodic layer at the top (doubled in octaves). Pitch complementation is observed between the melodic layer and the strand of harmonic accompaniment, but with less than twelve notes. The melodic line makes much use of chromatically twisting three-note cells that become more disjunct as they migrate to a higher register.

Ex. 10: 5

Example 10:6 shows the progression of chords from Fig.28 through to the climax of the first movement at Fig.34 and the final cadence. Chromatic voice leading governs the horizontal progression, whilst the soloist delivers a complementary melodic line that climbs to the highpoint. Whereas in earlier works one might expect Lutosławski to deploy a 12-note chord at a climactic moment (albeit quietly, as in the first movement of *Partita*), here the point of arrival is marked by a 6-note chord of superimposed minor thirds (at Fig.34, and again a semitone higher at Fig.35). Lutosławski's predilection for minor ninths has already been noted; here the minor thirds are superimposed in order to maximise the intervallic content of non-adjacent minor ninths. The final chord also emphasises a minor ninth (at the bottom, between C and Db), and the sound of the cellos' lowest open string at this point may be heard to establish a structural connection with the chord at Fig.28.

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Ex. 10: 6

The harmonic sonority of perfect fifths and minor third at Figs. 20 and 28 is highly distinctive, and may have a referential effect for the listener (apparently no stylistic allusion was intended by the composer). If a reference is detected at these points, it is perhaps to the extended chord structures of Ravel. Similar sonorities are embedded in many of Lutosławski's complex chord-aggregates, particularly those having a minor-seventh chord in two harmonic strands (see Ex. 3:13), although in 12-note chords there are other, non-adjacent interval relationships. In the 8-note chords used for the harmonic texture of *Interlude* one is able to distinguish a little more clearly the characteristic combination of perfect fifth and minor third in the low strand (see Ex. 9:16), albeit rendered out of focus by rhythmic blurring. When these interval-classes are combined in a 4-note chord, however, the smaller number of intervals enables the 3+7 sonority in the low register to be heard more clearly.

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There is a textural aspect to the harmonic strand between Figs. 20-24 and 28-34 (Ex. 10:7). In each case the composer adopts a method of rhythmic layering that enables chords to be sustained whilst avoiding a purely static effect. It is important to note that he achieves this effect with polyphony that is metred rather ^{than} aleatory. It has to be metred in order to maintain a constant rate of harmonic change, without which the linear progression of chromatic voice leading would not be feasible. In the Double Concerto the equivalent stage in the form of the first movement contains a polyphonic bundle that delivers a mostly triadic 12-note chord (see Ex. 6:5).

Ex. 10:7

The image displays a musical score for Ex. 10:7, consisting of eight staves. The top two staves are in treble clef, and the bottom six staves are in bass clef. The score is divided into three measures. Each measure begins with a dynamic marking of *f* (forte), which then transitions to *mf* (mezzo-forte) within the first measure. The music features a dense, layered texture with many notes, including slurs and ties, creating a complex polyphonic effect. The bottom two staves appear to be a simplified or reduced version of the texture above.

The second movement is a fleet, whispering scherzo conveyed by pianism of Chopinesque delicacy (but not Chopinesque in language). It opens, however, not with any gestural references to the romantic period, but with motoric rhythmic figurations similar to those at the beginning of *Partita*, which the composer associates with a tactile allusion to baroque keyboard music (Ex. 10:8). It is necessary to distinguish an abstract, gestural allusion of this kind from stylistic reference, as it is unlikely that the piece will convey anything which the listener might perceive as being borrowed from or influenced by musical language of the baroque era.

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Ex. 10: 8

2.

Presto $\downarrow = \text{ca } 160$

Table 10:2 gives an outline of the formal scheme of the second movement. This is the only one of the four movements to contain a section that fulfils the function of a cadenza (fully composed rather than improvised).

Table 10:2 Piano Concerto: formal scheme of second movement

Fig.	Stage	Character	Instrumentation
---	Chase	A	
41	↓	B	
45	↓	C	
47	↓	A ¹	string trem.
49	↓	D	piano
51	↓	A ²	piano/w. wind
53	↓	D	str./wind
55	↓	A ³	
56	↓	E	
59	↓	A ⁴	
60	Recap	A	piano
61+	↓ chord 1	with 2-bar interruptions	w. wind inserts
62+	↓ chord 2	tritone chord interruption	w. wind
63+	↓ chord 3	maj 7th chord interruption	w. wind
	Cadenza	tritone chord interruption	w. wind
		26 bars (from 4 after Fig. 63)	piano solo
64	Coda	calmly subsides to end	pft+str/w. wind
65	↓ chord 4	tritone chord interruption	w. wind
66	↓ chord 5	tritone chord interruption	w. wind

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Much of the melodic and harmonic material in the second movement is derived from either three-note cells of interlocking tone/semitone, or the pairing of tritones and semitones. This can be observed, melodically in the first section from the beginning to Fig.38 (Ex.10:8) and harmonically in the woodwind chords (of superimposed and interlocking tritones) which interrupt the perpetual motion later in the movement, before and after the piano cadenza (Ex.10:9). All except one of these 4-note chords can be expressed as pc-set 0,1,6,7, and the last one represents the set compressed into its compact format. Vertical symmetry of intervals is characteristic of all six chords, and the first, third, fourth and fifth all emphasise the minor ninths as a non-adjacent interval (the configuration of the second chord superimposes three major sevenths). The structural function of these chords is momentarily to interrupt the rhythmic flow of perpetual motion. The sixth chord is played by divided cellos, which continue to descend chromatically until the movement ends on a low F, leading to the beginning of the slow movement on the next note of the chromatic sequence - E.

Ex. 10: 9

The image shows a musical staff with six chords. Each chord is represented by a cluster of notes on a five-line staff. Below the staff, the pc-sets for each chord are listed: 0,1,6,7; 0,1,2,3; 0,1,6,7; 0,1,6,7; 0,1,6,7; 0,1,6,7. The notation includes various accidentals (sharps, flats) and fingerings (numbers 1-5) above the notes.

The fast pace of the second movement is largely the result of it being conventionally metred throughout, including the cadenza-like passage for the soloist between Figs.63 and 64. Example 10:10 shows most of this unaccompanied section for the soloist (bars 135-153), the destination of which is the chord at Fig.64 (Ex.10:12). At bar 144 the perpetual motion of continuous semiquavers is broken and the harmony divides into triadic aggregates in distinct strands (with octave doublings). The number of pitch-classes is increased, but surprisingly Lutosławski does not use 12-note chords (here the pitch collections are defined by the pedal indications). The sonorities produced are reminiscent of those in the piano accompaniments to the Illakowicz Songs, but with a lower level of harmonic density.

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Ex. 10: 10

The musical score consists of five systems of piano solo notation. The first system (measures 136-141) shows a right hand with arpeggiated figures and a left hand with harmonic reduction. Dynamics include *poco f*, *p*, and *cresc.*. The second system (measures 139-141) continues the arpeggiated figures, with dynamics *mf* and *cresc.*. The third system (measures 142-144) shows the right hand arpeggiated figures and the left hand harmonic reduction, with dynamics *menof* and *ms.*. The fourth system (measures 146-149) continues the arpeggiated figures. The fifth system (measures 150-153) shows the right hand arpeggiated figures and the left hand harmonic reduction, with dynamics *f (Legato)* and *ff*. Pedal markings (*Ped*) are present throughout the score.

Example 10: 11 gives a harmonic reduction of the left hand, 4-note chords from bars 133-142, showing the chromatic voice leading that determines horizontal progression. Similar voice leading obtains in the arpeggiated figures played by the right hand, where the thumb gradually rises in semitones at each half-bar; these figures each have the compass of a major seventh or diminished octave (except the end of bar 143) as they lead inexorably to the high F# in bar 144.

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Ex. 10: 11

II, bb. 133-142

One of the most memorable features of the second movement is the harmony at Fig. 64 (Ex. 10:12) that acts as the destination point of the preceding cadenza. The intervallic sonority is typical of the work in containing superimposed perfect fifths (E-B-F#) and a minor third (G#-B). The root of the chord (effectively an E⁷, but without the seventh) is also doubled at the low octave by double basses, which has the effect of enhancing the acoustic resonance of that note's harmonic series. The soloist doubles the string harmony (including the piano's highest B) and then adds a complementary tetrachord of adjacent semitones (C, C#, D, D#) that is gradually displaced lower in register until it is in a central position just above the sustained chord. Gesturally, this passage testifies to the influence of Chopin, particularly the tactile allusion of the right hand's chromatic decoration. Harmonically, however, it suggests another reference to the sound world of Ravel. The root of the harmony also has structural significance: E is used to underpin the section between Figs. 47 and 49 as well as the beginning of the slow movement. It is perhaps not merely coincidental that the long-range organisation of the Third Symphony is defined by repetition of the same pitch, including the memorable extended harmony beginning at Fig. 93 (see Ex. 7:14) that has a similar sonority of superimposed perfect fifths.

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Ex. 10: 12

The musical score for Example 10:12 consists of two systems. The top system is for the piano, marked 'pf solo' and 'p'. It begins with a recitative-like passage indicated by a dashed line above the staff. The tempo is 'Poco meno mosso'. The bottom system is for the string quartet, including Violin I (vni I), Violin II (vni II), Viola (vle), Violoncello (vc), and Contrabasso (cb). All string parts are marked 'pp' and play sustained notes that provide harmonic support for the piano's recitative.

The slow, third movement epitomises Lutosławski's late style, as do the slow movements of both *Partita* and *Chain 2*. It opens with a long, unaccompanied passage for the soloist, whereas the String Quartet and the Cello Concerto each opened with a long solo, akin to a dramatic monologue or soliloquy; if there is any valid theatrical analogy it must be to an operatic scene. It begins like a recitative (note the absence of bar lines), which then leads into a slow, lyrical *cantabile*, quasi-arioso. Dramatically, although not stylistically, this could be compared with the opening of the third movement of Beethoven's Sonata in A flat op.110. A facsimile of the opening of the slow movement is shown in Example 10:13. It has already been noted that the low E which begins the recitative is a consequence of chromatic descent at the end of the second movement. It rises to F (*secco*) at the end of the first system, then F#, G, and to a sustained G#. This chromatic ascent leads to the A which underpins the Largo theme; note the prominent minor ninth between the bass and tenor

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registers. The latter then continues to rise in semitones until reaching the Eb at the beginning of the fourth system (whilst the bass also rises by semitones to B). This chromatic voice leading is a simple, but nonetheless effective device for raising the level of dramatic tension as the melodic line is extended sequentially up to a high C, from which it then subsides.

Ex. 10: 13

3.

The musical score consists of five systems of piano solo music. The first system is marked $\Gamma = ca 85$ and includes dynamics *p*, *mf*, *mp secco p*, *pp*, *pocof*, and *mp secco*. The second system includes *p*, *mf*, *mp secco p*, and *pp*. The third system is marked **5 Largo** ($\text{♩} = 40 - 45$) and includes *p cantabile*. The fourth system includes dynamics *p* and *pp*. The fifth system includes *rit.*, *a tempo*, *rit.*, and *a tempo*. Pedal markings include *Ped*, **II Ped*, and *II Ped*. The score is written for piano solo and includes various musical notations such as slurs, accents, and dynamic markings.

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Mention has already been made of the significance of melodic and harmonic pairing of minor thirds and perfect fifths as a key element in the late works. Here, these intervals can be seen in the melodic contour of the opening recitative as well as bars 5-7 of the ensuing Largo. Initially, they are used as a three-note pattern (F-Ab-Eb), transposed sequentially at the tritone (B-D-A; F-Ab-Eb) as the line rises. They are used again in the same way, but inverted, as the line falls: D-B-E; Ab-F-Bb; D-B-E. Simple as this melodic shape *maybe*, it carries a highly distinctive harmonic colour when sustained by the pedal. Similar sequential extension follows as the line becomes more expansive, ranging from low A (A-C-G; Eb-Gb-Db; etc) to reach D in a higher register in preparation for the beginning of the Largo theme. The individual character of the latter, unlike other themes in Lutosławski's *oeuvre* (except perhaps the slow movement of *Partita*), is determined largely by the minor ninth sonority underpinning the line.

Ex. 10: 14

The image shows a musical score for a piano part, divided into two systems. The first system is labeled '(quasi-recitative)' and features a treble clef. It contains a series of notes with slurs and fingering numbers (3, 7, 4) indicating a specific melodic contour. The second system is labeled '(Largo)' and features a bass clef. It continues the melodic line with similar slurs and fingering, ending with a fermata. The notation is handwritten and includes various musical symbols such as slurs, ties, and dynamic markings.

After the orchestra re-enters at Fig. 67, the piano part becomes more impassioned and declamatory, leading to the dramatic highpoint of the slow movement in a *fortissimo* 8-note chord-aggregate at Fig. 77, played by the whole orchestra together with the soloist. In keeping with ^{the} overall harmonic character of the movement, this chord superimposes only minor thirds and perfect fourths/fifths (3+5), with a notable absence of minor ninths between harmonic strands. Example 10:15 is a harmonic reduction of the climactic harmony showing how it collapses inwards onto a central, semitone dyad (F/F#). It is interesting to note that this harmony is subdivided into three harmonic strands, in the manner of a 12-note chord-aggregate, but that the middle strand duplicates two pitches from each of the outer, adjacent strands (see also the C-H aggregates in *Interlude*, Ex. 9:16).

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Ex. 10: 15

Musical score for Ex. 10: 15. It consists of three staves. The top staff is for the violin, the middle for the piano, and the bottom for the bass. The piano part includes triplets and a descending line. The violin part has a long, sustained note. The bass part has a descending line.

After the highpoint, the Largo theme is developed in whole-tone scale segments by the violins. The movement ends as it began, with the soloist intoning the Largo theme (Ex. 10: 16), gradually subsiding to conclude with a low 4-note chord of two superimposed perfect fifths and one minor third: C-G-D-F (similar to the chords used at Figs. 20 and 28 in the first movement). Whereas the bass and tenor lines both rose by semitones in the comparable passage at the beginning of the slow movement, here they fall through minor thirds, thus lowering the degree of dramatic tension previously established. The top line gradually falls by semitones through an octave from F to reach the upper note of the final chord. Three-note cells of falling semitone and minor third (1+3) form a distinctive feature of this line and similar phrases in several of the *Chantefleurs et Chantefables*.

Ex. 10: 16

Musical score for Ex. 10: 16. It consists of two systems of staves. The top system is for the piano, and the bottom system is for the violin. The piano part includes a solo section and a section with lyrics 'di mi nu en do'. The violin part has various dynamics and tempo markings. The piano part includes a solo section and a section with lyrics 'di mi nu en do'. The violin part has various dynamics and tempo markings.

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For the final movement, Lutosławski returned to his earliest formal model for the 'chain' principle: the Passacaglia in the final movement of the Concerto for Orchestra. There, the eight-bar passacaglia theme is overlapped with contrasting episodes (unrelated to each other) so that phrases in each strand rarely begin or end at the same point. In the Piano Concerto, he adopts a term also borrowed from music of the baroque period: chaconne (although, as he acknowledges, it is not strictly a chaconne in the traditional sense). Table 10:3 summarises the overlapping links of chaconne and episodes which make up the chain.

Table 10:3 Piano Concerto: formal scheme of final movement

Fig.	Chaconne	Episodes	Instrumentation	
---	chaconne 1	----	p basses only	
83	chaconne 2	----	p +cellos	
84	↓	episode 1		piano
85	chaconne 3	↓	+bassoons	
86	↓	episode 2		piano
87	chaconne 4	↓	+trp, fl	
88	↓	episode 3		piano
89	chaconne 5	↓	+trb, ob, str.	
90	↓	episode 4		piano
91	chaconne 6	↓	+horns	
92	↓	episode 5		piano
93	chaconne 7	↓	upper str.	
94	↓	episode 6		piano
95	chaconne 8	↓	cb, fg, trb, tb,	
96	↓	episode 7		piano
97	chaconne 9	↓	xyl, ob, picc, cl,	
98	↓	episode 8		piano
99	chaconne 10		percussion	
100	↓	episode 9		piano
101	chaconne 11	↓	tutti	
102	↓	episode 10		piano
103	chaconne 12	↓	cellos/basses	
104	↓	episode 11		piano
105	chaconne 13	↓	ob, timp, str.	
106	↓	episode <u>11a</u>		piano
107	chaconne 14		p cl, fg, GC,	
108	↓	episode 12		piano
109	chaconne 15	↓	f tutti	
110	↓	episode 13		piano
111	chaconne 16	↓	cl, harp, etc.	
112	↓	episode 14		ff piano
	chaconne 17	↓	f cl, strings, etc.	
113	chaconne 18		ff tutti	(piano tacet)
114	climax	ad libitum, recitativo		ff piano
119	coda	a battuta, presto		

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The chaconne consists of two elements: a ten-bar rhythmic pattern, and a 37-note melodic line (with repetitions); these will be referred to as *talea* and *color*, respectively, to borrow terminology from the techniques of isorhythm. Of the eighteen statements of the chaconne, seventeen preserve the *talea* in its original form including rests, whilst one compresses it into only five bars by deleting rests. Twelve statements combine the *talea* with the *color*; six use the *talea* without the *color*, and five of these use the *talea* harnessed to chords rather than a horizontal line (nos. 6, 13, 15, 16 and 17). Only chaconne 10 (for untuned percussion) uses the *talea* without any pitch element at all. Example 10:17 shows the initial statement of the chaconne theme with its distinctive rhythmic and pitch characteristics. Transpositions of those statements of the chaconne which preserve the *color* are shown in Table 10:4 with a numerical sub-script suffix for the level of semitone transposition above or below the original.

Ex. 10: 17

<u>Table 10:4 Piano Concerto finale</u>			
<u>Chaconne theme: Talea and Color</u>			
<u>Bars</u>	<u>Fig.</u>	<u>Chaconne</u>	<u>Talea/Color</u>
1- 10	--	1	T - C ₀
11- 20	83	2	T - C ₁₅
21- 30	85	3	T - C ₁₀
31- 40	87	4	T - C ₉
41- 50	89	5	T - C ₈
51- 60	91	6	T
61- 70	93	7	T - C ₁
71- 80	95	8	T - C ₆
81- 90	97	9	T - C ₁₁
91-100	99	10	T
101-110	101	11	T - C ₄
111-120	103	12	T - C ₉
121-130	105	13	T
131-140	107	14	T - C ₂
141-150	109	15	T
151-160	111	16	T
161-170	113	17	T
171-175	113	18	T - C ₇

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Melodic interval-pairing 1+6 governs all twelve statements of the *color* (Ex. 10:18); although chaconne 6 is chordal it has some characteristics of the *color*, such as a similar contour, albeit more expansive. The first note of each *color* is determined by simple rotation through the cycle of fifths, anticlockwise (the last note matches the first of the next transposition).

Ex. 10:18

TC₀
1

TC₅
2

TC₁₀
3

TC₃
4

TC₈
5

TC₁
6

TC₆
7

TC₁₁
8

TC₄
9

TC₉
10

TC₂
11

TC₇
12

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In chaconne 13 (Figs.105-107) the *talea* is delivered by the combination of oboe, timpani and harp, which use repeated note patterns drawn from a progression of thirteen chords played by the strings. Example 10:19 shows these chords, together with a reduction into separate horizontal lines in order to clarify the linear progression of the upper three voices which moves according to interval-pairing 1+3. The bass line is mostly doubled in octaves sustaining a pedal G, but then descends in semitones to reach the low D natural with which the *color* of chaconne 14 begins.

Ex. 10:19

The musical score for Example 10:19 is presented in two systems. The first system shows measures 105 to 107 with a piano reduction of the upper three voices (treble clef) and a bass line (bass clef). The second system shows the same measures with a more detailed reduction of the upper three voices, including fingerings (1, 3) and accents. The bass line is mostly doubled in octaves, sustaining a pedal G, but then descends in semitones to reach the low D natural.

The destination point of the final movement is reached with the eighteenth statement of the *color* between Figs.113-14. Here, the orchestra (without soloist) plays a compressed version of the *talea*, with many (but not all) rests removed so that the theme is reduced to five bars, half its previous length (Ex. 10:20). This acts as the orchestral highpoint of the work and marks the end of the chain technique that enables the composer to drive towards the concerted climax.

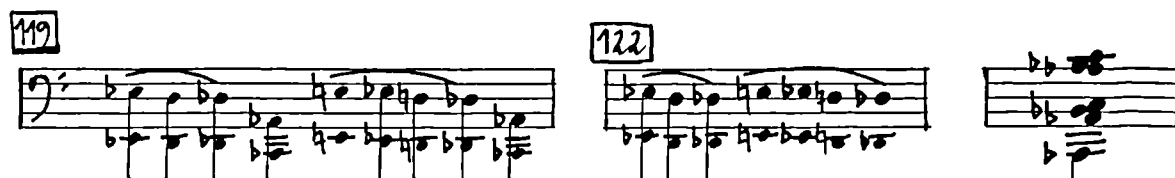
Piano Concerto

Ex. 10: 20



The climax for the soloist comes in the *ad libitum* section at Fig. 114, the first aleatory section of the movement. Although the sonority of the piano's highpoint is made harmonically dense by sustaining *fortissimo* chords with the pedal, unlike Lutosławski's other large-scale forms there is no 12-note chord-aggregate at the point of climax, either played by the orchestra or by the soloist. In fact, the whole work displays a notable absence of 12-note chords (as distinct from the more general principle of 12-note harmony). In this respect it is very similar to *Partita*, which also exploits the resources of the chromatic whole, but partitioned into foreground and background, melodic and harmonic layers. Also like *Partita* and *Chain 2*, the Piano Concerto ends with a fast, vigorous Coda driving to a crisp, cadential ending. The composer approaches the final cadence by means of a chromatically falling bass line introduced at the beginning of the coda that drops by a perfect fourth onto Ab (Ex. 10: 21). This progression is repeated and then stretched to delay the inevitable conclusion on a trichord rooted to Ab.

Ex. 10: 21



Piano Concerto

Discussion of the finale has focused on horizontal unfolding of the *color* and *talea* elements of the chaconne theme because it is this strand of the musical material in the fourth movement that invests the piece with linear coherence and a compelling sense of direction. The other strand in the chain technique of this movement, the overlapping episodes played by the soloist, do not present melodic material that could be described as thematic. Whereas the chaconne provides the horizontal dimension leading to the climax at Fig. 114, the soloist's episodes provide a succession of rhythmically varied ideas that are primarily gestural and tactile (but they are not 'variations' in the usual sense, as they are not linked by the varied treatment of common material). Differences of rhythmic patterning mark the changes from one episode to another, although the listener is unlikely to perceive these changes in the rate of rhythmic activity as sectional divisions due to the way they follow each other without breaks. Many familiar features of Lutosławski's style can be observed in the episodes, including three-note cells of adjacent semitones, frequent use of cells combining semitone and minor third, and short-term illustrations of chromatic voice leading; but at no point does the piano develop melodic ideas to compare with the slow movement, or with the expressive violin lines found in *Partita* or *Chain 2*. The piano is treated here as an instrument of harmony, complementing pitches used in the *color*, but giving a total of less than twelve notes. Concentration on fast passage work was obviously the composer's intention with the solo part in the final movement, but the absence of any thematic role is perhaps a weakness.

In the case of a piano concerto, it is inevitable that comparisons will be made with the existing repertory. In Lutosławski's case such comparisons must also take into account his own experience as a pianist and the composers that influenced him in his youth.⁶ Ravel, Bartók and Prokofiev are the most obvious composers to mention in this context, as all three were influential in the stages of Lutosławski's career. The Piano Sonata of 1934, for example, displays many traces of Ravelian harmony and pianistic figurations strongly reminiscent of the Ravel Sonatine. Bartók has been an all pervading influence on Lutosławski's musical language, particularly in the treatment of intervallic cells, but there is little evidence of any direct influence from the pianism of Bartók's concertos on that of

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Lutosławski. A less obvious connection may be drawn with the pianism of Chopin, especially in the use of melodic decoration in the high register drawn from patterns that curl around chromatic notes that are auxiliary to the predominant harmonic sonority (such chromatic lines have been discussed in Chapter Four in connection with Bartók, but they can also be found in the music of Chopin although in relation to diatonic functions of the melodic line that are not usually found in the music of Lutosławski).

Of all the connections that might be made, perhaps the most significant is with the music of Brahms. There are formal similarities between the chaconne technique of the finale in Lutosławski's concerto and the passacaglia technique that defines the structural unfolding of the finale of Brahms's Fourth Symphony (a similar procedure had been adopted by Lutosławski for the finale of his Concerto for Orchestra). The short unit of variation, together with the changing moods between them, and the cumulative effect of the whole, all these points are strongly reminiscent of the Brahms model. There is also a formal similarity between the four movement structure adopted by Lutosławski for the concerto and the scheme of Brahms's Second Piano Concerto, particularly in the placing of the scherzo movement before the slow movement. Lutosławski's admiration for Brahms is known, and he has acknowledged that he referred to the Second Piano Concerto during the work on his own.⁷

Pianistically, there may be traces of Brahms in the treatment of chromatic voice leading in thirds, harmonically thickened by the addition of octave doublings due to hand positioning and the role of the thumbs. Inevitably, close voicings of this kind are more likely to occur in the upper register, whereas the lower register is acoustically more suited to wider chord configurations. Although one can find such tactile and gestural similarities, it does not necessarily follow that the musical language will convey any aural allusion. Lutosławski's harmony does not observe the diatonic functions that are integral to the music of Brahms, and therefore the chromatic voice leading that can be detected is unlikely to be perceived in relation to the tension and relaxation principle of tonal dissonance treatment.

Chantefleurs et Chantefables

It has already been observed that a consistent pattern of Lutosławski's career since 1960 has been the composition of only one concertante work for each featured instrument, and only one large-scale work for each type of voice with orchestra. Hence there has been only one work for tenor and orchestra, *Paroles tissées*, and only one for baritone, *Les espaces du sommeil*. The idea of writing a large-scale work for soprano and orchestra remained a challenge which awaited a suitable text, not only inspiring a musical setting through strength of poetic images, but also having a shape, a dramatic 'plot' which would lend itself to the composer's treatment of large-scale form. The *Trois poèmes d'Henri Michaux*, *Paroles tissées* and *Les espaces du sommeil* had all been selected for the potential offered for dramatic growth and culmination. Throughout the early and mid 1980s, Lutosławski searched for a suitable text, but evidently without success. Eventually, he decided to approach the task in an entirely different way, setting a cycle of short poems. At this point he turned once more to the verse of Robert Desnos, the author of *Les espaces du sommeil*.

In 1944, shortly before he was arrested by the Gestapo for his activities in the French Resistance, Desnos deposited with his publisher in Paris the manuscript for thirty 'Chantefables à chanter sur n'importe quel air'. Tragically, the poet did not live to see these verses in print; he died of typhoid in 1945 after spending several months in the concentration camp at Terezin in Czechoslovakia.⁹ In 1952 a selection of sixty *Chantefables et Chantefleurs*, thirty of each, was published in a limited edition. The complete collection of eighty poems was not published, however, until 1955, when a further twenty 'Chantefleurs' were discovered and added.¹⁰ (Note that Lutosławski has chosen to invert the title used by the publishers of the poetry in order to distinguish the title of the musical work from that of the book).

The verses are surreal nonsense rhymes, somewhere between Hilaire Belloc and Ogden Nash.¹⁰ Seen in the context of his abstract concert works composed since 1960, it may appear odd that Lutosławski turned to such lighthearted poetry as his source of inspiration; yet this is not at all out of character. Although the 45 songs for children composed during the

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late 1940s and throughout the 1950s were written purely as functional pieces to fulfil commissions from Polish Radio and PWM, they display a genuine sympathy for the simplicity of the medium and reveal a side of the composer which has remained open to the enchanting world of a child's imagination. The poems of Kazimiera Iłlakowicz, which Lutosławski chose for his set of Five Songs in 1957, were also taken from a collection of children's verse (*Rymy dziecięce*, Children's rhymes). From the full set of eighty 'poems for wise children' by Desnos, Lutosławski selected five representing creatures, and four representing a flower or flowers. As individual songs they are inevitably quite short; but the cycle as a whole is not insubstantial, lasting some 20 minutes in performance, slightly longer than either *Les espaces du sommeil* or *Paroles tissées*. Table 10:5 lists the order of song titles within the cycle, together with their English translations, and also shows the contrast achieved by alternating the tempo and the type of text.

Table 10:5 Chantefleurs et Chantefables : cyclic contrast

No.	Title	Translation	Type of text	Tempo
1	<i>La Belle-de-Nuit</i>	The Marvel of Peru	flower	slow
2	<i>La Sauterelle</i>	The Grasshopper	creature	fast
3	<i>La Véronique</i>	The Speedwell	flower	slow
4	<i>L'Eglantine, l'Aubepine et la Glycine</i>	The Wild-Rose, the Hawthorn and the Wistaria	flowers	fast
5	<i>La Tortue</i>	The Tortoise	creature	slow
6	<i>La Rose</i>	The Rose	flower	slow
7	<i>L'Alligator</i>	The Alligator	creature	moderate
8	<i>L'Angélique</i>	The Angelica	flower	slow
9	<i>Le Papillon</i>	The Butterfly	creature	fast

The cycle was written with a soprano of light vocal timbre in mind, although not for a particular singer. Whereas *Paroles tissées* was written for Peter Pears, and *Les espaces du sommeil* for Dietrich Fischer-Dieskau, the *Chantefleurs* had already been completed in 1990 when Lutosławski attended a gala recital in the recently renovated Royal Castle in Warsaw, given by the Norwegian soprano, Solveig Kringlebotn. Her light voice was apparently in keeping with the type of ensemble balance he had envisaged from the outset, hence he decided to request her as soloist for the première in London, and for the first performance in Poland, at the 1991 Warsaw Autumn Festival. '1

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The instrumental requirements are modest by comparison with the large orchestra used for *Les espaces*, and were chosen partly due to considerations of balance between soloist and orchestra, but also to suit the concert programming of smaller ensembles such as the London Sinfonietta: flute, oboe, clarinet (doubling piccolo and bass clarinets), bassoon (doubling contra-bassoon), trumpet, horn, trombone, percussion (timpani, xylophone, xylorimba, glockenspiel, tubular bells, snare drum), harp, piano (doubling celesta), and strings. Table 10:6 shows the contrast achieved between songs by altering the combination of instrumental tone colours exploited from within the ensemble.

Table 10:6 *Chantefleurs et Chantefables* : instrumentation

	1	2	3	4	5	6	7	8	9
flute		x	x	x	x	x		x	x
oboe		x	x	x	x	x		x	x
piccolo clarinet									x
clarinet		x	x	x	x	x	x	x	x
bass clarinet							x		
bassoon		x	x	x	x	x	x	x	x
contra bassoon			x				x		
trumpet		x	x	x	x			x	x
horn			x	x	x	x	x	x	x
trombone			x	x	x		x	x	
tamborine									x
snare drum				x					
<i>glockenspiel</i>	x			x					
tubular bells				x					
vibraphone	x			x					
xylophone		x							
xylorimba		x							x
timpani		x	x	x	x				
harp		x	x	x		x		x	x
celesta	x			x					
piano	x	x	x	x					x
strings	x	x	x	x	x	x	x	x	x

Vivid use of instrumental tone colours is one of the most striking features of the song-cycle. Certain combinations are typical of Lutosławski: vibraphone, glockenspiel, piano and celesta used for the nocturnal atmosphere of *La Belle-de-Nuit*; fragmented woodwind motifs and string *pizzicati* for the jumping of *La Sauterelle*; and especially the

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arpeggiated patterns for woodwind and tuned percussion in the last song, to represent the fluttering of *Le Papillon*.

Comparing the *Chantefleurs et Chantefables* with the Iłakowicz songs, both for soprano, one is impressed by the difference in treatment between the relative importance of the prime elements of harmony and melody. Whereas the earlier set concentrated on harmony, constituting a study in the composer's methods of building 12-note chords and chord-aggregates, the later cycle focuses primarily on melody. In this respect it continues the line of development which can be traced through *Partita*, *Chain 2*, and the Piano Concerto. Whereas the Iłakowicz songs were composed before Lutosławski had introduced his techniques of aleatory counterpoint, the Desnos songs could have made full use of such rhythmic effects, but he opted for conventional ensemble co-ordination that assists the projection of line instead of dense harmonic or polyphonic textures.

La Belle-de-Nuit opens with a melodic line played by first and second violins in unison with motorless vibraphone. This line is generated by horizontal pairing of semitones and tones (1+2), but blurred by rhythmic discrepancy between the two violin parts. The effect of this blurring is to establish a difference of aural focus between the instrumental line and the vocal melody. The soprano line in the opening and closing sections is generated by melodic pairing of interval-classes 2+5. Thus there is clear distinction between the intervallic character and the texture of these two melodic strands. Example 10:22 gives a melodic reduction of the vocal line together with the chromatic counterpoint, and also shows a harmonic reduction of the harmony in the middle section and at the end of the song. In the closing section, the countermelody slowly winds its way through the violins' upper register, this time joined by celesta. There is no method of set-complementation applied between the vocal line and the instrumental countermelody, although there is little duplication of pitches between them except at the beginning and end of phrases. Set-complementation does apply, however, in the middle section from Figs.2 and 4, where there is no duplication of pitch-classes between the 4-note string chords, the vocal line, and the decorative highlights played by piano and glockenspiel.

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Ex. 10: 22

1 Voice (2+5)
(1+2)

2 Voice Voice 4

Voice (2+5)
(1+2)

(1+2)

In the opening and closing sections of the vocal line in *La Belle-de-Nuit* there is a simple contour that outlines an arch, rising sequentially from F to G#, and then falling sequentially from G# to Gb. The continuity of interval-pairing that obtains between these sections (separated by the 'troped' insertion of the middle section) can readily be perceived by the listener, particularly in view of the fact that the closing section resumes on high G#. There are five chords in the middle section, each containing four pitch-classes (plus octave doubling of the lowest note). The vertical

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interval structure of the first of these chords, at Fig.2, superimposes two perfect fifths with a major second. Thus the initial interval-pairing of 2+5 (or 2+7) appears as a harmonic sonority as well in the vocal line (of the preceding section). The progression thereafter is by chromatic voice leading that reproduces the perfect fifths and major second sonority transposed a minor third higher, before octave transfers are used to migrate into the high register. The final four-note chord played by the strings has a vertically symmetrical structure of interval-classes 2+5 that matches the character of the vocal line.

In contrast to the lyrical, nocturnal mood of the opening song, *La Sauterelle* depicts the jerky, leaping motion of a grasshopper. This is achieved with fragmented three-note cells of adjacent semitones from the woodwinds, xyloimba and piano highlighting *pizzicato* chords from the strings. These chords each contain a major second dyad that is doubled at the octave to result in interlocking major ninths (except for the dyad just before Fig.3 which contracts to a semitone, thus giving two minor ninths). Example 10:23 gives a melodic reduction of the vocal line for the second verse, showing the way the composer uses rising sequential patterns to climb gradually to the high B \flat with which the song ends. At the point where this note is reached (Fig.11) the ensemble sustains a 6-note chord with octave doublings that is the most dense chord thus far in the work.

Ex. 10:23

The image shows a musical score for Example 10:23. It consists of three staves. The top staff is labeled 'Voice' and contains a melodic line with various accidentals and a final note on a high B-flat. The middle staff is for a piano accompaniment, featuring a series of chords and arpeggios with fingerings (1, 4, 1, 1, 3) and a 'pizzicato' marking. The bottom staff is a bass line with a few notes and a 'pizzicato' marking. The score is written in a single system with a key signature of one sharp (F#) and a common time signature (C).

La Véronique marks a return to the mood of the opening song, although there are no direct thematic connections established. It also opens with a rhythmically blurred string line, this time blending with the harp. The

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vocal line begins by twisting chromatically through interlocking tone/semitone cells; later it becomes more expansive, but still emphasising similar three-note cells of interval-classes 1+2 (Ex. 10:24). Between bars 13 and 21 there is a progression of chords that demonstrates Lutosławski's liking for chromatic voice leading in moving from a particular chord (here combining interval-classes 4+5) to a transposed version of the same sonority. A feature of this line which it shares with the sixth and eighth songs (see Exx. 10:27 and 29) is the use of a three-note cell of falling semitone and minor third (sometimes semitone and major third) at the end of phrases. *La Véronique*, *La Rose* and *L'Angélique* all end with a falling 1+3 cell, and this particular pairing colours many other vocal phrases throughout the cycle of nine songs (see also Exx. 10:13 and 10:16).

Ex. 10:24

The image shows three staves of musical notation in treble clef. The first staff begins with a bracketed interval labeled '1+2' above the first two notes. Below the first staff, there are two '1+4' annotations under the first and last notes of the first phrase. The second staff has a '1+3' annotation under the last note of the second phrase. The third staff has a '1+3' annotation under the last note of the first phrase. The music consists of eighth and sixteenth notes, with some beamed eighth notes.

The vocal line of the fourth song, *L'Eglantine*, *l'Aubépine et la Glycine*, is derived initially from melodic pairing of semitones and minor thirds (Ex. 10:25), although the setting of the second part of each stanza combines 1+3 cells with the 2+5 pairing where the poem refers to a bird singing in flight. The contour of the line shows a gradual ascent to high Bb within each verse, matched by the end of the song where the soloist outlines a minor ninth by climbing in minor thirds (and one major third) from A to Bb. Example 10:25 also shows the accretion of intervals in the accompanying harmony as the voice ascends to its highpoint. The final chord (Eb-F-G) strongly emphasises Eb as its root, thus creating a cadential (dominant to tonic) effect in relation to the preceding Bb.

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Ex. 10: 25

The musical score for Ex. 10: 25 consists of two systems. The first system has two staves: the top staff is labeled 'Voice' and contains a melodic line with slurs and triplet markings (1+3) and (2+5); the bottom staff is a piano accompaniment with chords and rhythmic markings. The second system also has two staves: the top staff is labeled 'Voice' and continues the melodic line; the bottom staff is a piano accompaniment with complex chordal textures and rhythmic patterns.

The fifth and seventh songs are humorous. The former, *La Tortue*, begins with a slow, descending semitone motif which, together with plodding *pizzicati* subtly suggests the deliberate gait of the tortoise, who remarks that he could imitate the swallows if only he had wings (he also observes that his elegant tortoise-shell waistcoat is cut exactly to his size). The vocal melody alternates with linking oboe phrases to form a continuous line (Ex. 10: 26). The initial 5-note chromatic descent remains undeveloped on repetition, whereas the intervening oboe links (of interval-pairing 1+3) gradually expand by insertion of additional notes. Later, the oboe develops a more expansive phrase, reaching a high B just after Fig. 6. A cadential flourish further extends the oboe line (diverging in contrary motion) to reach top E. The finality of this device is due not to any functional progression (either chordal or melodic) but to semitone voice leading.

Ex. 10: 26

The musical score for Ex. 10: 26 is a single system with six staves. The top five staves are for the oboe (labeled 'ob.') and show a continuous melodic line with various slurs and triplet markings (1+3). The bottom staff is a piano accompaniment with chords and rhythmic markings.

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La Rose, like *La Belle-de-Nuit*, *La Véronique* and *L'Angélique*, inhabits the sound world of Ravel's *Scheherazade* (particularly the harmony of 'Asie'). This is evident at the end, where the sensuous image of 'son parfum m'endort' is accompanied by a minor-seventh chord underpinning the sustained F# in the vocal line (note how this chord is placed above a C major triad as the final harmony). A falling cell of semitone and minor third establishes a connection with similar phrase endings in the Largo of the Piano Concerto (see Ex10:16). The song reaches a highpoint of expressive intensity as it twists chromatically up to top A. It ascends by sequential phrases that pivot on Ab whilst intervening notes form a line rising to Eb. The phrase that rises by a perfect fifth (Ab to Eb) and then a minor third (Eb to Gb) is a particularly expressive melodic gesture that has already been identified in the epilogue of the Third Symphony (Ex. 7:11) and the Largo of the Piano Concerto (Ex.10:13). Example 10:27a shows a reduction of the vocal line; note the recurring interval cells of 1+2 and 1+3, and the significance of F# as the focal pitch of the first and last phrases. Example 10:27b shows a harmonic reduction of chords that mark the unfolding of the melody (corresponding notes of the vocal line are shown with open note heads); note the underlying tonic-dominant-tonic progression of C-G-C in the bass (albeit confused by either G# or Gb), and the 6/4 sonority in the middle/low register supporting the vocal highpoint on A.

Ex. 10:27

a)

b)

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Similar interval cells (1+2 and 1+3) predominate in the vocal line of *L'Alligator* (Ex. 10:28), which is also structured around certain focal pitches (F#, G and D). An apt combination of bass clarinet, bassoon and cello (*pizzicato*) playing in irregular metres in the low register succeed in suggesting the awkward gait of the creature along the mudbanks of the Mississippi. It has already been observed how Lutosławski tends to avoid obvious word-painting in serious vocal works such as *Paroles tissées* and *Les espaces du sommeil*; but here the rationale is entirely different. Intentionally lighthearted, the suggestions of the creatures' character and attributes are gently humorous, but without being unduly burlesqued (and therefore not banal). The implausible scene of an alligator addressing his intended (though not entirely unsuspecting) victim in the mode of human speech is the kind of situation which would appeal to Lutosławski were he to compose to opera. He has often quoted the example of Ravel's *L'enfant et les sortilèges* as his ideal opera, due to the surreal nature of its characters such as the singing teapot, the armchair, and the clock. His view that, because it is ridiculous to think of a teapot speaking it is no more ridiculous when the teapot sings, provides a clue to his attitudes towards the personification of the tortoise and the alligator. It would appear that Lutosławski is now unlikely to embark on the composition of an opera, which would inevitably occupy him fully during his remaining years. The *Chantefleurs et Chantefables*, however, give an insight into the kind of surreal images which he might have been tempted to explore.

Ex. 10:28



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The penultimate song, *L'Angélique*, is harmonically the warmest and melodically the most lyrically expressive of the set.¹² The vocal line (Ex. 10:29) shares a number of similarities with the Largo theme in the slow movement of the Piano Concerto, particularly the way it eventually subsides onto the final E, preceded by the semitone and minor third pattern G#-G-E. The supporting harmony also shares the sonority of superimposed minor thirds and perfect fifths, already observed as a central feature of the late style and found at structurally significant and expressive moments (either horizontally, or vertically, or both) in the Third Symphony, *Partita*, *Chain 2*, *Chain 3* and the Piano Concerto.

Ex. 10:29

The musical score for Ex. 10:29 consists of four staves. The top two staves represent the vocal line, and the bottom two staves represent the piano accompaniment. The vocal line begins with a descending semitone (G# to G) and a minor third (G to E), followed by a series of intervals including 1+3 cells. The piano accompaniment features chords that progress horizontally by chromatic voice leading, specifically major, augmented, and minor triads. The final chord is marked with a '5' and a '3'.

The opening vocal phrase winds downwards through adjacent semitones, whilst the ^{second} phrase climbs through 1+3 cells. The third and fourth phrases curl through cells of semitone/tone. The fifth phrase ascends sequentially through cells of minor third and semitone, then major third and semitone until reaching the vocal highpoint on top A. From here until the end of the song the line is supported by chords that progress horizontally by chromatic voice leading; note the sequential progression through major, augmented and minor triads, with the 'tenor' voices descending chromatically in parallel major thirds. It is interesting to observe the way Lutosławski arrives on the final chord: horizontally by semitone in each voice, although the lowest part's arrival on F# is delayed.

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The final song, *Le Papillon*, is the only one of the set to make use of *ad libitum* ensemble playing. There are only three points within the song where the conductor is required to give a downbeat beginning an aleatory section: at the beginning, at the end of the first verse, and just before the end of the song (ie. the end of the second verse). These *ad libitum* sections feature rapid, unsynchronised, arpeggiated patterns played by woodwinds, horn, harp, piano and xyloimba that vividly suggest the fluttering of a butterfly. They elaborate a 9-note chord which appears at the beginning and the end (at the same pitch level), and transposed at Fig. 8 to provide a harmonic, textural and gestural highpoint to the whole cycle. Whereas it is not surprising that Lutosławski chose to limit the extent of aleatory procedures in chamber pieces such as *Epitaph*, *Grave* and *Partita*, it comes as a surprise to find such a tiny proportion of an ensemble work devoted to *ad libitum* co-ordination.

In terms of compositional technique, the leading role in *Le Papillon* is taken by a strong *pizzicato* bass line, divided between cellos and double bass. Closely integrated with this melodic and harmonic feature in the low register there is a part for xyloimba that adds short, troped insertions; rhythmically, the result is almost perpetual motion in staccato quavers. In the upper register, the woodwinds play arpeggiated figures (similar to the intervallic patterns of the opening chord) that provide perpetual motion in semiquavers. The result of combining these rhythmic layers in metred counterpoint is to invest the piece with a fast pace that is due as much to the rapid delivery of changing pitch material as it is to the degree of rhythmic activity.

Lutosławski has acknowledged that the bass line owes something to the style and compositional technique of J.S Bach, and that the continual quaver motion is a faster version of bass lines that can be found in some chorales.¹⁹ The listener is unlikely to hear this as a specific reference, however, and the significance of this stylistic observation is that it confirms Lutosławski's continuing interest in harmonic procedures of the baroque period (other examples of this long standing interest are the final movements of the Concerto for Orchestra and the Piano Concerto, *passacaglia* and *chaconne*, respectively). Example 10:30 shows a melodic

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reduction of the bass line together with the troped insertions played by the xylorimba (note the way the last pitch of the 4-note xylorimba patterns is repeated in order to break the continuity of the bass line). The effect of displacing the quaver patterns from the *pizzicato* line to the xylorimba is continually to divert the listener's focus of aural attention from the low to the high register.

Ex. 10: 30

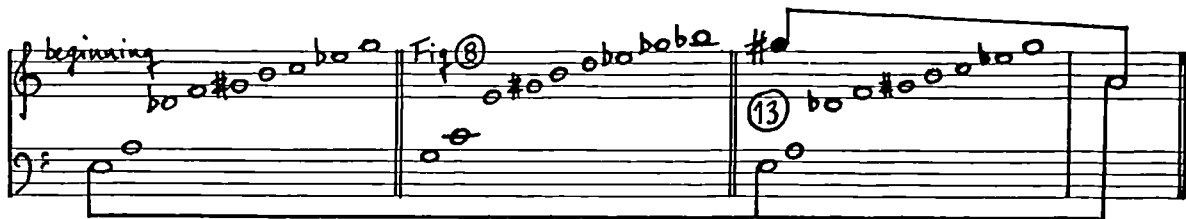
The image shows a handwritten musical score for Example 10, 30. It consists of seven staves of music. The notation includes various rhythmic values, accidentals, and dynamic markings. There are several circled numbers (2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13) placed above the notes, likely indicating measures or specific musical events. The score is written in a style typical of a composer's manuscript, with some corrections and annotations.

In the middle register there is a progression of three-note chords sustained by the upper string parts. These chords are mostly triadic (extended to seventh chords) and are linked by the kind of chromatic voice leading that has already been observed in the preceding songs and in the Piano Concerto. The vocal melody has a simple, syllabic outline and is conceived vertically, in relation to the string chords, rather than horizontally as an independent line. As the vocal part weaves through the string harmony it completes the chords by supplying the 'missing' notes, usually a major third either above or below the first violins (hence there is predominant harmonic sonority of augmented triads).

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It is worth noting that Lutosławski did not deploy 12-note chords for the aleatory sections in *Le Papillon*, but opted for the less dense harmonic sonority of 9-note chords that are used to define the structure of the song (Ex. 10:31). Although they are not presented with any particular differentiation between harmonic strands, these chords could be regarded as aggregates of three triads: major (second inversion), at the bottom; diminished, in the middle; and minor (root position) at the top. The first and third chords are at the same pitch level, whilst the second is transposed to a higher pitch level that assists in strengthening the aural sense of it being the highpoint (literally, as well as in the formal sense of a climax). The second chord (at Fig. 8) preserves the vertical interval structure of the first, and is connected to the horizontal scheme (of the bass line) by middle C, its second lowest note. Similarly, the third 9-note chord (at Fig. 13) is linked to the preceding horizontal line by the A that appears a perfect fourth above the lowest note. The song ends with a flourish that cadences decisively onto A. There is a strong suggestion of dominant to tonic functions in the bass progression from E at Fig. 13 to the final note. Even though the rest of the 9-note chord does not form part of a functional progression the sonority of an A major triad (enharmonically a 6/4 chord) at the bottom reinforces the horizontal logic of conclusion on A. The cadential implication of the chord at Fig. 13 is further strengthened by the presence of high G#, sustained by the soprano, that could be said to function as a leading note resolving at the lower octave.

Ex. 10: 31



At the première of *Chantefleurs et Chantefables*, given on 8 August 1991,¹⁴ the programme for the Promenade Concert included another of Lutosławski's works to have had its first performance in London: the Cello Concerto. The contrast between these works, composed twenty years apart,

underlined the degree of refinement which has taken place in his musical language during this period. The intimate, enchanted world inhabited by the Desnos songs could not be at a further remove from the extrovert, confrontational drama that unfolds in the concerto.

Humour is an essential aspect of this song cycle, but it is not a feature that one associates with Lutosławski's other mature or late works (with the exception of the finale of the Double Concerto; see Ex.6:13). The humour obviously springs from surreal images in the poems that Lutosławski chose, particularly those depicting the tortoise and the alligator. To a listener familiar with the *Trois poèmes d'Henri Michaux*, *Paroles tissées* and *Les espaces du sommeil*, it may come as a considerable surprise to find Lutosławski engaging in word painting (such as the irregular metres used for the lumbering gait of the alligator, or the repeated-note figure that suggests the gnashing of its numerous sharp teeth). But a listener familiar with the Children's Songs composed between 1945 and 1960 is likely to recognise in the *Chantefleurs et Chantefables* a return to elements of the composer's earlier style and to personality traits of his youth. It would be misleading, however, to suggest that the lighthearted nature of the *Chantefleurs* represents a change of direction for Lutosławski, and it is unlikely that subsequent, more abstract, symphonic works will be treated in a similar vein.

Since completing the *Chantefleurs*, Lutosławski has been working on a large-scale orchestral work that, if completed, may realise his plan for a Fourth Symphony. It is impossible accurately to predict how this project will relate to the stylistic features that have been identified in the present study, but it will be interesting to observe how the composer applies the compositional techniques of his late style (especially in the melodic dimension) to a work without the concertante focus of a particular voice or instrument. This consideration, in particular, is likely to determine the relationship between melodic line and harmonic accompaniment.

When questioned about recent developments in his musical language, Lutosławski suggests that he has not changed direction, but that he has added new compositional methods and techniques to the means at his

disposal, without discarding any of his previous ones. Whilst this may be true of his harmonic and melodic techniques, the evidence of his recent work seems to indicate that there has been a fundamental reassessment of the role and importance of aleatory procedures. It remains to be seen whether his future pieces (such as a Fourth Symphony) will confirm this shift in emphasis, or whether he will return to experiment further with the element of chance.

If Lutosławski does succeed in completing a Fourth Symphony within the *near future, for example by the end of 1992 or early the following year*, this in itself would reveal an intriguing development in his method of working. Whereas a period of twenty years separates the completion of his First and Second Symphonies, and sixteen elapsed between completion of the Second and Third, a possible Fourth might emerge after only a further nine *or ten years*. It has already been noted, in Part One, that the use of aleatory techniques has tended to make the composer's progress with each new work very slow, whilst 'least advantageous solutions' to ensemble problems are calculated and solved. In addition, one must not overlook the time-consuming process of establishing a fixed page image for scores employing *ad libitum* sections. The greater fluency with which Lutosławski produced his pieces of the 1980s can largely be ascribed to the diminishing role, and therefore the diminishing notational difficulty, of passages composed according to aleatory principles.

The harmonic sonorities that one can hear in Lutosławski's most recent works have a clarity of definition that places him closer to the sound world of Ravel than to the dense texturalism associated with works of the 1960s. The relative absence of 12-note chords in the later works would have been as hard to predict in 1970 as the adoption of 12-note harmony would have been difficult to anticipate in 1950. There has been no move towards neo-romanticism, and music of the baroque era remains Lutosławski's spiritual home. There has been a re-emergence of quasi-tonal relationships, particularly in the use of cadential endings, but these show a greater concern for pitch centring rather than a conscious (or unconscious) allusion to any particular style or language. The pitch focus of the Third Symphony (on E) reveals a concern for long-range organisation that may (or

may not) be developed further in any subsequent large-scale, symphonic work. It is unlikely that there will be a return to the kind of static (or slow moving) 12-note harmony exemplified by *Mi-Parti*, and 12-note chord-aggregates will presumably be used to mark moments of long-range structural significance, as in *Chain 2*.

It has been the aim of the present study to examine the development of Lutosławski's compositional technique, through methods of pitch organisation, primarily from an empirical rather than theoretical perspective. Although there are harmonic and melodic features that can be classified in theoretical terms, there has been no attempt to establish the collection of Lutosławski's compositional techniques with the status of a system. The notion of a system in this case would be misleading, as it would tend to imply that all the musical substance of each work could be accounted for and explained by reference to systematic principles. Whilst it is possible to identify specific techniques in almost every work of Lutosławski, it is also possible to identify significant features that are freely composed, without apparent reference to any underlying technique, and which therefore resist analytical explanation.

Conclusive assessment of Lutosławski's work is obviously impossible at a time when he is still composing. It is possible, however, to conclude from the evidence surveyed in the present study that there has been a process of continuing development in the evolution of Lutosławski's methods of pitch organisation and the ways in which these are applied in specific works. There is no sign of this line of development having stopped, even though there have been indications of stylistic consolidation in the pieces of the 1980s. It is quite possible, even probable, that further development will take place and identification of the composer's late style must still, therefore, be an interim and not a final assessment.

NOTES ON CHAPTERS

NOTES ON CHAPTER ONE

- 1 As the complementary disciplines of synthesis and analysis are central to musical composition, it is worth noting that the Greek word for 'composer' is *Συνθετις* ('synthetis', ie. synthesist).
- 2 Caroline Rae: *The Music of Maurice Ohana*, 2 vols (D.Phil. thesis, University of Oxford, 1989)
- 3 Robert Sherlaw Johnson: *Messiaen* (London, Dent, 1975; rev.ed.1989). Based on *Messiaen: a survey of his music up to 1963* (D.Mus. thesis, University of Leeds, 1971)
- 4 David Schiff: *The Music of Elliott Carter* (London, Eulenburg, 1983).
- 5 David Harvey: *The later music of Elliott Carter: a study in music theory and analysis* (New York, Garland, 1989); photo-reproduction of D.Phil thesis (University of Oxford, 1986). Reviewed by Jonathan Bernard in *Music Analysis* vol. 9 no. 3 (Oct. 1990) pp. 344-355
- 6 Tadeusz Kaczyński: *Conversations with Witold Lutosławski* (London, Chester, 1984) p.48 (translated from Polish by Yolanta May). This quotation comes from an interview about *Livre pour orchestre*, first published in *Ruch Muzyczny* no. 17/13 (1969).
- 7 Edward Cowie: 'Mobiles of sound', *Music and Musicians* vol.20 no.230 (October 1971) pp.34-45
- 8 For example: Steven Stucky, *Lutosławski and his music* (Cambridge, CUP, 1981); and several publications by the present author, 'Lutosławski's Golden Year', *The Musical Times*, vol.cxxvii no.1723 (Oct.1986), pp.547-51; *Witold Lutosławski* [profile] (Chester Music, 1988; German ed. by Sikorski Verlag, 1991); *The Music of Lutosławski* (London, Faber and Faber, scheduled for release in the autumn of 1992).
- 9 A profile of the life and work of Zofia Lissa, by Zofia Helman, was published (in English) in *Polish Musicological Studies* vol.2 (Kraków, 1986) pp.7-24
- 10 The precise circumstances of the proscription of the First Symphony have not previously been related. This account was given in conversation between the composer and myself (London, August 1991).

Notes on Chapters

Notes on Chapter One, continued...

- 11 Lutosławski: from the text of his address to the Congress of Culture in Warsaw, December 1981. This material remains unpublished, except for an inaccurate transcript which appeared in an account of the proceedings issued under martial law by the Solidarity underground press. My translation is from the following Polish: "Kongres zorganizowali ludzie sztuki i nauki. Zaczęę więc od prostego stwierdzenia, że najwyższym celem sztuki jest piękno, tak jak najwyższym celem nauki jest prawda. Jednak tak jak w matematyce, astronomii i z pewnością wielu innych naukach można dopatrywać się swoistego piękna, tak w sztuce spotykamy się nieuchronnie z zagadnieniem prawdy. ...Przypomnę w paru słowach na czym miała polegać walka z formalizmem, jak akcję tę oficjalnie nazywano. Wychodzi się z założenia, że wiek XX przyczynił się do degeneracji sztuki, będącej wytworem kultury burżuazyjnej. Należy utwory Strawińskiego, Bartóka, Schönberga, czy międzywojenne Prokofiewa i wiele innych uznać za 'formalistyczne' i zerwać ze wszystkim, co te utwory wniosły, przekreślić je i zapomnieć. Powrót do prostego, na systemie tonalnym opartego XIX-wiecznego języka jest jedyną drogą do stworzenia muzyki dnia dzisiejszego, dostępnej dla szerokich mas i wyrażającej w sposób realistyczny nasze czasy. Muzyka wokalna oparta na odpowiednio dobranych propagandowych tekstach winna mieć pierwszeństwo w stosunku do utworów instrumentalnych i tak dalej, i tak dalej w podobnym duchu. Samo prostactwo intelektualne podobnego rozumowania jest może mniej groźne od faktu, że opisany tu ponury obraz podsuwano nam przed oczy przy okazji każdej dyskusji, każdego oficjalnego spotkania, każdej krytyki przez szereg lat. Ta perfidna choć prymitywna operacja, która była swoistą formą ataku na prawdziwość sztuki miała skutki opłakane. Konieczność chowania przez kompozytorów do szuflady ich najważniejszych dzieł, niedopuszczanie ich dotychczasowego dorobku do wykonania, fałszywość ogólnej sytuacji w świecie muzycznym, tępienie przez krytykę najmniejszych objawów indywidualności, czy poszukiwań stylowych i technicznych, wszystko to dla wielu z nas było powodem przygnębienia i psychicznej depresji."
- 12 The Piano Concerto has elicited some critical response suggesting that there may be traces of neo-romanticism, although the present author is not inclined to this view (see Chapter Ten).
- 13 For example: Lutosławski's own explanation given in 'O roli elementu przypadku w technice komponowania' [On the role of the element of chance in compositional technique], *Res Facta* 1 (Warsaw, 1967) pp. 34-8, also reproduced in other sources; Adrian Thomas, 'Rhythmic articulation in the music of Lutosławski 1956-65', (M.A. dissertation, University of Cardiff, 1971); Maria Piotrowska, 'Aleatorizm Witolda Lutosławskiego na tle genezy tego kierunku w muzyce współczesnej' [Witold Lutosławski's aleatorism in the context of this trend in contemporary music], *Muzyka* 14 no. 3 (Warsaw, 1969) pp. 67-86.
- 14 T. Kaczyński: *Conversations with Witold Lutosławski* (London, 1986) 85/88
- 15 This expression has been used *viva voce* by the composer in numerous interviews over the past thirty years.

Notes on Chapters

Notes on Chapter One, continued...

- 16 The expression 'an affair with romanticism' was used by Penderecki himself, in an interview which I recorded for BBC Radio 3 in 1990. It provided an apt title for the resulting documentary, first broadcast on 20 March that year.
- 17 Lutosławski: address to Congress of Culture, Warsaw, December 1981. My translation from the following Polish: " Sytuację tę - przynajmniej do niedawna - można by określić jako stan permanentnej rewolucji, Słuszniej może byłoby nazwać ją parodią rewolucji ponieważ to, co to zjawisko charakteryzuje można by przedstawić w następującym skrócie: co to było wczoraj jest złe, tylko to, co jest dzisiaj może być dobre, zaś gdy będzie to, co będzie jutro, to co jest dzisiaj dobre, będzie już złe."..."Dlatego też, mówiąc nieco paradoksalnie, za najbardziej rewolucyjny krok w sytuacji permanentnej pseudorewolucji uważałbym zignorowanie jej, wyłączenie się z dialogu ze światem zewnętrznym, przede wszystkim ze światem tych krytyków i menadżerów muzyki oraz tych bywalców koncertów i festiwali, którzy interesują się przede wszystkim ciągle zmieniającymi się trendami i modami. Natomiast skierowanie wysiłków na tworzenie dzieł mających szansę dłuższego egzystowania i funkcjonowania w niezależności od bezpośredniego kontekstu historycznego."
- 18 Bálint András Varga: *Lutosławski Profile* (London, Chester, 1976), p. 24. First published by Editio Musica Budapest (in Hungarian) in 1974, although the original interviews were conducted in English (at the composer's home in Warsaw in 1973).
- 19 Jean-Paul Couchoud: *La Musique Polonaise et Witold Lutosławski* (Paris, Stock Musique, 1981) p. 87. My translation from the following French: "...l'organisation de la hauteur du son... est l'objet de mes travaux récents [1976-78]. J'y attache une grande importance, bien qu'elle soit maintenant assez peu populaire parmi les compositeurs. Les compositeurs *des jeunes générations* ne se soucient pas beaucoup de l'organisation de la hauteur du son. Ayant renoncé à une organisation stricte, ils préfèrent traiter le son comme un phénomène en soi et s'intéressent plus aux sonorités qu'aux hauteurs du son. A mon sens c'est priver la musique de son élément le plus essentiel. Je suis d'avis qu'il faut rétablir la signification de la hauteur du son et des combinaisons entre ces hauteurs. Composer une symphonie à l'aide de sonorités, de couleurs, de bruits, de rythmes, de dynamiques, d'abord c'est très facile. Je vous promettrais volontiers de vous composer une symphonie de cette sorte en une semaine. Et, surtout, ça s'épuise immédiatement. En une seule écoute vous savez tout ce qu'il y a dans cette oeuvre. Tandis que si vous travaillez les hauteurs du son, cela rend votre matière musicale plus solide et plus profonde."
- 20 Kaczyński: *op. cit.*, p. 38
- 21 Varga: *op. cit.*, p. 34

Notes on Chapters

Notes on Chapter One, continued...

- 22 Couchoud: *op. cit.*, pp.86-7. My translation from the following: "...Cela devrait faire l'objet d'une étude écrite, mais je n'ai pas le temps de la faire, et je ne crois pas qu'il me soit possible de vous exposer ce système. Est-ce d'ailleurs un système? En réalité j'accumule des choses, je remplis des lacunes, j'aborde de plusieurs côtés différents les problèmes qui se posent à moi, aussi bien ceux qui concernent l'organisation du temps que l'organisation de la hauteur du son."
- 23 Steven Stucky: *Lutosławski and his music* (Cambridge, CUP, 1981)
- 24 For example, Stucky overlooks that the composer's childhood was spent in Moscow; he omits any mention of the composer's uncle, Stanisław Lutosławski, inheritor of the family estates; he overlooks the composer's full, baptismal name (Witold Roman Lutosławski); and he relates incorrectly the circumstances of Henryk Lutosławski's death.
- 25 The first part of Stucky's D.Mus.A. submission is an original composition entitled 'Kenningar' (Symphony no.4), dated 1978 and dedicated to Lutosławski on his 65th birthday.
- 26 Stucky: *op. cit.*, p.118. The following source claims to cover matters of pitch organisation, although in fact it relies heavily on Stucky and goes no further than he had done: Julia Doggett, 'The development of certain processes in Witold Lutosławski's compositions after 1960, with particular reference to the post-1978 works' (dissertation in partial fulfilment of the requirements for M.Phil., CNA/Kingston Polytechnic, 1986). In her first two chapters, Doggett attempts to analyse horizontal and vertical pitch organisation, respectively. In the former she does draw attention to the manipulation of 3-note intervallic cells in melodic lines, but fails to account for their provenance in the music of Bartók. In the latter she fails to identify the construction of 12-note chords as chord-aggregates. Sadly, her study suffers from many basic errors, for example, referring to the Piano Sonata as Lutosławski's first published work (p.75), and making critical comment on the harmony of a work which she could neither have seen nor heard.
- 27 John Casken, in *The Musical Times* vol.122 no.1666 (Dec.1981) pp.822-823. Doggett (*op. cit.*) makes exactly the same mistake, confirming the extent of her indebtedness to Stucky, and revealing her unawareness of Casken's review. Like Stucky, she also omits any reference to an important article by Casken: 'Transition and Transformation in the Music of Lutosławski', *Contact* 12, (Autumn 1975) pp.3-12.
- 28 Arnold Whittall, in *Music Review* vol.43 (Aug-Nov 1982) pp.280-282
- 29 Varga: *op. cit.*, p.35
- 30 Conversation between composer and present author, London 1 May 1988
- 31 Whittall, *op. cit.*

Notes on Chapters

Notes on Chapter One, continued...

- 32 It is generally recognised that the German word *Gestalt*, as used in connection with analytical psychology, is probably better left untranslated as it has no direct equivalent in English (its translation as 'mould' can have a pejorative connotation, suggesting compositional contrivance). In *Analysis* (London, 1987, pp. 28 and 37; also in the New Grove, 1980) Ian Bent touches on this issue in relation to use of the term *Gestalt* by A.B. Marx in *Die Lehre von der musikalischen Komposition* (1837-47), drawing attention to his view that: "...formal 'moulds' were not merely conventions: they represented deep-seated principles of organization in the human mind."

Notes on Chapters

NOTES ON CHAPTER TWO

- 1 Reference to proportions, including the Golden Section, was made in the following article, by the present author: 'Lutosławski's Golden Year', *The Musical Times*, vol. cxxvii, no. 1723, October 1986, pp. 548-549
- 2 See note no. 29 to Chapter One
- 3 Varga, *op. cit.*, p. 3
- 4 Conversation between the composer and the author (Warsaw, 1987). Lutosławski had also studied privately with Maliszewski from 1928-1932.
- 5 See note no. 28 to Chapter One
- 6 An incomplete list of these plays is given by Owe Nordwall in *Lutosławski* (Stockholm, London etc., Chester/Hansen, 1968) pp. 135-137. Scores and instrumental parts for four of them are held by the music manuscripts section of the Polish National Library (Biblioteka Narodowa) at the Krasiński Palace in Warsaw (for details of these four, see the list of works given in Appendix A). Later works which function according to principles of dramatic analogy include the String Quartet and the Cello Concerto.
- 7 Lutosławski's lecture, 'Notes on the Construction of Large-Scale Forms', was written for presentation at Darmstadt in the late 1960s (c. 1968). In the event, he was not able to attend and so the lecture was temporarily shelved. He subsequently presented the lecture at several events during the 1970s and 80s, although it has never been published. This quotation is taken from a photocopy of the composer's own script (in English).
- 8 *idem*
- 9 In English speaking countries, this work is commonly known as 'Funeral Music', an obvious translation from the French title, *Musique funèbre*. Referring to the original Polish form, *Muzyka żałobna*, the composer makes his preferred translation as 'Music of Mourning'. Although Stucky's adoption of the latter corresponds closer to the composer's original intention, unfortunately it is unlikely now to oust the more familiar form. As *żałobna* and *funèbre* are both adjectives, the grammar of the English title should at least be corrected to 'Funereal Music'. Use of the noun is misleading, suggesting music for a funeral rite rather than a memorial tribute.
- 10 Ernő Lendvai: *Béla Bartók, an analysis of his music* (London, 1971); also, *The Workshop of Bartók and Kodály* (London, 1983). These sources are of significance in spite of some lapses in analytical rigour (such as miscounting numbers of bars). It is worth noting that amongst the works of Bartók which Lutosławski most admires are those which lend themselves to analysis in terms of Golden Section proportions: Music for Strings, Percussion and Celesta; Sonata for Two Pianos and Percussion; and the Divertimento (slow movement).

Notes on Chapters

Notes on Chapter Two, continued...

- 11 In conversation with the present author.
- 12 Roy Howat: *Debussy in Proportion* (Cambridge, 1983). See also: Howat's article on 'Bartók, Lendvai and the Principles of Proportional Analysis', *Music Analysis* vol.2 no.1 (March 1981), pp.69-95; and Lendvai's response, 'Remarks on Roy Howat's "Principles of Proportional Analysis"', *Music Analysis* vol.3 no.3 (October 1984) pp.255-264.
- 13 Varga: *op.cit.*, p.27
- 14 Conversation between composer and present author (Warsaw, 1987)
- 15 A recording of *Novelette* (together with the Piano Concerto) was made by Deutsche Grammophon in 1989 (with the composer conducting the BBC Symphony Orchestra). But, at the time of writing, this recording has still not been released.
- 16 Varga: *op.cit.*, p.28
- 17 Couchoud: *La musique polonaise et Witold Lutosławski* (Paris, 1981), pp.124-126. Kaczyński: *Conversations with Witold Lutosławski* (English ed., London, 1984), pp.20-21.
- 18 Varga: *op.cit.*, p.35
- 19 C.G. Jung: *Civilization in Transition*, Part VI, 'A Psychological View of Conscience'. Coll. Works Vol.10, p.449, ¶ 847, (London, 1964)
- 20 C.G. Jung: *The Archetype and the Collective Unconscious*, Part II, 'Psychological Aspects of the Mother Archetype', 1. On the Concept of the Archetype. Coll. Works Vol.9, Part 1, pp.79-80, ¶ 155. (London, 1959)
- 21 The 'jelly mould' interpretation of the principle of underlying formal models is inappropriate in this context. See note 32 on Chapter One.
- 22 Lutosławski: 'The Composer and the Listener', in Owe Nordwall (ed.), *Lutosławski*, (Stockholm, 1968), pp.121-2. [Original text published in Polish as: 'Kompozytor a odbiorca', *Ruch Muzyczny* 8 No.4 (1964).

Notes on Chapters

NOTES ON CHAPTER THREE

- 1 Conversation between composer and present author (Warsaw, April 1987). Over a ten-day period at Easter in 1987, I recorded a lengthy series of conversations with Lutosławski in his study, at his home in Warsaw-Żoliborz. This resulted in some twenty hours or so of cassette tape recordings. The quotations from these conversations given in Chapter Three (and elsewhere in the present study) are taken from a verbatim transcript. I have not sought to change or correct the idiosyncracies of Lutosławski's expression in English, as the sense is usually clear in spite of the occasional lapse of grammar.
- 2 Bálint András Varga: *Lutosławski Profile* (London, 1976), pp. 16-17
- 3 *ibid*, p. 22
- 4 Reference to these events has already been made in Chapter One, p. 18
- 5 Conversation between composer and present author (Warsaw, April 1987)
- 6 *idem* Lutosławski evidently feels some antipathy towards the music of Schönberg (and Berg), and this can be detected in dismissive remarks he has made in various published interviews over the past thirty years. This is largely due to his disillusionment with the post-war phenomenon of post-Webernian serialism (as represented by Darmstadt and the circle of the Domaine Musical). He also expresses antipathy to the period of Austro-German expressionism from which the music of Schönberg, Berg and Webern stems.
- 7 *idem* Lutosławski uses the term vertical 'aggregation' in English to refer^{to} his various types of 12-note chord.
- 8 *idem* At this point in the conversation, Lutosławski was responding to my line of questioning about consonance and dissonance by referring to the two 12-note chords which occur in the last of his Five Songs; hence his remark that "...from the point of view of tonal harmony *both* [my emphasis] are dissonant..."
- 9 *idem*
- 10 In some editions of the score of the Second Symphony there is a misprint, showing D-flat rather than D-natural in the part for violins 21-22 at Fig. 44.
- 11 Conversation between composer and present author (Warsaw, April 1987)
- 12 *idem*
- 13 Stucky was the first to identify this important aspect of Lutosławski's sensitivity to the difference between major sevenths and minor ninths: *Lutosławski and his music* (Cambridge, CUP, 1981) p. 118. In his Ex. 5.5, however, Stucky compares two 12-note pitch collections which are, in fact, distinctive types of chord-aggregate; but he did not pursue this point, and appears to have overlooked its true significance.

Notes on Chapters

Notes on Chapter Three, continued...

- 14 Conversation between composer and present author (Warsaw, April 1987). It is significant that Lutosławski here stresses the importance of the choice of chord for the low harmonic strand. It is also worth noting that he uses (and thinks in terms of) chord descriptions such as 'dominant-seventh chord'.
- 15 The earliest example I have found in Lutosławski's sketches of 'OWD' chord calculations (relating closely to the kind of chords later employed in his complex chord-aggregates) is at the end of one of the sets of canons which he wrote in 1943-44 as contrapuntal studies for his First Symphony (the number of canons Lutosławski composed during the war was identified incorrectly by both Nordwall and Stucky, suggesting that neither had had access to the autograph manuscripts).
- 16 According to the classification which is shown in Tables 3:3 and 3:5 these three chord-aggregates can be represented by the following codes: B-K-B; D-J-D; C-H-C. Note that, in Example 3:9 the composer has made one notational error (which he has confirmed as such): on the upper system, in the bottom harmonic strand of the second pitch collection, there is a G-natural which should read A-natural (G-natural is present in the top harmonic strand).
- 17 Lutosławski's use of 12-note chords has been mentioned by many previous writers, but hitherto none has identified his methods of pitch organisation with respect to the use of 12-note chord-aggregates. Stucky came closer to this issue than his predecessors (*op. cit.*, p. 118), but did not succeed fully in penetrating the issue of Lutosławski's construction of 12-note pitch collections (see also note 13, above). Since the publication of Stucky's book in 1981, an attempt claiming to outline Lutosławski's methods of pitch organisation has been made by Julia Doggett (see notes 26 and 27 on Chapter One), but in fact her study goes no further than Stucky had done.
- 18 The 4-note chords in groups 1-3 could be expressed in relation to the diatonic major and minor scales with a combination of roman numerals (upper and lower case) and superscript arabic numerals. Such a method of labelling would be misleading, however, as it would falsely imply the operation of tonal functions. The verbal descriptions provided in this study ('diminished-seventh chord', etc.) are preferable as they indicate the intervallic profile of the chords without emphasising tonal functions (with the exception of the term 'dominant-seventh chord', which does suggest a tonal implication). Terms such as 'minor-seventh chord' and 'major-seventh chord' are not universally recognised in the parlance of harmonic theory, but their use is sufficiently well established (albeit in common, colloquial usage) for their inclusion to be justifiable. See Walter Piston, *Harmony* (revised and expanded by Mark DeVoto, London, 1978) p. 349.
- 19 Allen Forte: *The Structure of Atonal Music* (New Haven, Yale UP, 1973).

Notes on Chapters

Notes on Chapter Three, continued...

- 20 Mention has already been made, in the Preface and in Chapter One (pp. 5 and 15), of the potentially interesting comparisons which might be drawn from ~~comparison between~~ Lutosławski's chords and those of Elliott Carter. It is worth noting, however, that the method of chord labelling with integer codes adopted by Carter does not correspond to the numbering used by Forte. In *The Music of Elliott Carter* (London, Eulenburg, 1983), David Schiff refers to the composer's personal catalogue of chords: 'Since the Piano Concerto [1963-4], Carter has expanded his chordal harmony to include the twenty-nine four-note chords and the thirty-eight five-note chords (see Appendix B). In order to explore the properties of these chords he has gradually compiled a Harmony Book for his own use. This book at present [1983] numbers and analyses all chords up to and including those of eight notes.' (p. 63).
- 21 The limitation of Forte's application of integer notation in failing to distinguish between the half-diminished-seventh chord and the dominant-seventh chord (due to his principle of reducing sets to their 'prime form' by intervallic inversion) obviously relates to the same problem with theoretical equivalence between the major and the minor triad.
- 22 Allen Forte: *The Harmonic Organization of The Rite of Spring* (New Haven, Yale UP, 1978) p.35
- 23 *ibid.*, p. 35
- 24 *The Structure of Atonal Music*, Ex. 19
- 25 *The Harmonic Organization of The Rite of Spring*, p. 39
- 26 The true significance of Mussorgsky's innovative harmony at this point in *Boris Godunov* is its exploitation of the principle of tritone chord substitution, whereby two dominant-seventh chords whose roots are a tritone apart can act as mutual substitutes due to the shared presence of a common (enharmonic) tritone. Although Mussorgsky undoubtedly originated this harmonic effect directly at the keyboard (its idiomatic pianism testifies to such origin), its true source is the strength of tritone resonance (of the untreated 11th partial) in untuned Russian-Orthodox bells. This issue was addressed by the present author in a radio programme about the musical influence of Russian *zvonn*-ringing, 'Kolokola', first broadcast on BBC Radio 3 on 6 February 1990.
- 27 See also Ex. 3:9 and note 16, above.
- 28 Steven Stucky: *Lutosławski and his music* (Cambridge, CUP, 1981) pp. 65-9
- 29 Attention was first drawn to this mistranslation by the present author in 'Kolokola' for BBC Radio 3 (see note 26, above).
- 30 Stucky states, erroneously, that: 'When Jósef went to Russia in August 1915 he left behind Maria and three sons...', *op. cit.*, p. 3

Notes on Chapters

Notes on Chapter Three, continued...

- 31 The first performance of *Muzyka żałobna* was given at Katowice on 26 March 1958, eighteen months before the première of the Five Songs. On 15 January 1959 Lutosławski received the prize of the *Związek Kompozytorów Polskich* (Polish Composers' Union). In May of the same year he received joint first prize from the *Tribune Internationale des Compositeurs* (UNESCO) in Paris.
 - 32 Stucky's account of pitch (and rhythmic) organisation in *Muzyka żałobna* 'relies heavily' (his expression) on the detailed analysis published by Wilfried Brennecke: 'Die Trauermusik von Witold Lutosławski', in *Festschrift Friedrich Blume zum 70. Geburtstag*, ed. Abert and Pfannkuch (Kassel, 1963), pp. 60-73. Yet the crucial aspects of pitch organisation in the Apogee were missed, as pointed out by John Casken (see note 27 to Chapter One, above).
 - 33 Stucky: *op.cit.*, Ex. 5.6, p. 119. Although he identifies the principle of selective octave transfer he does not succeed in revealing the way that these chord-aggregates are constructed with distinct 4-note chord types in particular harmonic strands.
 - 34 The expressions 'melodic foreground' and 'harmonic background' are not intended with any reference to the terms 'Vordergrund' and 'Hintergrund' as relating to Schenkerian analysis. They are used here, and throughout the present study, simply to signify different levels of aural perception in the sense of melodic line and supporting harmonic accompaniment.
 - 35 Conversation between composer and present author (Warsaw, April 1987)
 - 36 Conversation between composer and present author (London, May 1988)
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Notes on Chapters

NOTES ON CHAPTER FOUR

- 1 The expressions '[not a] linear composer' and 'a composer of harmony' were used by Lutosławski in conversation with the present author (Warsaw, April 1987).
- 2 Examples of Lutosławski's practice of combining certain types of interval have been pointed out by previous writers (including Casken, Stucky and Homma) commenting on individual works, but the present study is the first to focus on this technique with classification of the various interval combinations and comparison between works using similar pairings.
- 3 Zofia Lissa discusses the source melodies in 'Koncert na orkiestrę Witolda Lutosławskiego', *Studia muzykologiczne* 5 (1956), pp.196-299. Stucky reproduces a selection of Lissa's findings in *Lutosławski and his music* (Cambridge, 1981) pp. 49-50.
- 4 Many composers will be indifferent to (or possibly even opposed to) the notion of this matter as problematic. The presentation of this view is as much a subjective expression of my own compositional convictions as it is an objective assessment of an issue addressed by Lutosławski.
- 5 See p. 50
- 6 For example, the pairing of major second and minor third (2+3) in a rising pattern (eg. C-D-F) implies a minor-seventh chord (ie. D-F-A-C), although the same pairing in a falling pattern (eg. C-Bb-G) implies a dominant-seventh chord (ie. C-E-G-Bb).
- 7 For example, the pairing of minor third and perfect fourth (3+5) in a rising pattern (eg. C-Eb-Ab) produces a major triad in first inversion, whereas the same pairing in a falling pattern (eg. C-A-E) produces a minor triad in second inversion. By interlocking intervals other chords can be produced; for example, the combination of rising major third and falling perfect fifth gives a minor triad in root position (eg. C-E-A), while the combination of falling major third and rising perfect fifth gives a major triad in root position (eg. C-Ab-Eb).
- 8 The interval content of the pentatonic set (5-35) and its various sub-sets is particularly interesting. Only nine pc sets (of between three and nine notes) show a complete absence of both interval-classes 1 and 6 (semitones and tritones). Of these, one is the augmented triad (3-12) containing only interval-class 4. The other eight constitute the full group of pentatonic set and sub-sets. I had occasion to calculate these relationships in connection with my investigations into the pentatonic harmony characteristic of central European (particularly German) bell ringing, and several of my own compositions reveal the application of this principle. The following table of pc sets and their vectors was one of several on pentatonicism included in my paper on 'The Harmony and Melody of Continental European Bells' at the Midlands Chapter Meeting of the Royal Musical Association held at the University of Nottingham on 23 March 1991:

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Notes on Chapter Four, continued...

8 (continued)

Pentatonic pc set (5-35) and sub-sets

<u>set name</u>	<u>pc set</u>	<u>vector</u>	<u>pitch equivalents</u>
3-6(12)	0, 2, 4	020100	c d e
3-7	0, 2, 5	011010	d e g
3-9(12)	0, 2, 7	010020	c d g
3-11	0, 3, 7	001110	c e g (by inversion)
[3-12(4)]	[0, 4, 8]	[000300]	
4-22	0, 2, 4, 7	021120	c d e g
4-23(12)	0, 2, 5, 7	021030	d e g a
4-26(12)	0, 3, 5, 8	012120	c e g a
5-35(12)	0, 2, 4, 7, 9	032140	c d e g a

- 9 J. Doggett correctly identified Lutosławski's predilection for the semitone/tone interval cell (pc set 0,1,2), although she did not carry the idea further to identify the other types of interval cell used. See footnote 26 to Chapter One.
- 10 The unsuitability of the pitch-class set approach is in direct proportion to the length of the horizontal line governed by consistent interval-pairing. In the case of short melodic fragments the drawbacks are not so acute, but in lines containing dozens of notes one would encounter great difficulty in deciding how to segment the horizontal projection of intervals to allow for the identification of particular sets. It is significant to note that in defending his analytical method Allen Forte did not address the crucial problem of horizontal segmentation in 'Pitch-Class Set Analysis Today', *Music Analysis* vol. 4 nos. 1/2 (March/July 1985) pp. 29-58. Neither did this article address the problem of calculating pc sets by inversion (and the consequent suppression of differences between triads and other chord formations).
- 11 Conversation between composer and present author (Warsaw, April 1987)
- 12 It is interesting to note that Lutosławski expresses greater interest in and admiration for the works of Bartók composed before the war, in 1936-39, than those composed during the war.
- 13 Elliott Antokoletz: *Principles of Pitch Organization in Bartók's Fourth String Quartet* (PhD thesis, City University of New York, 1975), also under the same title as an article in *In Theory Only* 3/6 (September 1977) pp. 3-22; and *The Music of Béla Bartók: a study of tonality and progression in twentieth-century music* (London, University of California Press, 1984), in particular Chapter V concerning the 'Construction, Development and Interaction of Intervallic Cells', pp. 78-137 (with commentary on the Fourth Quartet on pp. 109-125).
- 14 Note the generation of lines by semitone/tone cells in, for example: the third movement (Elegia) of Bartók's Concerto for Orchestra (eg. the violas in bars 62-72 and the woodwind section in bars 73-83).

Notes on Chapters

Notes on Chapter Four, continued...

- 15 Lutosławski uses quarter-tones melodically, as chromatic passing notes, but does not consider them to have any harmonic significance. He tends to use them more often when writing for large string instruments, such as the cello and the viola, as they are easier to finger.
- 16 This type of chromatic stealth is typical of the slow movement of Bartók's Divertimento for strings, and also appears in several of the 'functional' pieces composed by Lutosławski contemporary with the First Symphony: for example, the Carol *Hej, hej, leliya Panna Maryja*, which also has a chromatic counterpoint twisting by semitones, tones and minor thirds.
- 17 Other significant examples of chromatically curling three-note cells in the First Symphony include: the solo for flute II which begins the development section in the first movement (Fig.13), this line then passes in canon to flute I and piccolo; the same thematic idea appears in the coda of the first movement, played in canon by inversion between cor anglais and clarinet I (also piccolo I); see also the flute solo in the fourth movement from Figs.142-143.
- 18 Stucky has identified the use of this particular synthetic mode in the Overture for Strings (*op.cit.*, p.39), although he did not discuss the application of three-note cells of the 1+2 interval-pairing.
- 19 The three-note melisma on 'l'ombre' is the first to occur in the vocal part of *Paroles tissées*, and is introduced merely so that the line will correspond with the equivalent phrase which opens the movement. The next melisma occurs at Fig.70 (see Ex.4:33).
- 20 This is the second song in the set of four under the title of *Wiosna* [Spring] (1951).
- 21 Example 4:17 is a facsimile reproduction (p.20) from the 1991 edition by Chester Music of early piano works including: *Melodie Ludowe* (1945); *Bucolics* (1952); *Pieces for the Young* (1953); *Invention* (1968); and *An Overheard Tune* (1957, for two pianos). Background notes by the present author appear in this edition on p.40.
- 22 The grace note groups in the piano part are not strictly in accordance with the 1+3 interval-pairing, although the first note of each group of grace notes is a semitone from the preceding note, and the last note of the group is a minor third from the following note.
- 23 Stucky, in his discussion of the First Symphony (*op.cit.*, p.29) fails to identify this 12-note line as the first example of such a phenomenon in Lutosławski's music.
- 24 This type of subdivision of a 12-note set into complementary hexachords is characteristic of the approach of Josef Matthias Hauer.
- 25 The numbering of these canons given by Stucky is incorrect (*op.cit.*, p.198); he evidently did not have access to the manuscripts.

Notes on Chapters

Notes on Chapter Four, continued...

- 26 In the orchestral version of the Carols, made by Lutosławski during the 1980s, their order and numbering is changed (and the number of verses reduced). *A coś z tą dzieciną* appears as no.17 in the 1946 set, but as no.15 in the orchestral version. The latter received its première in December 1990, with English performance texts by the present author.
- 27 It is interesting to note that Lutosławski used the subtitle 'Metamorfozy' (Metamorphoses) for the second section of *Muzyka żałobna*, and that he also used the title and techniques of transformation for another memorial piece associated with the 1+6 interval-pairing.
- 28 For example, the isomorphic patterning in Webern's rows for the following works: the Concerto op.24 (1934); the String Quartet op.28 (1937-8); the First Cantata op.29 (1938-9); and the Variations for Orchestra op.30 (1940), for which the row is constructed from pairing of interval-classes 1 and 3. See also the comments by Pierre Boulez on such isomorphic serial patterns in *Penser la musique aujourd'hui* (Paris, 1963) pp.77-93.
- 29 J-P Couchoud: *La musique polonaise et Witold Lutosławski* (Paris, 1981) p.76-77. My translation from the following: "...je n'ai jamais été influencé par la doctrine de Schoenberg, bien que je doive admettre que j'utilise certains éléments de ses principes, c'est-à-dire l'utilisation du total chromatique... En tout cas je n'ai jamais utilisé le dodécaphonisme en tant que tel. Même si j'emploie des séries de douze sons, cet emploi vise toujours des effets entièrement différents. ...dans la *Musique funèbre* j'utilise une série de douze sons, mais la façon de la manier et surtout le choix des intervalles montrent clairement qu'il s'agit d'un moyen d'obtenir un résultat harmonique, de créer des agrégations verticales, et non d'employer un nouveau système fonctionnel des intervalles comme c'est le cas dans la doctrine classique de la dodécaphonie."
- 30 *idem* p.88. My translation from the following: "C'est le seul morceau où j'aie utilisé méthodiquement une série de douze sons dans les deux parties extrêmes. ...Mais ce qui est important dans ces deux parties, c'est le résultat vertical de l'emploi de cette série. Elle se compose uniquement de tritone et de secondes mineures. Utilisée en forme de canon, elle donne certains résultats harmoniques qui, ne contenant ni tierce ni sixte, produisent une certaine atmosphère de vide sonore qui s'accordait spécialement avec le titre du morceau."
- 31 Stucky mistakenly suggests that in *Muzyka żałobna* the harmony of the Prologue includes "...as simultaneities interval classes 0,1,2,5 and 6...", and that "...interval class 4... does occasionally occur vertically...". Both analytical observations are incorrect. The harmony contains vertical adjacency of interval-classes 0,5, and 6 only. *op.cit.*, p.71.
- 32 This and other issues were discussed by John Casken in a lecture analysing the String Quartet, delivered at the Lutosławski Symposium held at the Britten-Pears School at Snape in November 1980.

Notes on Chapters

Notes on Chapter Four, continued...

- 33 A detailed motivic analysis is^{given} by Steven Stucky in 'The String Quartet of Witold Lutoslawski' (M.F.A. dissertation, Cornell University, 1973).
- 34 Stucky states erroneously that the cello melody contains only interval classes 2 and 5, *op.cit.*, p.175
- 35 See Chapter Three, pp.77-8.
- 36 Lutoslawski reserves the expressive effect of an extended melisma until this moment of dramatic significance on the word 'peine' (sorrow). Similarly, the movement ends on 'peines'.
- 37 See note no.8, above.
- 38 J-P Couchoud, *op.cit.*, pp.182-3 my translation from the following:
"Dans mes dernières oeuvres j'ai essayé de me servir d'agrégations simples contenant un nombre limité de sons. C'est déjà notable dans *Les espaces su sommeil* où il y a un long passage *adagio* dans lequel j'ai voulu que chaque nouvelle note qui apparaît à l'orchestre ait sa signification propre. Il est bâti sur un série qui ne compore que deux sortes d'intervalles: les secondes majeures et les quartes ou quintes justes."
- 39 Robert Desnos: *Corps et biens*, (Paris, 1930)
- 40 Conversations between the composer and the author (Warsaw, April 1987)

NOTES ON CHAPTER FIVE

- 1 John Casken observed in 'Transition and transformation in the music of Witold Lutosławski', *Contact* 12 (Autumn 1975): 'Transformations in the character and shape of different musical ideas are now an essential part of his development technique towards that one goal where all differences are ironed out, where the horizontal and vertical fabric is indivisible. It is significant that all six subjects in the Fugue [ie. in Preludes and Fugue] are capable of superimposition, illustrating, I believe, just how oblique the line between harmony and melody has become for Lutosławski...' (p. 12).
- 2 Varga: *Lutosławski Profile*, (London, 1976) p. 24
- 3 For example, Owe Nordwall's erroneous statement that 'Harmony, in the usual sense of the word [sic., ie. 'word'], becomes a mere by-product of a counterpoint which is aleatory', in *Lutosławski* (London and Stockholm, 1968) p. 19.
- 4 For example, the following articles by Lutosławski: 'O roli elementu przypadku w technice komponowania' [On the role of the element of chance in compositional technique], *Res Facta* 1 (PWM, 1967) pp. 34-38; 'Kilka problemów z dziedziny rytmiki' [Some problems in the areas of rhythm], *Res Facta* 9 (PWM, 1982) pp. 114-129; 'Über das Element des Zufalls in der Musik', *Melos* 36 (1969) pp. 457-460. See also: Adrian Thomas, 'Rhythmic articulation in the music of Lutosławski, 1956-65', (M.A. dissertation, University of Cardiff, 1971) [nb. Stucky's citation of this source shows the title incorrectly, without the specified dates, and gives the date of submission incorrectly as 1970].
- 5 John Cage's *Concert for Piano and Orchestra* was composed in 1957-8, and received its première on 15 May 1958, in New York. (not to be confused with his *Concerto for Prepared Piano and chamber orchestra* of 1951).
- 6 Varga: *op. cit.*, p. 12
- 7 *The New Grove Dictionary of Music and Musicians*, ed. Stanley Sadie, (London, 1980), vol. 1, p. 239. See the section on Indeterminate Notation in the entry for 'Aleatory' by Paul Griffiths.
- 8 Werner Meyer-Eppler in *die Reihe* vol. 1 (Vienna, 1955); my translation. A slightly different translation appears in the English edition of 'Statistic and Psychologic Problems of Sound', *die Reihe* vol. 1 (London, 1958). See also other writings by Meyer-Eppler: 'Informationstheoretische Probleme der musikalischen Kommunikationen', *die Reihe* vol. 8 (Vienna, 1962); 'Musical Communication as a Problem of Information Theory', *die Reihe* vol. 8 (English ed., London, 1968); and *Grundlagen und Anwendungen der Informationstheorie* (Berlin, 1959).

Notes on Chapters

Notes on Chapter Five, continued...

- 9 Lutosławski: 'Rhythm and the organisation of pitch in composing techniques employing a limited element of chance'. This and subsequent extracts are from the composer's original English text, which he had intended to deliver at Darmstadt in 1968 or 1969 (in the event he was unable to attend and the lecture was not delivered to that particular forum). A Polish translation was published in *Muzyka w kontekście kultury* [Music in the context of culture] (Kraków, 1978). A version in English, unfortunately with many serious inaccuracies and omissions, appeared in *Polish Musicological Studies* vol. 2 (Kraków, 1986) pp. 37-53.
- 10 Pierre Boulez: from 'Form', the text of lecture delivered at the Darmstadt Internationale Ferienkurse für Musik in 1960, also reprinted in *Orientalions* (London, 1986) pp. 95-6. See also: 'Alea' in *la Nouvelle Revue française* no. 59 (1. xi. 1957), reprinted in *Relevés d'apprenti* (Paris, 1966); and 'Where are we now?', *Orientalions* (London, 1986) pp. 445-463 (especially p. 461), translation of a lecture given at Saint-Etienne on 13 May 1968 under the title 'Où en est-on?'.
- 11 Lutosławski: 'Rhythm and the organisation of pitch in composing techniques employing a limited element of chance'.
- 12 *idem*
- 13 See also the discussion of pitch organisation in this section by Steven Stucky, *Lutosławski and his music* (Cambridge, 1981), p. 135.
- 14 Lutosławski: 'Rhythm and the organisation of pitch in composing techniques employing a limited element of chance'.
- 15 *idem*
- 16 See also Stucky, *op. cit.*, pp. 149-50 and his Ex. 6. 9.
- 17 John Casken, *op. cit.*, gives a detailed account of pitch organisation in the first movement of the Second Symphony.
- 18 Lutosławski has discussed in detail the pitch organisation of this episode in two primary sources: his Darmstadt lecture 'Rhythm and the organisation of pitch...'; and an article on the Second Symphony published in *Res Facta* 4 (PWM, 1970) pp. 6-13. The latter was also published in an unattributed English translation in Chapter 7 of *The Orchestral Composer's Point of View: Essays on Twentieth-Century Music by those who wrote it*, ed. Robert Hines (University of Oklahoma Press, 1970) pp. 128-151. The same example has also been paraphrased in each of the following secondary sources: Kaczyński's interview in Polish for *Ruch Muzyczny* (1967) pp. 3-6, also reprinted in an English translation in Nordwall (ed.) *Lutosławski* (London and Stockholm, 1968) pp. 113-114, and reprinted again in the English edition of *Conversations with Witold Lutosławski* (London, 1986) pp. 41-42; Varga, *Lutosławski Profile* (London, 1976) p. 25; Stucky, *Lutosławski and his music* (Cambridge, 1981) pp. 121-122; and Jean-Paul Couchoud. *La musique polonaise et Witold Lutosławski* (Paris, 1981) p. 134.

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Notes on Chapter Five, continued...

- 19 John Casken, *op. cit.*, discussed the pitch content of these sections but did not include the changes of instrumentation towards the end of the movement.
- 20 Lutosławski: 'Rhythm and the organisation of pitch in composing techniques employing a limited element of chance'.
- 21 John Casken, *op. cit.*, identified the hexachordal complementation that connects the Preludes. Stucky later identified the same feature (although without referring to Casken's analysis).
- 22 There is a brief, isolated example of unpitched notation for the cellos on p.66 at the end of Prelude no.6. It is unclear why the composer did not specify the pitch in this case, as it is uncharacteristic of this piece and of his work in general.
- 23 On page 141 of the score there is a misprint in the part for the second cello. The sixth note, shown as F flat should have an additional ledger line in order to read as A flat (and therefore as part of the chord).
- 24 Varga: *op. cit.*, pp. 36-37.

NOTES ON CHAPTER SIX

- 1 See pages 20-21. The present author first drew attention to the significance of *Epitaph* in 'Lutosławski's Golden Year', *The Musical Times*, vol.cxxvii, no.1723, October 1986, pp.548-549
- 2 See note no.14 to Chapter One.
- 3 Steven Stucky discusses the genesis in 'Lutosławski's Double Concerto', *The Musical Times*, vol.cxxii, no.1662 (August 1981) pp.529-532. In his otherwise perceptive account of the piece and its place in Lutosławski's output Stucky refers to other works but makes no mention of *Epitaph*.
- 4 Varga: *Lutosławski Profile* (London,1976) pp.36-37
- 5 The first chord of the harp part at Fig.10 contains a misprint: the F natural should read F sharp. Later in the same section there is an A natural that should read A flat. There are some other, similar misprints in the harp part in these aleatory sections, but the intended pitch is usually clear if one observes the tuning of the pedals.
- 6 Stucky identifies this 12-note row, *op.cit.*, p.531, and emphasises the triadic formations that it contains. In his discussion of the first movement, however, he overlooks the principle of set-complementation operating between the oboe and harp parts.
- 7 Lutosławski composed a total of fifty contrapuntal miniatures between 1943 and 1944, as preliminary studies for the First Symphony; the first full list of them is given here, in Appendix A. They exist only in the original manuscripts which are in the composer's collection in Warsaw (they are not among the manuscripts that have been acquired by the Paul Sacher Stiftung in Basel). The Nine Canons for Three Clarinets are notated in the hand of the composer's mother, Maria Lutosławska. The specific dates on which they were written (and copied) constitute a poignant diary of late autumn 1944, when mother and son had taken temporary refuge with relatives at Komorów, 18 kilometres outside Warsaw. Stucky's reference to the Canons is incorrect in the total number given (thirty) and in the number of Canons for Three Clarinets (ten): *Lutosławski and his music* (Cambridge,1981) p.198.
- 8 Varga: *op.cit.*, p.37
- 9 Stucky quotes this passage (*op.cit.*, p.532) and points out the presence of a 12-note row in the top line. But he does not identify the horizontal and vertical significance of the 2+5 interval-pairing. Instead he describes the way the "...strings launch unexpectedly into quasi-diatonic harmony at no.90..." In fact, the harmonic sonorities are pentatonic rather than diatonic or quasi-diatonic.

NOTES ON CHAPTER SEVEN

- 1 A commemorative profile of Stefan Jarociński's life and work is given by Michał Bristiger (in English) in *Polish Musicological Studies* vol.2 (Kraków, 1986), pp. 25-36.
- 2 *Debussy a impresjonizm i symbolizm* (Kraków, PWM, 1966; 2nd ed.1976). Also published in French as *Debussy, impressionisme et symbolisme* (Paris, Editions du Seuil, 1970), and translated from French into English by Rollo Myers as *Debussy, Impressionism and Symbolism*, (London, Eulenberg, 1976).
- 3 *Witold Lutosławski: Materiały do monografii* [W.L.: materials for a monograph] (Kraków, PWM, 1967).
- 4 Jarociński: *Debussy, Impressionism and Symbolism* (London, 1976), p. 137
- 5 *ibid.*, pp. 147-148
- 6 Stucky: *Lutosławski and his music* (Cambridge, 1981) p. 195
- 7 From an interview with the composer published in *Polish Music*, vol.18 nos.3/4 (1983) pp. 4-5.
- 8 The present author drew this to the composer's attention in May 1988, with a suggested rewording. He agreed that the sense had been misleading and did not correspond to his original intention, and he authorised the corrected version.
- 9 From the interview in *Polish Music* vol.18 nos.3/4 (1983) p. 7.
- 10 See Chapter Two, pp.31-32.
- 11 For a breakdown of the pentatonic set and its related sub-sets see note no.8 to Chapter Four.

Notes on Chapters

NOTES ON CHAPTER EIGHT

- 1 Lutosławski's Polish title of *Łańcuch* (1,2,3) is directly equivalent in meaning to the English title. Even so, some Polish audiences during ~~the~~ austere political climate of the mid- to late-1980s sought an alternative (but incorrect) translation as *Kajdany*, which means chains (plural) in the sense of manacles.
- 2 In the finale of the Concerto for Orchestra there are eighteen statements of the passacaglia theme, against which Lutosławski overlaps thirteen episodes. The beginnings and ends of these strands do not coincide, except at Figs. 55 and 59 (passacaglia statements 11 and 15 beginning together with episodes 8 and 9, respectively).
- 3 Lutosławski conducted *Chain 1* with the London Sinfonietta during the Michael Vyner Memorial Concert, held at the Royal Opera House, Covent Garden, 6 May 1990.
- 4 Tadeusz Zieliński provides a descriptive account of the piece in the following article: 'Witold Lutosławski's *Chain 1*', *Polish Music* 1-2 (1985) pp. 17-24
- 5 Due to a misunderstanding over the terms of the commission, the San Francisco Symphony Orchestra announced in the concert programme for the first performance of *Chain 3* that the composer had waived his fee (apparently without his knowledge or agreement). A mutually face-saving compromise was later agreed, whereby the commissioners paid an equivalent sum into the scholarship trust fund that Lutosławski had established in 1985 with the \$100,000 Grawemeyer Prize. These funds have been used to support the postgraduate composition studies (outside Poland) of several young Polish composers including Tadeusz Wielecki, Jacek Grudzien and Hanna Kulenty (all former students from the class of Professor Włodzimierz Kotoński at the Warsaw Academy of Music).
- 6 In conversation between the composer and the present author.
- 7 An informative programme note on *Chain 3*, by Steven Stucky, is reproduced in the preface to the published score (Chester).

Notes on Chapters

NOTES ON CHAPTER NINE

- 1 An account of the genesis of *Partita* and *Chain 2* (and *Interlude*), together with discussion of their harmonic and melodic language illustrated with music examples, is given in: C. Bodman Rae, 'Lutosławski's Late Violin Works', *The Musical Times* vol. cxxxI no.1772 (October 1990) pp.530-533.
- 2 It would appear that the composer and the commissioner were at cross purposes over the instrumental requirements. *Partita* was commissioned for Pinchas Zukerman by the St Paul Chamber Orchestra, hence the composer had naturally assumed that an ensemble piece was required. It is significant to note that, although Zukerman and Marc Neikrug gave the first performance they have not made a gramophone recording of the work and the duo version does not bear a dedication. The later, orchestral version, however, is dedicated to Anne-Sophie Mutter.
- 3 The close association with Paul Sacher has been a feature of Lutosławski's later years and is likely to result in further commissions in addition to the Double Concerto, *Chain 2* and *Interlude*.
- 4 It is worth noting that Anne-Sophie Mutter's performances of *Chain 2* have had an inspirational effect on Lutosławski, hence his decision to orchestrate *Partita* as a personal gift for her. She has also requested a Violin Concerto from him, and he made some preliminary sketches for such a work during 1990, although it is unclear whether this project will be realised.
- 5 The present author first drew attention to the significance of *Partita* in 'Lutosławski's Golden Year', *The Musical Times* vol.cxxvii no.1723 (October 1986) pp.547-551
- 6 Although there is a purely abstract, intervallic similarity with Webern's use of interval-classes 1 and 6 (especially minor ninths), the style of the two composers is dissimilar in other respects such as rhythm, texture, rhetoric and so forth.
- 7 In *Partita*, Lutosławski adopts the conventional notation of accidentals for those sections of the work that are composed in metre, with bar lines. He even uses conventional notation of accidentals for the aleatory sections.
- 8 This type of harmony in the music of Chopin (and its bearing on the music of Liszt and Wagner) was the subject of my illustrated talk for BBC Radio 3, 'Tristan Triangles', first broadcast on *Music Weekly* (15 October 1989).
- 9 The present author expressed this opinion to the composer after the British première at the Barbican on 17 October 1990, and he has subsequently given some performances without a break for applause at the end of *Partita*.
- 10 The composer's programme note is reproduced as a preface to the published score (Chester).

Notes on Chapters

Notes on Chapter Nine, continued...

- 11 The issue of neo-romanticism was addressed in conversations between Penderecki and the present author recorded for the documentary 'An Affair with Romanticism', first broadcast by BBC Radio 3 on 20 March 1990.
 - 12 Barbara Smoleńska-Zielińska argues strongly against inappropriate application of the neo-romantic label to the later music of Lutosławski and *Chain 2* in particular: 'Łańcuch 2 Witolda Lutosławskiego', *Ruch Muzyczny* XXX/15 (July 1986) pp. 3-4.
 - 13 See Chapter Three, pp. 65-67.
 - 14 See notes 22-24 on Chapter Three.
 - 15 See notes 26 and 29 to Chapter Three.
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NOTES ON CHAPTER TEN

- 1 The expression ' *odrabiać zaległości* ' was used by the composer in conversation with the present author (Warsaw, April 1987).
- 2 A brief account of the work's genesis was given by the present author in 'Lutosławski's Piano Concerto', *The Listener*, vol. 122 no. 3124 (27 July 1989) pp. 36-7.
- 3 Lutosławski discussed his music, particularly the Piano Concerto, in an interview with Grzegorz Michalski on 16 January 1988, published in *Polish Music* vol. 23 nos. 2-3 (1988) pp. 3-22.
- 4 The Piano Concerto was written for Krystian Zimerman and is dedicated to him. Lutosławski had followed Zimerman's career with interest since he won first prize in the 1976 Chopin Competition.
- 5 My translation of the composer's Polish programme note, prepared for the première at the Salzburg Festival. The same translation is also reproduced in the published score (together with the German translation by Martina Homma, and the composer's own translation into French).
- 6 Lutosławski received his Piano Diploma from the Warsaw Conservatory in 1936 after performing the following in recital and concert performances: J.S. Bach, Prelude and Fugue in D major BWV 874 (from *Das Wohltemperierte Klavier*, Book 2); Mozart, Sonata in A minor K. 310; Schumann, Toccata op. 7; Liszt Paganini Caprice in A minor; Chopin, Two Studies in C# minor, op. 10 no. 4 and op. 25 no. 7; Chopin, Ballade no. 4 in F minor op. 52; Debussy, *Reflets dans l'eau* from *Images* Book I; Maliszewski, Dance from the ballet *Syrena*; Beethoven, Piano Concerto no. 4 in G major op. 58; Prokofiev, Variations from Piano Concerto no. 3.

Notes on Chapters

Notes on Chapter Ten, continued...

- 7 In conversation with the present author (Warsaw, April 1987).
 - 8 For an account of the life and work of Robert Desnos see the article by Marie-Claire Dumas in *Dictionnaire des Littératures de langue française*, ed. Beaumarchais, Couty and Rey (Paris, 1987) pp.669-671. There is also a brief profile by Pierre-André Touttain provided in the most recent Gründ Edition of the *Chantefables et Chantefleurs* (Paris, 1991).
 - 9 In the programme for the première on 8 August 1991 the total number of these poems was given, incorrectly, as fifty.
 - 10 It may be worth noting that Lutosławski is familiar with some of the poetry of Hilaire Belloc, and he set 'Do you remember an inn, Miranda?' for the Tarantella dedicated to Sheila MacCrindle.
 - 11 Lutosławski has also shown a preference for a light, young voice in performances of his *Kolędy* (Carols).
 - 12 *L'Angélique* was repeated, as an encore, after the world première.
 - 13 The composer has confirmed, in conversation with the present author (London, August 1991), that the bass line of *Le Papillon* was modelled on examples by J.S. Bach.
 - 14 The present author's review of the world première was given in *The Musical Times* vol.cxxxii no.1784 (October 1991) p.524.
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Appendix A: List of Works

The following list of works is in chronological order, except for revisions, arrangements or orchestrations of earlier work, which are listed immediately after the original version. In some cases the period of composition was spread over several years; for example, Symphony no.1, the Concerto for Orchestra, and *Muzyka żałobna*. The chronology of these works is taken from the date of completion; the overlap of dates often sheds interesting light on other pieces composed at the same time. Where the period of composition is known, the span of dates is given. Generic titles are given in English. Others are given in either Polish or French, whichever was the original language given by the composer.

Functional music composed by Lutosławski from 1945-60 falls broadly into two categories: published and unpublished. The former is included here, but reference to the latter is selective. Until April 1990, most of the sketches and manuscripts were kept in the composer's study at his home in Warsaw. Since then, these have been acquired by the Paul Sacher Stiftung in Basel. Others are held in the music manuscripts section of the Polish *Biblioteka Narodowa* (National Library) at the Krasiński Palace in Warsaw (including four scores/parts of incidental music for the theatre).

Only three publishers hold copyright in Lutosławski's work: Polskie Wydawnictwo Muzyczne (PWM); Chester Music; and Moeck Verlag. PWM (Al. Krasińskiego, 31-111, Kraków, Poland) cover all works in what was referred to until recently as the 'Soviet bloc', together with other socialist and former socialist countries (although this demarcation may change in the light of continuing political and economic changes in those countries). Moeck Verlag (Postfach 143, D-3100, Celle 1, Germany, Tel: 05141.88.530) have rights in all other countries for only two works: the Five Songs to poems of Iłakowicz; and *Jeux vénitiens*. Since 1966 the leading publisher has been J & W Chester Ltd of London, formerly part of the Wilhelm Hansen publishing group, since 1989 part of the Music Sales group (8-9 Frith Street, London W1V 5TZ, Tel: (0)71.609.1751). Chesters also act as sub-publishers for works composed prior to 1966.

In order to obviate the need for a separate discography, details of selected recordings are included here. Recent issues on compact disc are listed, including the Polskie Nagrania series (PNCD) which is largely drawn from performances of the 1960s previously issued on LP. Although the 1978 set of six LPs issued by EMI is unfortunately no longer available (and not yet issued on CD), its importance requires it to be included.

[Early pieces, no longer extant]

Prelude for piano (1922)

Other small piano pieces (1923-6)

Two Sonatas for violin and piano (1927)

Poème for piano (1928)

Taniec Chimery [Dance of the Chimera] for piano (1930)

Scherzo for orchestra (1930)

Incidental music for *Haroun al Rashid* for orchestra (1931)

Double Fugue for orchestra (1936)

Prelude and Aria for piano (1936)

Manuscripts: these and others destroyed in 1944 during the Warsaw Uprising.

List of Works

Sonata for Piano (1934)

[completed 'Warszawa, 29 XII 1934']

I. *Allegro*

II. *Adagio ma non troppo*

III. *Andante - Allegretto - Andantino*

Première : Polish Radio broadcast, Warsaw, 1935.

Performer : the composer

Duration : circa 23 minutes overall; (I: c.9'; II: c.6'; III: c.8')

Manuscript: unpublished Ms. in the composer's collection

[Two Songs for soprano and piano] (1934)

Wodnica [Water-nymph]

Kołysanka lipowa [Linden lullaby]

Texts : poems by Kazimiera Iłłakowicz (1892-1983) from *Płaczący Ptak* (Warsaw, 1927).

Première : at a café concert in Warsaw, 1941

Performers: Ewa Bandrowska-Turska (soprano), the composer (piano)

Manuscript: lost/destroyed in 1944 during the Warsaw Uprising.

[Three Short-Film Scores] (c. 1935-36)

1. *Gore* [Fire]

2. *Uwaga* [Beware!]

3. *Zwarcie* [Short-circuit]

All three made for Institut Spraw Społecznych ('Institute for Social Affairs', akin to Health and Safety Executive), focusing on domestic or occupational hazards: danger of fires, safety at work, and safety with electricity, respectively. Nos. 1 and 3 directed by Eugeniusz Cękański; no. 3 directed by Stefan and Franciszka Themerson.

Lacrimosa, for soprano (optional SATB chorus) and orchestra (1937)

[Surviving fragment of a Requiem]

Première : Warsaw, 1938

Performers: Helena Warpechowska, Warsaw Phil.Orch., cond. Tadeusz Wilczak

Duration : circa 3 minutes

Publisher : unpublished manuscript in the composer's collection.

Transcription for soprano and organ published by PWM, 1948.

The other fragment, *Requiem aeternam*, for chorus and orchestra, was lost/destroyed in 1944 during the Warsaw Uprising.

Recording : (without chorus) PNCD 040 (1988). Stefania Wojtowicz, Polish Radio SO/Lutosławski.

Symphonic Variations (1936-8)

3. 3. 3. 3; 4. 3. 3. 1; Imp. perc. cel. pfl.; harp; strings.

Première : (broadcast), Polish Radio, Warsaw, April 1939.

(concert), Wawel Festival, Kraków, 17 June 1939

Performers: Polish Radio Symphony Orchestra, cond. Grzegorz Fitelberg

Duration : circa 9 minutes

Publishers: PWM / Chester

Recordings: EMI 1C 165-03 236 Q (1978) Polish Radio SO/Lutosławski

EMI ED29 1172-2 Polish Radio SO/Lutosławski

List of Works

Two Studies, for piano (1940-41)

I: *Allegro*; II: *Non troppo allegro*

Première : (No. 1) Kraków, 26 January 1948

Performer : Maria Bielińska-Riegerowa

Duration : circa 4½ minutes (I: 1'50"; II: 2'30")

Publisher : PWM / Chester

Recording : PNCD 045 (1974) Marek Drewnowski

Variations on a theme by Paganini, for two pianos (1941)

[Theme and twelve variations]

Source : Caprice in A minor no. 24, for violin, by Paganini.

Première : at a café concert in Warsaw, 1941

Performers: the composer and Andrzej Panufnik.

Duration : circa 6 minutes

Publishers: PWM / Chester

Recordings: numerous, eg. PNCD 045 (1978) Jacek and Maciej Łukaszczyk.

Orchestrated: (and slightly extended) by the composer in 1978 for solo piano and orchestra 2.2.2.2; 4.3.3.1; timp. perc.; harp; strings). First performance of this version in Miami on 18 November 1979 played by Felicja Blumental with the Florida Philharmonic Orchestra, cond. Brian Priestman.

Pieśni walki podziemnej for voice and piano (1942-44)

[Songs of the Underground Struggle]

1. *Żelazny marsz* [Iron march]

2. *Do broni* [To arms]

3. *Przed nami przestrzeń otwarta* [An open stretch before us]

4. *Jedno słowo, jeden znak* [One word, one sign]

5. *Wesoły pluton* [Merry platoon]

Texts : (1) Stanisław Dobrowolski, an officer of the Armia Krajowa (AK), the underground 'Home Army'; (2) Aleksander Maliszewski; (3, 4) Zofia Zawadzka; (5) anonymous.

Duration : circa 15 minutes

Publisher: PWM in vol. 1 of *Pieśni walki podziemnej* (1948)

[Fifty Contrapuntal studies, for Woodwind etc] (1943-44)

Ten Interludes for Oboe and Bassoon (1943-44)

1. *Allegro giusto*

2. *Poco adagio*

3. *Tempo di Menuetto*

4. *Allegro vivace*

5. *Con moto*

6. *Vivo*

7. *Allegretto*

8. *Andante*

9. *Allegro giocoso*

10. *Allegro vivo*

Ten Canons for Two Clarinets (1943-44)

Ten Canons in Four Parts

Eleven Miniatures in Four/Five Parts

Nine Canons for Three Clarinets (2 Bb Cl. and Bb Bass Cl.) (1944)

1. *Allegro non troppo* 20. X. 1944

2. *Stesso movimento* 22. X. 1944

3. *Stesso movimento* 24. X. 1944

4. *Stesso movimento* 28. X. 1944

List of Works

5. *Adagio* 30. X. 1944
6. *Adagio* 31. X. 1944
7. *Stesso movimento* 1. XI. 1944
8. *Stesso movimento* 2. XI. 1944
9. *Stesso movimento* 4. XI. 1944

Manuscripts: unpublished Mss. in the composer's collection.

Trio, for oboe, clarinet and bassoon (1944-5)

I: *Allegro moderato*; II; III: *Allegro giocoso*.

Première : Festival of Contemporary Polish Music, Kraków, September 1945.

Performers: Seweryn Śnieckowski, oboe; Teofil Rudnicki, clarinet;
Bazyli Orłow, bassoon.

Duration : circa 16 minutes

Manuscript: original Ms. lost; but composer has an unauthorised copy.

Melodie Ludowe [Folk melodies] (1945)

'Twelve easy pieces for piano'

1. *Ach mój Jasieńko* [O, My Johnny] *Sostenuto*
2. *Hej, od Krakowa jadę* [Hey, I Come From Kraków] *Allegretto*
3. *Jest drożyna, jest* [There is a path, there is] *Andantino*
4. *Pastereczka* [The Little Shepherdess] *Allegretto*
5. *Na jabłoni jabłko wisi* [An Apple hangs on the apple-tree] *Moderato*
6. *Od Sieradza płynie rzeka* [A River flows from Sieradz] *Allegretto*
7. *Panie Michale* [Master Michael] *Poco sostenuto*
8. *W polu lipieńka* [The Lime-tree in the field] *Sostenuto*
9. *Zalotny* [Flirting] *Allegretto*
10. *Gaik* [The Grovel] *Allegro vivace*
11. *Gąsior* [The Gander] *Andantino*
12. *Rektor* [The Schoolmaster] *Allegro*

Source : melodies from an unpublished collection by Jerzy Olszewski.

Première : Kraków, 1947.

Performer : Zbigniew Drzewiecki

Duration : circa 10 minutes

Commission: from Polskie Wydawnictwo Muzyczne

Publisher : PWM / Chester. Transcription for guitar by José de Azpiazu [of nos. 1-5, 8, 10, 12], PWM 1971.

Arranged : by the composer, for (school) string orchestra in 1952 (nos. 1, 2, 11, 12), and for four violins in 1954 (nos. 9-12).

Odrą do Bałtyku [Via the Oder to the Baltic], documentary film (1945)

Orchestral film score

Director: T. Makarczyński (35mm)

Duration: 39 minutes

Location: Polish Film Archives at Wytwórnia Filmowa, ul. Chelmska, Warsaw.
Shown to present author in private screening on 23 April 1987.

Commentary: With text, maps, and voice-over narration throughout. Follows the route of the river Oder from Silesia to the Baltic sea, via Bytom (etc), Kędra, Opole, Brzeg, Wrocław (Breslau), Lignice, Głogów, Ziemia Lubuska, and Szczecin (Stettin). Begins with maps of Poland's new boundaries, particularly the Oder-Neisse line forming the new border with the DDR and Czechoslovakia. Propagandist narration relegates the music to a subordinate position.

List of Works

Suita Warszawska [Warsaw Suite], documentary film (1946)

Orchestral film score, for full symphony orchestra .

I. *Klęska* [Disaster]

II. *Powrót do Życia* [Return to life]

III. *Wiosna Warszawska* [Warsaw spring]

Director: T. Makarczyński (35mm)

Duration: 20 minutes overall (5, 6, and 9 minutes, respectively)

Location: Polish Film Archives at Wytwórnia Filmowa, ul. Chelмна, Warsaw.

Shown to present author in a private screening on 23 April 1987.

Commentary: There is no text, no subtitled captions, and no voice-over narration; only visual images and music. *Klęska* shows the utterly devastated, deserted capital. *Powrót do Życia* gradually introduces scenes of human activity as the music becomes more active and 'warmer'. *Wiosna Warszawska* is atmospheric and colourful, both visually and musically. Vivid orchestration is used for images of trees blossoming.

Dwadzieście kolęd [Twenty Carols], for voice and piano (1946)

1. *Anioł pasterzom mówił*

2. *Gdy się Chrystus rodzi*

3. *Przybieżeli do Betlejem*

4. *Jezus malusieńki*

5. *Bóg się rodzi*

6. *W żłobie leży*

7. *Północ już była*

8. *Hej, weselmy się*

9. *Gdy śliczna Panna*

10. *Lulajże, Jezuniu*

11. *My też pastuszkowie*

12. *Hej, w dzień narodzenia*

13. *Hola, hola, pasterze z pola*

14. *Jezu, śliczny kwiecie*

15. *Z narodzenia Pana*

16. *Pasterze mili*

17. *A cóż z tą dzieciną*

18. *Dziecina mała*

19. *Hej, hej, lelija Panna Maryja*

20. *Najświętsza Panienska po świecie chodziła*

Sources: texts and melodies from: Father Michał Mioduszeński, *Śpiewnik kościelny*, (Kraków, 1838 [nos. 1, 5, 6], 1842 [nos. 14, 15], 1853 [nos. 2, 16]); Mioduszeński, *Pastorałki i kolędy z melodyjami*, (Kraków, 1843), [nos. 2, 4, 7, 8, 9, 10, 11, 12, 13, 16, 17, 18]; Oskar Kolberg, *Lubelskie*, (Kraków, 1883) [no. 19] ; Kolberg, *Łęczyckie* (Kraków, 1889) [no. 20].

Première : [nos. 11, 15, 17, 18, 20, only] Kraków, January 1947.

Performers: Aniela Szlemińska, soprano, Jan Hoffman, piano.

Duration : circa 45 minutes

Commission: from Polskie Wydawnictwo Muzyczne.

Publisher : PWM / Chester

Recording : Veriton SXV-778P, Krystyna Szostek-Radkowa (soprano), Andrzej Hiolski (baritone), Jerzy Witkowski (piano).

Twenty Polish Christmas Carols (1946, orch. 1984-89)

Soprano solo; female chorus; 1. 1. 2. 1; 2. 1. 1. 0; timp. perc. pft. ; hp; strings

1. Angels To The Shepherds Came (*Anioł pasterzom mówił*)

2. Hey ! We Rejoice Now (*Hej ! Weselmy się*)

List of Works

3. When The Christ To Us Is Born (*Gdy się Chrystus rodzi*)
4. Just After Midnight (*Północ już była*)
5. God Is Born (*Bóg się rodzi*)
6. Our Lovely Lady (*Gdy śliczna Panna*)
7. Hurrying To Bethlehem (*Przybieżeli do Betlejem*)
8. In A Manger (*W żłobie leży*)
9. Jesus There Is Lying (*Jezus malusienki*)
10. We Are Shepherds (*My też pastuszkowie*)
11. Lullaby, Jesus (*Lulajże, Jezuniu*)
12. Hey, On This The Day (*Hej, w dzień narodzenia*)
13. Jesus, Lovely Flower (*Jezu, śliczny kwiecie*)
14. Heyla, Heyla, Shepherds There You Are (*Hola, hola, pasterze z pola*)
15. What To Do With This Child ? (*A cóż z tą dzieciną ?*)
16. Hey, Hey, Lovely Lady Mary (*Hej, hej, Lelijska Panna Maryja*)
17. This Is Our Lord's Birthday (*Z narodzenia Pana*)
18. Shepherds Can You Tell ? (*Pasterze mili*)
19. Infant So Tiny (*Dziecina mała*)
20. Holy Lady Mary (*Najświętsza Panienska po świecie chodziła*)

Texts : English rhyming translations by Charles Bodman Rae, ©1988/89.

Première : Aberdeen, 14 December 1990; Queen's Hall, Edinburgh, 15 December 1990 (an incomplete selection of only 17 Carols was performed, in Polish, at the Queen Elizabeth Hall, London on 15 December 1985, sung by Marie Slorach with the London Sinfonietta and Chorus, conducted by the composer).

Performers: Susan Hamilton (soprano), with the Scottish Chamber Orchestra and Scottish Philharmonic Singers, conducted by the composer.

Duration : circa 45 minutes

Publishers: Chester

Symphony no. 1 (1941-7)

3. 3. 3. 3; 4. 3. 3. 1; timp. perc. cel. pft.; strings.

I. *Allegro giusto*; II. *Poco adagio*; III. *Allegretto misterioso*;

IV. *Allegro vivace*

Première : Katowice, 6 April 1948.

Performers: Polish Radio Symphony Orchestra, cond. Grzegorz Fitelberg.

Duration : circa 25 minutes

Publishers: PWM / Chester

Recordings: EMI 1C 165-03 232 Q (1978) Polish Radio SO/Lutosławski.
PNCD 040 (1964) Polish Radio SO/Lutosławski

***Sześć piosenek dzieciennych* [Six Children's Songs] (1947)**

for voice and piano

1. *Taniec* [Dance]

2. *Rok i bieda* [Year and trouble]

3. *Kotek* [Kitten]

4. *Idzie Grześ* [Here comes Greg]

5. *Rzeczka* [Little river]

6. *Ptasie plotki* [Birds' gossips]

Texts : by Julian Tuwim (1894-1953)

Publishers: PWM

Arranged : by the composer, for children's choir and orchestra in 1952 (concert performance, Warsaw, 29 April 1954), and for mezzo-soprano and orchestra in 1953 (broadcast by Polish Radio). Both remain in manuscript.

List of Works

[Two Children's Songs for voice and piano] (1948)

Spóźniony słowik [The overdue nightingale]

O Panu Tralalińskim [About Mr Tralaliński]

Texts : by Julian Tuwim (1894-1953)

Première : Kraków, 26 January 1948

Performers: Irena Wiskida (soprano), Jadwiga Szamotulska (piano)

Publishers: PWM / Chester

Arranged : by the composer for voice and chamber orchestra in 1952; this version first performed by Maria Drewniakówna with the Polish Radio Symphony Orchestra, conducted by Stefan Rachoń.

Lawina [The Snowslide], for voice and piano (1949)

Text : poem by Alexander Pushkin (1799-1837), *Obval* (1829)

Première : Lesław Finze (tenor), Kraków, 26 September 1950

Publisher : PWM

Prizes : Second prize in a competition of the Polish Composers' Union for songs to celebrate 150th anniversary of Pushkin's birth.

Overture for Strings (1949)

Première : Prague, 9 November 1949.

Performers: Prague Radio Symphony Orchestra, cond. Grzegorz Fitelberg.

Dedication: to Mirko Očadlik

Duration : circa 5 minutes

Publishers: PWM / Chester

[Selection of Extant Incidental Music for the Theatre, (1948-50)]

1. *Cyd* (1948), *El Cid*, by P. Corneille

for small instrumental ensemble

Production: Teatr Polski, Warsaw, première 8 January 1948

Source: autograph score and parts in Biblioteka Narodowa (Mus. 3611)

2. *Fantazy* (1948), by Juliusz Słowacki

Ensemble: 1. O. 1. O.; 0. 2. 1. O.; GC; pft; 2vl, vlc, cb; and female chorus

Production: Teatr Polski, Warsaw, première 10 July 1948

Source: autograph score and 12 parts in Biblioteka Narodowa (Mus. 3612)

3. *Wesołe kumoszki z Windsoru* (1949)

Merry Wives of Windsor, by William Shakespeare

Ensemble: 1. O. 1. O.; 0. 1. 1. O.; perc; vl, vla, vlc, cb.

Production: Teatr Polski, Warsaw, première 28 October 1949

Source: set of 9 parts in Biblioteka Narodowa Mus. (3613)

4. *Bóg, cesarz i chłop* (1950)

God, Caesar and Peasant, by Juliusz Hay

Ensemble: 0. O. 1. O.; 1. 1. 1. O.; perc; hp; 2vl, vla, vlc, cb.

Production: Teatr Polski, Warsaw, première 5 April 1950

Source: autograph score and 11 parts in Biblioteka Narodowa (Mus. 3610)

Little Suite, for chamber orchestra (1950)

I. *Fujarka* [Fife], *Allegretto*; II. *Hurra* polka, *Vivace*; III. *Piosenka* [Song], *Andante molto sostenuto*; IV. *Taniec* [Dance], *Allegro molto*.

Sources : Folk melodies from Machów in the Rzeszów region.

Performed : on Polish Radio by a light-music chamber orchestra

Revised : in 1951 for symphony orchestra (2. 2. 2. 2; 4. 3. 3. 1; timp. perc.; strings). Première, Warsaw, 20 April 1951, Polish Radio SO/Fitelberg.

Duration : circa 11 minutes

Publishers: 1950 version, unpublished Ms.; 1951 version, PWM / Chester

List of Works

Słomkowy łańcuszek i inne dziecinne utwory (1950-51)

[Straw Chain and other children's pieces]

Cycle of Children's Songs for soprano, mezzo-soprano, fl., ob., 2cl., bsn.

1. *Wstęp instrumentalny* [Instrumental introduction]
2. *Chałupeczka niska* (Low hut)
3. *Była babuleńka* (There Was An old woman)
4. *Co tam w lesie huknęło* (What went bang in the woods?)
5. *W polu grusza stała* [In the field stood a pear-tree]
6. *Rosła kalina* [A guelder-rose grew]
7. *Chciało się Zosi jagódek* [Sophie wanted blueberries]
8. *Słomkowy łańcuszek* [Straw chain]

Texts: 2,3,4,7 traditional material collected by Oskar Kolberg; no.5 text by Janina Porazińska (1888-1971); no.6 text by Teofil Lenartowicz (1822-93); no.8 text by Lycyna Krzemieniecka (1907-55).

Première: Polish Radio, Warsaw, 1951

Duration: circa 10 Minutes

Publishers: PWM / Chester

Tryptyk Śląski [Silesian Triptych], for soprano and orchestra (1951)

Soprano; 3.2.3.2; 4.3.3.1; timp. perc. cel.; harp; strings.

Sources : Silesian folk texts and melodies from: Bystron (ed): *Pieśni ludowe z polskiego Śląska*, (Kraków, 1927-34)

Première : Warsaw, 2 December 1951.

Performers: Maria Drewniakówna, Polish Radio S.O., cond. Fitelberg.

Duration : circa 9 minutes

Prizes : First Prize at the Festival of Polish Music, Warsaw, 16 December 1951; State Prize class II, 17 July 1952.

Publishers: PWM / Chester

Recitative e arioso, for violin and piano (1951)

Première : Eugenia Umińska (violin), Kraków, c.1952

Duration : circa 3 minutes

Publisher: PWM (written for its director, Tadeusz Ochlewski).

Arranged : by Bronisław Eichenholz for violino grande and piano, this version first performed at Malmö in Sweden, 30 September 1966.

Wiosna [Spring] (1951)

Cycle of children's songs for mezzo-soprano and chamber orchestra

1. *Już jest wiosna* [Already it's spring]
2. *Piosenka o złotym listku* [Song of the golden leaf]
3. *Jak warszawski woźnica* [Like a Warsaw coachman]
4. *Majowa nocka* [May night]

Texts : (1) W. Domeradzski; (2) Jadwiga Korczakowska; (3) Januszewska; (4) Lycyna Krzemieniecka (1907-55)

Première : Polish Radio, Warsaw, 1951

Performers: Janina Godlewska, Warsaw Radio SO, cond. the composer

Manuscript: unpublished

Arranged : Nos.2 and 4 arr. voice/piano in 1952, published by PWM in 1954. No.4 arr. SSA chorus/piano, published by Chester in 1977.

Jesień [Autumn] (1951)

Cycle of children's songs for mezzo-soprano and chamber orchestra

1. *W listopadzie* [In October]
2. *Świerszcz* [The Cricket]

List of Works

3. *Mgła* [Fog]

4. *Deszczyk jesienny* [Light autumn rain]

Texts : by Lucyna Krzemieniecka (1907-55)

Première : Polish Radio, Warsaw, 1951

Performers: Janina Godlewska, Warsaw Radio SO, cond, the composer

Manuscript: unpublished

Ten Polish Folksongs, on Soldiers' Themes (1951)

for unaccompanied male chorus

1. *Pod Krakowem czarna pola* [A black field near Kraków]
2. *Nie będę łez ronić* [No tear will be shed]
3. *A w Warszawie* [And in Warsaw]
4. *Zachodzi słońeczko* [The sun is setting]
5. *Oj, i w polu jezioro* [Oh, and a lake in the field]
6. *Jam kalinę łamała* [I broke the guelder-rose]
7. *Gdzie to jedziesz, Jasiu?* [Where are you going, Jack?]
8. *A na onej górze* [And on that mountain]
9. *Już to mija siódmy roczek* [Already passed the seventh year]
10. *Małgorzatka* [Maggie]

Sources: (1,2,4,7-10) texts and tunes from collections by Oskar Kolberg; nos.2,4,9 from *Krakowskie* vol.2/6 (Kraków,1873); no.7 from *Mazowsze* vol.3/26 (Kraków,1887); no.8 from *Mazowsze* vol.4/27 (Kraków,1888); no.10 from *Mazowsze* vol.1/24 (Kraków,1885). Sources for nos.1,3,5,6 unknown.

Commission: from the Polish Ministry of Defence

Publisher : Ministry of Defence Press, Polish Army series

Seven Songs, for voice and piano (1950-2)

[Mass songs for unison chorus]

1. *Zwycięska droga* [The road of victory]
2. *Wyszłabym ja [...]* [I would marry]
3. *Nowa Huta* [The post-war 'new foundry' town near Kraków]
4. *Służba Polsce* [Service to Poland]
5. *Żelazny marsz* [Iron March; from Songs of the Underground Struggle]
6. *Najpiękniejszy sen* [The most beautiful dream]
7. *Naprzód idziemy* [Forward we go]

Texts: nos.1 and 6 by Tadeusz Uragacz; no.2 by Leopold Lewin; nos. 3 and 4 by Stanisław Wygodzki; no.5 by Stanisław Ryszard Dobrowolski; no.7 by Jan Brzechwa.

Publisher: PWM in the series 'Festiwal Muzyki Polskiej'

Arranged : by the composer in 1951, for unaccompanied male chorus (no.4), and for unaccompanied mixed chorus (nos.2,4,5)

[Children's Songs for voice and piano] (1952)

Srebrna szybka [Silver window-panel]

Muszelka [Cockle-shell]

Texts : by Agnieszka Barto

Publishers: PWM / Chester

Arranged : by the composer in 1953 for mezzo-soprano and chamber orchestra

Bukoliki (Bucolics), for piano (1952)

I. *Allegro vivace*; II. *Allegretto sostenuto, poco rubato*;

III. *Allegro molto*; IV. *Andantino*; V. *Allegro marciale*.

Première : Warsaw, December 1953.

Performer : the composer

List of Works

Duration : 5'15" overall. (I: 57"; II: 45"; III: 41"; IV: 1'28"; V: 1'14")
Publisher : PWM / Chester
Arranged : by the composer in 1962 for viola and cello (first performed in the 1970s by Stefan Kamasa, viola, and Andrej Orkisz, cello).

Three Songs, for voice and piano (1953)

Soldiers' Songs

1. *Kto pierwszy* [Who first?] *Żywo* [briskly]
2. *Narciarski patrol* [Ski patrol] *Umiarkowanie* [restrainedly]
3. *Skowronki* [Skylarks] *Żywo* [briskly]

Texts : (1) Stanisław Czachorowski; (2) Aleksander Rymkiewicz; (3) Mieczysław Dołęga.

Publishers: PWM, in the series *Pieśni Dziesięciolecia* (1954-5)

Miniatura [Miniature], for two pianos (1953)

Duration : circa 1'50"

Publisher : PWM

Three Pieces for the Young, for piano (1953)

1. Four-finger exercise, *Allegro*
2. Melody, *Andante con moto*
3. March, *Allegro*

Commission: from PWM

Publishers: PWM / Chester

[Children's Songs for voice and piano] (1953)

Pióreczko [Little feather], text by Janina Osińska

Wróbelek [Little sparrow], text by Lucyna Krzemieniecka

Pożegnanie wakacji [Goodbye to holidays], text by Lucyna Krzemieniecka

Wianki [Wreaths], text by Stefania Szuchowa

[Children's Songs for voice and chamber orchestral] (1954)

Spijże, śpij [Sleep, sleep] (1954), text by Lucyna Krzemieniecka

Idzie nocka [Night is falling] (1954), text by Janina Osińska

Warzywa [Vegetables] (1954), text by Julian Tuwim

Trudny rachunek [Difficult sums] (1954), text by Julian Tuwim

All written for Polish Radio. All unpublished.

Concerto for Orchestra (1950-54)

3.3.3.3; 4.4.4.1; timp. perc. cel. pft.; 2 harps; strings.

I. Intrada: *Allegro maestoso*; II. Capriccio notturno e arioso: *Vivace*;

III. Passacaglia, toccata e corale: *Andante con moto - Allegro giusto*.

Sources : folk melodies from Kolberg, *Mazowsze, Lud* (Kraków, 1886, 1890)

Première : Warsaw, 26 November 1954.

Performers: Warsaw National Philharmonic Orch., cond. Witold Rowicki.

Dedication: to Witold Rowicki

Score : autograph Ms. in Biblioteka Narodowa (Mus.533 Cim), available on microfilm (no. 30448). Shows completion date '1.viii.1954'.

Duration : circa 30 minutes

Prizes : State Prize class I and Order of Labour class II, 22 July 1955

Publishers: PWM / Chester

Recordings: EMI 1C 165-03 234 Q (1978) Polish Radio SO/Lutosławski

PNCD 040 (1962) Warsaw National PO/Rowicki

Philips 412 377-2 Warsaw National PO/Rowicki

List of Works

Dance Preludes, for clarinet and piano (1954)

I. *Allegro molto*; II. *Andantino*; III. *Allegro giocoso*; IV. *Andante*;
V. *Allegro molto*.

Première : (original version) Warsaw, 15 February 1955.

Performers: Ludwik Kurkiewicz, clarinet; Sergiusz Nadgryzowski, piano.

Orchestrated: in 1955 for clarinet and chamber orchestra (timp. perc. pft.; harp; strings 8.8.6.6.4.). Concert première of this (second) version, Aldeburgh Festival, June 1963, played by Gervase de Peyer, with the English Chamber Orchestra, conducted by Benjamin Britten.

Arranged: in 1959 for nine instruments (1.1.1.1; 1.0.0.0; strings 1.1.1.1.)
Première of this (third) version at Louny (NW of Prague), 10 November 1959, by the Czech Nonet.

Duration : circa 7 minutes

Publishers: PWM / Chester

Recordings: (1955 version) Hyperion A66 215 Thea King/ECO/Litton
Philips 416 817-2 Brunner/Bavarian Radio SO/Lutosławski

Five Songs, for soprano and piano (1957)

1. *Morze* [Sea]; 2. *Wiatr* [Wind]; 3. *Zima* [Winter]; 4. *Rycerze* [Crusaders];
5. *Dzwony Cerkiewne* [Orthodox-Church Bells]

Poems : by Kazimiera Iłakowicz (1892-1983) from *Rymy dziecięce* (1922).

Première : Katowice, 25 November 1959.

Performer : Krystyna Szostek-Radkova, soprano.

Dedication: (1) to Marya Freund, (2, 3, 4, 5) to Nadia Boulanger

Duration : circa 10 minutes

Publishers: PWM / Moeck Verlag

Orchestrated by the composer in 1958 (timp, perc, piano, 2 harps, strings 9.4.4.4.), this version first performed in Katowice on 12 February 1960, by Krystyna Szostek-Radkova and the Polish Radio SO, cond. Jan Krenz.

Recordings: PNCD 045 (1967) Halina Łukomska/Warsaw Nat PO/Markowski
EMI 1C 165-03 234 Q (1978) Łukomska/Polish Radio SO/Lutosławski

Muzyka żałobna, (Musique funèbre), (1954-58)

for string orchestra:

vl. I (6-8), vl. II (6-8), vl. III (6-8), vl. IV (6-8), vle. I (4-6),
vle. II (4-6), vlc. I (4-6), vlc. II (4-6), cb. I (3-5), cb. II (3-5)

Prologue - Metamorphoses - Apogeeum - Epilogue.

Première : Katowice, 26 March 1958.

Performers: Polish Radio Symphony Orchestra, cond. Jan Krenz.

Dedication: *à la mémoire de Béla Bartók*

Score : autograph Ms. in Biblioteka Narodowa (Mus. 532 Cim), available on microfilm (no. 30447). Dedication shown in French.

Duration : circa 13½ minutes

Prizes : Prize of the Polish Composers' Union [ZKP], 15 January 1959;
joint first prize, Tribune Internationale des Compositeurs (UNESCO), Paris, 12-15 May 1959 (with Tadeusz Baird).

Publishers: PWM / Chester

Recordings: EMI 1C 165-03 234 Q (1978) Polish Radio SO/Lutosławski
PNCD 040 (1959) Warsaw National PO/Rowicki
Philips 412 377-2 Warsaw National PO/Rowicki

List of Works

[Three Children's Songs for voice and piano] (1958)

Na Wroniej ulicy w Warszawie [On Wronia street in Warsaw]

Kuku, kuku [Cuckoo, cuckoo]

Piosenka na prima aprilis [Song on April Fools' Day]

Texts : by Roman Pisarski (1912-69)

Manuscript: unpublished

Piosenki dzieciinne [Children's Songs] (1958)

1. Siwy mróz [Hoar-frost]

2. Malowane miski [Painted bowls]

3. Kap, kap, kap [Drip, drip, drip]

4. Bajki iskierki [Sparkling tales]

5. Butki za cztery dudki [Little shoes for fourpence]

6. Plama na podłodze [A stain on the floor]

Texts : by Janina Porazińska (1888-1971)

Manuscript: unpublished

Trzy piosenki dzieciinne [Three Children's Songs] (1959)

1. Trąbka [Little trumpet]

2. Abecadło [ABC]

3. Lato [Summer]

Texts : by Benedykt Hertz (1872-1952)

Manuscript: unpublished

Three Postludes, for orchestra (1958-63)

3. 3. 3. 3; 4. 3. 3. 1; 4 perc. pft.; 2 harps; strings 16. 14. 12. 12. 8.

I. m. m. = 80; II. m. m. = 160; III. m. m. = 150.

Première : (No. 1 only) Grand Theatre, Geneva, 1 September 1963.

Performers: Orchestra of the Suisse Romande, cond. Ernest Ansermet.

Première : (all 3) Kraków, 8 October 1965.

Performers: Kraków Philharmonic Orchestra, cond. Henryk Czyż.

Dedication: (no. 1 only) for the centenary of the Red Cross

Duration : circa 17 minutes; (No. 1, 3'30"; No. 2, 4'50"; No. 3, 8'40").

Publishers: PWM / Chester.

Recordings: (no. 1 only) PNCD 042 (1964) Polish Radio SO/Krenz

EMI 1C 165-03 236 Q (1978) Polish Radio SO/Lutosławski

EMI ED29 1172-2 Polish Radio SO/Lutosławski

Jeux vénitiens [Venetian Games], for chamber orchestra (1960-1)

2. 1. 3. 1; 1. 1. 1. 0; timp. perc. cel. pft. (2); 2 harps; strings 4. 3. 3. 2.

I: [*ad libitum*]; II: m. m. = 150; III: m. m. = 60; IV: m. m. = 60.

Première : (incomplete, without third movement), Teatro la Fenice, Venice Biennale, 24 April 1961.

Performers: Kraków Philharmonic Chamber Orch., cond. Markowski.

Première : (complete, including third movement and slight revision of the others) Warsaw Autumn Festival, 16 September 1961.

Performers: Warsaw National Philharmonic Orchestra, cond. Rowicki.

Commission: from Andrzej Markowski and the Kraków Phil. Chamber Orch.

Duration : circa 13 minutes

Prize : First prize, Tribune Internationale des Compositeurs (UNESCO), Paris, May 1962.

Publishers: PWM / Moeck Verlag

Recordings: EMI 1C 165-03 236 Q (1978) Polish Radio SO/Lutosławski

PNCD 041 (1962) Warsaw National PO/Rowicki

List of Works

Trois poèmes d'Henri Michaux, for chorus and orchestra (1961-3)

[Three Poems of Henri Michaux]

Chorus: twenty solo voices (5 sop., 5 alt., 5 ten., 5. basses)

Orchestra: 3.2.3.2; 2.2.2.0; timp, 4 perc, 2 pft; harp. [nb. no strings]

I. *Pensées*; II. *Le grand combat*; III. *Repos dans le Malheur*.

Poems : by Henri Michaux (1899-1984). Nos. 1, 3 from *Plume* (Paris, 1938);
no. 2 from *Qui je fus* (Paris, 1928)

Première : Zagreb Music Biennale, 9 May 1963

Performers: Zagreb Radio Orchestra/Lutosławski; Zagreb Radio Choir/Zlatić

Commission: from Slavko Zlatić and the Zagreb Radio Choir.

Score : autograph Ms. in Biblioteka Narodowa (Mus.534 Cim), available
on microfilm (no. 30449). Shows completion date '17. iv. 1963'.

Duration : circa 20 minutes

Prize : First prize, Tribune Internationale des Compositeurs (UNESCO),
Paris, May 1964.

Publishers: PWM / Chester.

Recordings: EMI 1C 165-03 235 Q (1978) Polish Radio Chorus/Michniewski,
Polish Radio SO/Lutosławski.

PNCD 041 (1964) Polish Radio Chorus/Lutosławski
Polish Radio SO/Krenz

String Quartet (1964)

I. Introductory Movement; II. Main Movement.

Première : Stockholm, 12 March 1965.

Performers: La Salle Quartet.

Commission: from Swedish Radio for the 10th anniversary of 'Nutida Musik'.

Duration : circa 23½ minutes overall (I, c. 8'30"; II, c. 15')

Publishers: Chester / PWM

Recordings: DG 423 245-2 (1968) LaSalle Quartet

PNCD 045 (1965) LaSalle Quartet

Paroles tissées [Woven words], for tenor and chamber orchestra (1965)

Tenor soloist; perc, harp, pft; strings (10.3.3.1.)

Poems : 'Quatre tapisseries pour la Châtelaine de Vergi',
by Jean-François Chabrun from *Poésie* 47

Première : Aldeburgh Festival, 20 June 1965.

Performers: Peter Pears, Philomusica of London, cond. the composer.

Dedication: to Peter Pears

Duration : circa 15 minutes

Publishers: Chester / PWM

Recordings: PNCD 042 (1968) Louis Devos, Polish Radio SO/Lutosławski

EMI 1C 165-03 235 Q (1978) Devos, Polish Radio SO/Lutosławski

Symphony no. 2 (1965-67)

3.3.3.3; 3.3.3.1; 3 perc. groups; harp; pft. (2); strings: 16.14.12.6.6.

I. *Hésitant*; II. *Direct*.

Première : (*Direct* only) Hamburg, 15 October 1966.

Performers: NDR [North German Radio] Symphony Orch., cond. Boulez.

Première : (complete) Katowice, 9 June 1967.

Performers: Polish Radio Symphony Orch., cond. the composer.

Duration : circa 30 minutes

Commission: from Norddeutscher Rundfunk (NDR) for their 100th concert in
the contemporary music series 'Das Neue Werk'.

Prize : First prize of the Tribune Internationale des Compositeurs

List of Works

(UNESCO) at Paris, 20-24 May 1968.

Publishers: Chester / PWM

Recordings: PNCD 041 (1968) Warsaw National PO/Lutosławski
EMI 1C 165-03 232 Q (1978) Polish Radio SO/Lutosławski

Invention, for piano (1968)

[miniature *pièce d'occasion*]

Duration : circa 50 seconds

Dedication: for the 71 birthday of Stefan Śledziński

Publishers: PWM (1975) / Chester (1991)

Livre pour orchestre (1968)

[nb. no valid translations of the French title in use]

3.3.3.3; 4.3.3.1; timp. 3 perc. cel. pft.; harp; strings

1^{er} Chapitre [Chapter 1]

1^{er} Intermède [Intermezzo 1]

2^{me} Chapitre [Chapter 2]

2^{me} Intermède [Intermezzo 2]

3^{me} Chapitre [Chapter 3]

3^{me} Intermède et chapitre final [Intermezzo 3 and final chapter]

Première : Hagen, 18 November 1968.

Performers: Hagen City Orchestra, cond. Berthold Lehmann.

Commission: from the City of Hagen, Federal Republic of Germany.

Dedication: to Berthold Lehmann

Duration : circa 22 minutes

Publishers: Chester / PWM

Recordings: PNCD 042 (1969) Warsaw National PO/Krenz
EMI 1C 165-03 233 Q (1978) Polish Radio SO/Lutosławski

Concerto for Cello and Orchestra (1969-70)

Solo cello; 3.3.3.3; 4.3.3.1; timp. 3 perc. cel. pft.; harp; strings.

Première : Royal Festival Hall, London, 14 October 1970.

Performers: Mstislav Rostropovich, Bournemouth S.O., cond. Downes.

Commission: Royal Philharmonic Society and the Gulbenkian Foundation.

Dedication: to Mstislav Rostropovich

Duration : circa 24 minutes

Publishers: Chester / PWM

Recordings: PNCD 042 (1976) Roman Jabłoński, Polish Radio SO/Lutosławski
EMI 1C 165-03 233 Q (1978) Jabłoński, Polish Radio SO/Lutosławski
Philips 416 817-2 (1986) Schiff, Bavarian Radio SO/Lutosławski

Preludes and Fugue, for 13 solo strings (1970-72)

7 violins, 3 violas, 2 cellos, 1 double-bass

Composer's note: 'The work can be performed whole or in various shortened versions. In the case of performances of the whole, the indicated order of the [seven] Preludes is obligatory. Any number of the Preludes in any order can be performed with or without a shortened version of the Fugue'.

Première : Steirischer Herbst, Graz, 12 October 1972.

Performers: Zagreb Radio/TV Chamber Orchestra, cond. Mario di Bonaventura.

Dedication: to Mario di Bonaventura (who commissioned the work)

Duration : circa 34 minutes overall [without omissions]

Publishers: Chester / PWM

Recordings: PNCD 043 (1974) Warsaw National Ch. Orch./Lutosławski
EMI 1C 165-03 231 Q (1978) Polish Chamber Orch./Lutosławski

List of Works

Les espaces du sommeil, for baritone and orchestra (1975)

[The Spaces of Sleep; nb. the title is given only in French]

3.3.3.3; 4.3.3.1; timp. perc. cel. pft.; harp; strings.

Poem : by Robert Desnos (1900-45) from *Corps et Biens* (Paris, 1930)

Première : Philharmonie, [West] Berlin, 12 April 1978.

Performers: Fischer-Dieskau, Berlin Phil.Orch., cond. the composer.

Dedication: to Dietrich Fischer-Dieskau

Duration : circa 15 minutes

Publishers: Chester / PWM

Recordings: CBS IM 42203 (1985) Shirley-Quirk, Los Angeles PO/Salonen

Philips 416 387-2 (1986) Fischer-Dieskau, Berlin PO/Lutosławski

Sacher Variation, for solo cello (1975)

Première : Zürich, 2 May 1976.

Performer : Mstislav Rostropovich.

Dedication: to Paul Sacher on his 70th birthday

Duration : circa 5 minutes

Publishers: Chester / PWM

Mi-Parti (1975-76)

3.3.3.3; 4.3.3.1; timp. perc. cel. pft.; harp; strings.

Première : Concertgebouw, Amsterdam, 22 October 1976.

Performers: Concertgebouw Orchestra, cond. the composer.

Commission: from the City of Amsterdam for the Concertgebouw Orchestra.

Duration : circa 15 minutes

Publishers: Chester / PWM

Recordings: PNCD 043 (1976) Polish Radio SO/Lutosławski

EMI 1C 165-03 236 Q (1978) Polish Radio SO/Lutosławski

Novelette (1978-79)

3.3.3.3; 4.3.3.1; timp. perc. cel. pft.; 2 harps; strings.

I, Announcement; II, First Event; III, Second Event;

IV, Third Event; V, Conclusion

Première : Washington D.C., 29 January 1980.

Performers: National Symphony Orch., Washington, cond. Rostropovich.

Dedication: for Mstislav Rostropovich and the National Symphony Orchestra,
Washington

Duration : circa 17½ minutes

Publishers: Chester / PWM

Recordings: PNCD 043 (1984 Warsaw Autumn) Junge Deutsche Phil./Holliger

DG 431 664-2 (1992) BBCSO/Lutosławski

Epitaph, for oboe and piano (1979)

Première : Wigmore Hall, London, 3 January 1980.

Performers: Janet Craxton, oboe; Ian Brown, piano.

Dedication: in memory of Alan Richardson

Duration : circa 5½ minutes

Publishers: Chester / PWM

Recording : PNCD 045 (1980 Warsaw Autumn) Holliger/Esztényi

List of Works

Double Concerto, for oboe, harp and chamber orchestra (1979-80)
Solo oboe, solo harp; 2 perc.; strings 7.2.2.1.
I, *Rapsodico*; II, *Dolente*; III, *Marciale e grottesco*
Première : Lucerne, 24 August 1980.
Performers: Heinz and Ursula Holliger, Collegium Musicum, cond. Sacher.
Dedication: to Paul Sacher
Commission: from Paul Sacher
Duration : circa 20 minutes
Publishers: Chester / PWM
Recording : Philips 416 817-2 (1986) Holligers/Bavarian RSO/Lutosławski

Grave, Metamorphoses for cello and piano (1981)
Première : The National Museum, Warsaw, 22 April 1981.
Performers: Roman Jabłoński, cello; Krystyna Borucińska, piano.
Dedication: *in memoriam* Stefan Jarociński (1912 - 8 May 1980)
Orchestrated: by the composer in 1982 for cello and thirteen strings (4.3.3.2.1.). First performance of this version at the Festival Estival in Paris on 26 August 1982, played by Mischa Maisky with the Polish Chamber Orchestra, conducted by Jerzy Maksymiuk.
Duration : circa 7 minutes
Publishers: Chester / PWM
Recording : PNCD 045 (1981 Warsaw Autumn) Jabłoński/Esztyényi

Mini-Overture, for brass ensemble (1982)
Horn, 2 trumpets, trombone, tuba.
Première : Lucerne Festival, Kunsthau, Lucerne, 11 March 1982.
Performers: Philip Jones Brass Ensemble.
Dedication: to Dr. Walter Strebli
Duration : circa 3 minutes
Publishers: Chester / PWM
Recording : Chandos ABRD 1190 Philip Jones Brass Ensemble

Symphony no. 3 (1981-3)
3.3.3.3; 4.4.4.1; timp. 3 perc. cel. pft. (2); 2 harps; strings.
Première : Chicago, 29 September 1983.
Performers: Chicago Symphony Orchestra, cond. Solti.
Dedication: for Sir Georg Solti and the Chicago Symphony Orchestra.
Commission: from the Chicago Symphony Orchestra.
Duration : circa 30 minutes
Publishers: Chester / PWM
Recordings: Philips 416 387-2 (1985) Berlin PO/Lutosławski
CBS IM 42203 (1985) Los Angeles PO/Salonen
PNCD 044 (1988) Polish Radio SO/Wit

Chain 1, for chamber ensemble (1983)
1(+picc/alto).1(+c.ing.).1.1; 1.1.1.0; perc.; cemb.; str.1.1.1.1.1.
Première : Queen Elizabeth Hall, London, 4 October 1983.
Performers: London Sinfonietta, cond. the composer.
Dedication: to Michael Vyner and the London Sinfonietta
Duration : circa 9 minutes
Publishers: Chester / PWM
Recording : PNCD 044 (1984 Warsaw Autumn) Junge Deutsche Phil./Holliger

List of Works

Partita, for violin and piano (1984)

1. *Allegro giusto*; 2. *Ad libitum*; 3. *Largo*; 4. *Ad libitum*; 5. *Presto*.

Première : Saint Paul, Minnesota, 18 January 1985.

Performers: Pinchas Zukerman, violin; Marc Neikrug, piano.

Orchestrated: by the composer in 1988 (Solo violin; 2.0.2.2; 0.2.2.0; timp. perc. cel. piano solo; strings). This version written for and dedicated to Anne-Sophie Mutter. First performed in Munich on 10 January 1990, played by Mutter with the Munich Philharmonic Orchestra, conducted by the composer (nb. her recording of August 1988 predates this performance).

Duration : circa 15 minutes

Publishers: Chester / PWM

Recordings: PNCD 045 (1988) Konstanty Kulka (vln), Eugeniusz Knapik (pft).

DG 423 696-2 (1988) Anne-Sophie Mutter/BBCSO/Lutosławski

Chain 2, Dialogue for violin and orchestra (1984-5)

Solo violin; 2.2.2.2; 0.2.2.0; timp. 2 perc. cel./pft.; str. (6.6.4.4.2.)

1. *Ad Libitum*; 2. *A Battuta*; 3. *Ad Libitum*;

4. *A Battuta - Ad libitum - A battuta*

Première : Zürich, 31 January 1986

Performers: Anne-Sophie Mutter, Collegium Musicum, cond. Paul Sacher

Dedication: to Paul Sacher

Commission: from Paul Sacher for the Collegium Musicum

Duration : circa 18 minutes

Publishers: Chester / PWM

Recordings: DG 423 696-2 (1988) Anne-Sophie Mutter/BBCSO/Lutosławski

PNCD 044 (1968 Warsaw Autumn) Jakowicz/Warsaw National PO/Kord

Chain 3, for orchestra (1986)

3.3.3.3; 4.3.3.1; timp. 4 perc. pft. cel.; 2 harps; strings.

Première : Davies Hall, San Francisco, 10 December 1986.

Performers: San Francisco Symphony Orchestra, cond. Composer.

Duration : circa 10 minutes

Publishers: Chester / PWM

Recordings: PNCD 044 (1988) Polish Radio SO/Lutosławski

DG 431 664-2 (1992) BBCSO/Lutosławski

Fanfare for Louisville (1986)

3.3.3.3; 4.4.3.1; timp. perc.

(On receiving the Grawemeyer Award at the University of Louisville)

Première : Louisville, USA, 19 September 1986

Performers: Louisville Orchestra, cond. Lawrence Leighton Smith.

Duration : circa 2 minutes

Publisher : Chester

Concerto for Piano and Orchestra (1987-8)

Solo piano: 3.3.3.3; 4.2.3.1; timp. perc.; harp; strings.

1. m.m.=110; 2. *Presto*, m.m.=160; 3. *Largo*, m.m.=40-45; 4. m.m.=c.84.

Première : Kleines Festspielhaus, Salzburg, 19 August 1988.

Performers: Krystian Zimerman, ORF Symphony Orch., cond. Composer.

Commission: from the Salzburg Festival

Duration : circa 27 minutes

Publishers: Chester / PWM

Recording : DG 431 664-2 (1992) Zimerman/BBCSO/Lutosławski

List of Works

Slides, for chamber ensemble (1988)

[*Przezrocza*; 'slides' in the sense of photographic transparencies]

1. 1. 1. 1; 1. 0. 0. 0; perc, pft; vl, vla, vlc, cb.

Première : Merkin Concert Hall, New York, 1 December 1988

Performers: Speculum Musicae

Dedication: for the 80th birthday of Elliott Carter [b. 11. Dec. 1908]

Duration : circa 4 minutes

Publishers: Chester / PWM

Interlude, for orchestra (1989)

1. 2. 2. 1; 0. 1. 1. 0; perc, cel, pft; harp; strings

(composed as a concert 'link' between Partita and Chain 2)

Première : Munich, 10 January 1990 (together with the orchestrated version of *Partita*, see above)

Performers: Munich Philharmonic Orchestra, cond. Composer

Dedication: to Paul Sacher

Commission: from Paul Sacher

Duration : circa 5 minutes

Publishers: Chester / PWM

Tarantella, for baritone and piano (1990)

Text : poem by Hilaire Belloc (1870-1953)

'Do you remember an inn, Miranda?'

Première : at a gala concert for 'CrusAid', London, 17 October 1990

Performers: David Wilson-Johnson (baritone)

Dedication: to Sheila MacCrindle

Duration : circa 2 minutes

Publishers: Chester / PWM

Chantefleurs et Chantefables (1989-90)

Soprano solo; 1. 1. 1. 1; 1. 1. 1. 0; perc, hp, pft; strings

1. La Belle-de-Nuit [Marvel of Peru]

2. La Sauterelle [Grasshopper]

3. La Véronique [Speedwell]

4. L'Églantine, l'Aubépine et la Glycine [Wild-rose, Hawthorn and Wistaria]

5. La Tortue [Tortoise]

6. La Rose [Rose]

7. L'Alligator [Alligator]

8. L'Angélique [Angelical]

9. La Papillon [Butterfly]

Texts : by Robert Desnos (1900-45), selected from the full collection of eighty *Chantefables et chantefleurs* (Paris, 1955)

Première : Henry Wood Promenade Concerts, London, 8 August 1991

Performers: Solveig Kringlebotn (soprano), BBCSO, cond. Lutosławski

Duration : circa 20 minutes

Publishers: Chester / PWM

Appendix B: Bibliography

The following bibliography includes analytical and critical sources that address in detail the issue of pitch organisation in Lutosławski's music, particularly in relation to his works composed since 1979. Reference is also made to some valuable background sources, on the composer's life and his family, that have not been mentioned in previous biographical studies. Concert reviews have not been included (except for one by the present author concerning Lutosławski's most recent composition, the *Chantefleurs et Chantefables*).

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