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OLIVIER MESSIAEN : STRUCTURAL ASPECTS OF
THE PIANOFORTE MUSIC

by

IAN C. MACDOUGALL

B. Mus. (Hons.)

A Thesis
presented for the Degree of
Master of Arts
to the
Faculty of Music
at the
University of Durham.

Durham, Glasgow & Dunblane

1st September, 1972.



Olivier Messiaen

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SUMMARY

A popular conception of the music of Olivier Messiaen is that it embraces visionary, theological and mystical themes within a panorama of Nature ranging from the diverse emotional experiences of human sensibility to the projection of freely-transformed bird-song as a natural means of musical communication. This thesis is an attempt to view these sentiments primarily from an objective and analytical standpoint: nevertheless, frequent recourse is made to various published writings concerning the composer, his attitudes and his works by such prominent critics as David Drew, André Hodeir and Claude Samuel, to name but three.

In view of the prolific corpus of Messiaen's output, the dissertation is primarily concerned with an enquiry into the structural components of selected pianoforte works (movements in the case of longer compositions) ranging from the 'Préludes' (1929) up to and including the 'Catalogue d'Oiseaux' (1956-1958). References to Messiaen's works written for other media are, however, freely incorporated where appropriate.

The method of presentation, which relies to a great extent on the discussion of musical examples, attempts to postulate a logical development in the composer's musical language whilst illuminating, in a complimentary way, his various thought processes.

This thesis has been composed solely by the author and does not contain or incorporate any material which has been accepted for the award of any other degree in any other University. The present dissertation embodies the results of research performed by the author for the degree of Master in Arts.

Ian C. Macdougall

Ian C. Macdougall

1st September, 1972.

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PREFACE

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The present study of certain aspects of Messiaen's creative development has been prompted by two important considerations. The first of these is concerned with the general dearth of information about a composer whose seminal influence in terms of mainstream developments in twentieth century composition is undeniable, indeed widely acknowledged, and secondly, where such writings do exist, there is a tendency to deal in the main with issues concerning Messiaen's aesthetic, if he admits one at all, (1) rather than affording any great insight to the many diverse techniques which form an integral part of his creative process. I would, however, cite the composer's own 'Technique de mon langage musical' (1944) (2) and David Drew's splendid 'Provisional Study' (1954) (3) as the obvious exceptions to this, but in themselves they constitute only a relatively small part of the field, Messiaen's book being somewhat dated and Drew's assessment more a general survey of the works and a suggested placing than an analytical critique. I am nevertheless deeply indebted to both these references as they must inevitably serve as a basis for any thesis which seeks to promote further detailed study of this composer.

In a highly stimulating series of conversations (4), Messiaen declares a marked preference for the piano above any other instrument

stylized birdsongs, assiduously gathered on countless journeys to the countryside and representing, as David Drew points out, (6) a "quasi - musical expression of emotion in its purest form."

The important factors of time and space have required me to limit this treatise to a study of Messiaen's solo pianoforte music although references to other works are freely incorporated where desirable. I have further chosen to analyse works (movements in the case of larger compositions) with regard to their particular relevance in Messiaen's development and this, to some extent, has precluded the inclusion of every available score.

I take the liberty of assuming that the reader is well acquainted with Messiaen's own writings as these are indispensable to the full understanding of a work of this nature, and it may seem unnecessary to add that the knowledge of a number of representative scores would be a considerable asset. I have, however, thought it wise to devote the first chapter of the thesis to a general introduction to Messiaen's style, creed and musical language, this being intended to form a brief resumé of the several writings which have been published and which I hope will serve as an interesting and stimulating point of departure.

CHAPTER I

PRELIMINARY SURVEY : AN INTRODUCTION TO MESSIAEN'S
STYLE, CREED AND MUSICAL LANGUAGE.

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PRELIMINARY SURVEY : AN INTRODUCTION TO MESSIAEN'S STYLE, CREED AND MUSICAL LANGUAGE.

Olivier Messiaen was born in Avignon in 1908, and is perhaps best known today as a highly original, influential, and undeniably controversial figure in the world of contemporary music. He is also a nature lover, a man of strong, idealised religious persuasion and the teacher of many of the present members of the European 'avant garde', notably including composers such as Pierre Boulez, Karlheinz Stockhausen, Michel Fano and Iannis Xenakis. Messiaen is undoubtedly the most important French composer to emerge since Debussy, and although there can be no question about his contributions as an innovator, especially in the domains of rhythm and timbre, he remains essentially a creative personality with a strong regard for tradition.

In 1947, Messiaen was appointed Professor of Aesthetics, Rhythmic Studies and Analysis at the Paris Conservatoire, where he still teaches, and it is thus not entirely uncharacteristic, I think, that he is by no means reticent in talking about his music or in communicating to the sympathetic listener the many influences which have affected him as a composer. His interests, which are many and varied, have included the study of Greek metre and

Hindu rhythm, an amplification of the 'Tristan' legend and the themes of love and of death, the Passion of Christ, the major festivals of the Christian church and the songs of birds together with the writings of his favourite authors, Ernest Hello, Dom Columbia Marmion and Paul Reverdy. (7)

"I have tried to be a Christian musician and to sing my faith, but without ever reaching that goal. Without doubt because I was not worthy to do so (this is said without false humility.) Pure music, profane music, above all theological music (not mystical, as most of my listeners think) alternate through my works. I do not know whether I follow any 'aesthetic' pattern, but I can say that my preferences are for a music that glistens, that is refined, and even voluptuous, but definitely not sensual.' Music that sings (all honour to melody and melodic phrase.) Music which has the stamp of a master, an unknown perfume, a never-sleeping bird. A music that expresses the end of time, ubiquity, the blessed saints, the divine and supernatural mysteries. A 'theological rainbow.' When, commenting on my 'Vingt Regards sur l'Enfant-Jésus', I said as much in the Salle Gaveau, the critics ridiculed me. Justifiably perhaps? In religious matters a good deed is worth more than a symphony, a pure life more than a work of art.' (8)

As Routh points out, "his creative thought is entirely conditioned by a poetic Catholicism. That is to say he first interprets

theologically a visionary or mystical theme ; he then expresses this poetically in all its different aspects, so as to give a series of ideas or pictures, which will make a framework for the movements or sections of a composition." (9) Perhaps one of his finest examples of this procedure is the enormous piano work. 'Vingt Regards sur l'Enfant-Jésus', literally 'twenty gazes on the child Jesus', a composition wherein the many facets of the Nativity are set forth in a kaleidoscope of musical imagery. Cyclic themes are involved - the 'theme of God', the 'theme of the star and the cross', the 'theme of chords' and so on, but apart from their obvious musical function they tend to reflect the immutable and unchanging reality of an eternal truth. What Messiaen calls a theme is rarely capable of undergoing anything like a radical musical transformation such as one, for example, would expect to find in Wagnerian leitmotif, but exists rather as an entity which allows of no development. As Malcolm Williamson has pointed out, "it is an unalterable object, at once embryonic, mature and ultimate : the idea and its shaping in one creative stroke, the utter antithesis of Sibelius' conception of cellular development. It follows that we can never expect from Messiaen bridge passages, development sections, any of the traditional devices for propelling the music from point to point, no softening of the edges of musical paragraphs, but rather the layout, side by side, of blocks of sound, beautiful and terrifying." (10)

This principle of juxtaposition or superimposition of unrelated

material forms an integral part of Messiaen's technique, the success depending to a great extent on effective contrasts, asymmetrical phrase lengths and above all on the proportional relationship of the parts to the whole, at once reflective of the literalness and truth of nature.

Whilst Messiaen was still a pupil at the Conservatoire, he was introduced to a study of ancient Greek metre and the forms of plainchant by his professors, Marcel Dupré and Maurice Emmanuel. It remains difficult to assess the extent of the influence of these men on Messiaen's subsequent development, but Stuart Waumsley suggests that Emmanuel played a part of not inconsiderable importance. "Messiaen's interest in Hindu music, together with plainsong, bird song and occasionally, Greek rhythm, is anticipated in the work of one of his Conservatoire teachers, Maurice Emmanuel, who not only made extensive researches in the fields of plainsong and ancient Greek music, but also wrote a piano sonatina based on bird song and one based on Hindu modes." (11) Messiaen's fascination for these studies was to develop and play a crucial part in his subsequent re-appraisal of the nature of rhythm - a field in which he is assuredly one of the greatest innovators of all time.

Pierre Boulez writes "we are indebted to (Messiaen) for his attempt to set up a dialectic of duration by experimenting with heirarchies of note values (variable contrasts between

relatively short and relatively long time values, which may in turn be either odd or even), a dialectic which in itself provides a means of musical development when it acts upon the structures of rhythmic neumes." (12)

This deliberation in the relationship between time values was aided by a long and exacting study of Indian rhythms or 'deçî-tâlas', literally 'rhythms of different provinces', and Messiaen was greatly assisted in this work by a treatise of the 13th century theorist, Çârngadeva, known as the 'Samgîtaratnâkara' or 'Ocean of Music' which deals in a particular chapter with the deçî-tâlas, numbering them at 120. * It was from these researches that Messiaen was drawn towards a wholly new conception of rhythm, and one which embraces a number of fundamental principles which have permeated his musical thinking up to the present time. By far the most important of these is the 'non-retrograde' rhythm which can be simply expressed as a rhythmic pattern which creates a form of palindrome thus :-



* Messiaen obtained his knowledge of the deçî-tâlas' in the first place from Lavignac's "Encyclopedie de la musique" - (See note 75) - and not directly from Çârngadeva's treatise.

Messiaen justifies an employment of these rhythms simply by saying that they comprise a reflection of nature, and he points out that the Hindus were the first to order and use this principle both rhythmically and musically. (13)

"I have made a long study of the 120 deçî-tâlas which are gathered in a rather disorderly way by Çârngadeva, and have eventually discovered the different rhythmic rules surrounding them and also the religious symbols and the philosophy by which they were contained. The most important element is the existence of particular rhythms which I have called 'non-retrograde' rhythms. It's extraordinary to learn that the Hindus were the first to order and use both rhythmically and musically this principle of non-retrograde unit which we so frequently see around us."

"The principal application was for a long time in the decorative arts (architecture, tapestry, stained-glass work and flower bed displays) where symmetrically opposed patterns are ordered around a free centre. This order can be found in the veins of leaves, in butterfly wings, in the human face and in old forms of wizardry. There are two groups of sound durations, reversible, one with regard to the other, framing a central unit value and coming together in two groups. If we read the rhythm from right to left or from left to right, the sequence of the durations remains the same. It is an absolutely closed rhythm." (14)

In addition, Messiaen's study of these *deçî-tâlas* revealed a certain affinity with rhythms built upon primary numbers and which consequently led towards asymmetric phrase divisions and, so to speak, unexpected note-lengths. These often involved lengthened or shortened note values and serve as the 'raison d'être' for what Messiaen calls the 'added-value' or 'short-value, which is added to any rhythm whatsoever, whether by a note, or by a rest, or by the dot.' (15)



(added value at the star *)

These two concepts, 'non retrograde rhythm' on the one hand and 'added time value' on the other, do not, at first glance seem very compatible, as André Hodeir points out, "the former being the ideal expression of a symmetrical order which the latter seems destined to combat." (16) Messiaen makes no attempt to reconcile these apparently conflicting concepts and is merely content to add (17), "the same charm, one somewhat perverse, is found in these rhythms of supplement which make the rhythms limp deliciously..."

However contradictory Messiaen's theoretical ordering of these

structural devices may seem, I think it not inappropriate to postulate Stravinsky's subtle parallel in other arts, and because it appears so apposite to our argument, I quote it in full :

"Mondrian's 'Blue Façade', (composition 9, 1914) is a nearer example of what I mean. It is composed of elements that tend to symmetry but in fact avoids symmetry in subtle parallelisms. Whether or not the suggestion of symmetry is avoidable in the art of architecture, whether it is natural to architecture, I do not know. However, painters who paint architectural subject matter and borrow architectural designs are often guilty of it. And only the master musicians have managed to avoid it in periods whose architecture has embodied aesthetic idealisms, i. e. when architecture was symmetry and symmetry was confused with form itself. Of all the musicians of his age Haydn was the most aware, I think, that to be perfectly symmetrical is to be perfectly dead. We are some of us still divided by an illusory compulsion towards 'classical' symmetry, on the one hand, and by the desire to compose as purely non-symmetrically as the Incas, on the other." (18)

An adoption of this reasoning in our particular context might possibly provide a justification for certain of Messiaen's procedures, but we shall see, in the course of our analysis of the music, that in practice the effect and function of the use of the added value is

often considerably weakened, especially when incorporated in a rhythmic structure such as the ostinato, or 'rhythmic pedal point', as Messiaen calls it. (19)

Of greater importance than these considerations, however, is Messiaen's expansion of the threefold group, upbeat-accent-termination, and in this connection he has taken his cue from a perfect understanding of the rhythmic principles underlying Mozart's treatment of masculine and feminine note groups, and, in addition, a thorough knowledge of the undulations of plainsong as expounded by Dom Mocquereau, one of the greatest theorists on plainchant. Messiaen's contribution resulted in an enlargement of the tension-relaxation principle and although we will study its application in a specific context, + the reader is referred to Messiaen's 'Technique de mon langage musical' for a more complete survey than space will permit here. Finally, in the piano piece, 'Mode de valeurs et d'intensités', (1949) he invented modes of duration, attack, and intensity which foreshadowed the later interest amongst composers of a serial process which could equally apply to all parameters. In this connection one can regard Messiaen's score as the precursor of compositions such as Stockhausen's 'Zeitmasse', or, if one adopts a viewpoint centred on choice of timbre and colour,

+ See Chapter 4

there is the obvious affinity with 'Le Marteau sans Maître', written by Pierre Boulez in 1954.

Thus, Indian music and plainsong are the two most important factors that we have to consider when dealing with the music of Olivier Messiaen, and David Drew, in his absorbing 'Provisional Study', draws a comparison between these influences which I feel is worthy of inclusion here because it not only serves to crystalize an important concept but also provides the means of integrating a further consideration namely Messiaen's free translation of birdsong as one of the most natural forms of musical expression.

"The music of the Ambrosian and Gregorian orders, heartfelt as it is, seems to belong to an essentially Apollonian mode of thought. It is poised and uninvolved. Indian music, on the other hand, is wholly Dionysian. Its aim is to induce in the listener that state which the Indians describe as liberation, and which we would call ecstasy. 'Rāga is what charms', writes one of the classical theoreticians. + It would be obvious that Messiaen's music belongs to the same aesthetic, even if the composer himself had not written (of his ideal listener), "être séduit, tel sera son unique désir." (20)

+ 'Of course the word 'charm' here defines an occult rather than an emotional force.' (Drew).

It can be clearly seen that Drew's conclusion at this point affords an interesting comparison with the composer's own remarks, quoted earlier in this chapter. Messiaen's choice of words with which he seeks to define his art in terms of 'non sensual', 'pure, theological music', would appear to give rise to yet a further apparent contradiction of terminology.

Drew continues :

"Messiaen thus has a closer spiritual affinity with the music of North India than with mediaeval plainsong. Nevertheless, his ties with the latter are strong. But what relationship, one might ask, does birdsong bear to all this? The answer embraces both aesthetic and technical factors. Bird song is a quasi-musical expression of emotion in its purest form. Messiaen refers to birds as 'les petites serviteurs de l'immaterielle joie', and as an amateur ornithologist he will know that they express their joy (or sorrow) in a language as explicitly meaningful as that provided by the Indian 'rāgas' and 'rāginas'. Certain principles of structure, governing rise and fall, accent and repetition, appeal particularly to Messiaen, and the 'line of a complex bird song is such that it admits of a highly chromatic stylization. Bird song is often microtonal, and Messiaen transforms it freely, sometimes even involving it in implied harmony.

"It is futile to copy nature slavishly", he observes, and it is obvious to the ear that his finest essays in the 'style oiseau', such as the one in the sixth movement of 'Turangalîla', are in the nature of fantasias or variations on a brief theme taken from nature. The 'style oiseau' like the 'style hindoue', satisfies Messiaen's desire for the ornamental + and at the same time allows him to avoid any harmonic implications, if he so wishes." (21)

It must be emphasised, however, that Messiaen is not merely some sort of creative Ludwig Koch, recording birdsong, playing it back and making music out of it. Rather, as Stanley Sadie has written, "Messiaen is using these songs as a point of imaginative departure, and the particular direction of the departure is governed by the bird's plumage, its habitats, its flight, and the whole concatenation of circumstances under which he has encountered it. That is why each section of the 'Catalogue d'Oiseaux', for example, deals not only with a particular bird but also with a particular

+ 'A melody without ornament is like a night without moon, a river without water, a vine without flower, or a woman without jewels'.

These words from the Nāṭya Shāstra, a great theoretical work on Indian music, are quoted by Alain Daniélou.' (Drew)

region which it inhabits, taking in the other birdsongs to be heard in that region, the landscapes, and the weather. Messiaen's canvas is the whole of creation." (22) This last apparently extravagant point is of the utmost importance to a potential analyst because a study of the scores reveals a unit of conception which transcends formal organization in the ordinary sense and tends to render the music singularly resistant to paper analysis. As Roger Smalley puts it, the music becomes the "product of a continuing thought process which produces a series of images related, not by a background of musical logic which can be precisely demonstrated as in Beethoven or Schönberg, but simply by the fact that it was generated by that same thought process." (23)

Sufficient has now been said with regard to two primary characteristics of the music of Messiaen- namely rhythmic preoccupation and the use of freely adapted birdsong as a powerful agent of melodic expression. This however, is in no way to say or suggest that his melodic invention is by any means wholly governed by a consideration of birdsong, as we shall observe in the course of our analysis : indeed many of his finest inspirations, melodically, are the direct outcome of a harmonic system, largely of his own devising, and of which we shall speak presently. In addition, the contours of Hindu rāgas, plainchant, folk song and a close study of intervals, governed by harmonic relationships, all play

an important part. Ample information concerning this is contained in the 'Technique de mon langage musical', especially Chapters 8, 9, 10 and 11, and to which the interested reader is referred for full details. Let it suffice at this point to emphasise the degree of importance which Messiaen (24) attaches to melody.

"Knowing that music is a language, we shall seek at first to make melody 'speak'. The melody is the point of departure. May it remain sovereign! And whatever may be the complexities of our rhythms and our harmonies, they shall not draw it along in their wake, but, on the contrary, shall obey it as faithful servants : the harmony especially shall always remain 'true', which exists in a latent state in the melody, and has always been the outcome of it."

Messiaen's harmonic language has remained, together with rhythmic and melodic considerations, a cornerstone of his technique and in the course of this study I shall make constant reference to its development, adding that despite the composer's interest in serial techniques and note permutations in comparatively late works like 'Livre d'Orgue' (1951), or in the 'Quatre études de rythme' (1949), he has not been able to finally overthrow the basis of a harmonic system evolved whilst still a pupil at the Conservatoire. Admittedly this 'system' has been highly developed between 1929, the date of the 'Préludes pour piano', and the monumental 'Catalogue d'Oiseaux'

(1956/58), but in essence it is the hallmark of almost every one of his compositions. I refer to the 'Modes of limited transposition', (the title is Messiaen's own), which, as musical scales of his own devising, create a music which is consistently modal or polymodal. These scales are in no way related to the great modal systems of ancient Greece or the middle ages, but are chromatic in nature, being founded on the twelve - note scale of our tempered system. The modes, of which there are seven in all, are formed by a number of note groups, the last note of one being also the first note of the next. These modes or note groups share a common relationship in that the notes within each group determine the nature of the mode of which they form a component part, and are further arranged in an interval sequence which comprises a number of interval transpositions. Each entire mode may only be transposed a certain number of times, hence the title 'limited-transposition', after which it returns, enharmonically, to the same notes as the prime form. For convenience, a table of these modes together with their possible transpositions is given in Appendix I although we shall find in practice that Messiaen tends to adopt marked preferences for the particular qualities of one mode as opposed to another. For example, the first mode is rarely used, + whereas the characteristic harmonies and melodic or cadential formulae associated

+ The 'whole-tone' scale, which has perhaps already been fully exploited.

with the second mode tend to occur with almost disconcerting frequency in his earliest works, such as in 'L'Ascension', up to about 1948. The third mode results in a scale corresponding to the superimposition of three augmented fifth triads and it may be transposed three times. ++ Finally, Messiaen realizes the existence of four other modes, centered round the interval of the augmented fourth and these complete the series of chromatic modes which he uses. It is not possible to discover others which are governed by the same structural laws.

"Messiaen uses the last four modes with less frequency than the others, partly because they are not so rich in musical potentialities, and partly because he prefers the limited field imposed by modes with fewer transpositions. The attraction of this limitation he describes as 'the charm of impossibilities.' As we shall see, this concept invades his rhythmic as well as his harmonic thinking." (26)

"Already we find ourselves dealing with matters on the borderline between music and metaphysics. Let us therefore retreat to a point from which we can examine the purely musical effect of these modes. The composer's own words are here particularly

++ Messiaen says (25) it may be 'transposed four times', but I prefer to consider the mode as having a prime form with three possible transpositions. Throughout, I adopt the logical approach of considering Messiaen's 'first transposition' as the prime form of the mode.

valuable. The modes, he writes, 'exist in an atmosphere of several tonalities at once, without polytonality, the composer being at liberty either to give predominance to one tonality, or to leave the tonal feeling fluid.' (27)

"In practice, Messiaen's use of these modes has a more radical outcome than this analysis might lead one to suppose. Granted, in all but his most recent works, the existence of a tonal centre is very apparent. But the feeling of a dominant which is a 'sine qua non' of tonality, is often absent from Messiaen's music.

Admittedly there is a persistent emphasis on the degree a diminished fifth away from the tonic or final. But we cannot regard this as a substitute dominant, as we sometimes can with Scriabin and Bartok, for it has no true cadential function. The root progressions Vb-I, or I-Vb are no more to be found than the traditional half close or full close ; and where a melodic part moves a diminished fifth to the tonic at cadential points, it is really no more than a decoration of a tonic already established." (28)

"Since Messiaen thus systematically undermines any cadential impulse, the music has no tendency to progress, in the conventional sense. The tonic is like a ring to which the harmony is attached. The modes are like an immensely long rope that allow it to rove across a wide field, whilst all the time imposing a certain restraint,

(obviously the modes allow a great variety of chromatic chords that may be clearly related to one tonal pole.) The composer is thus able to juxtapose chords that have only the remotest diatonic relationship to one another, with the result that whilst the music is externally in a state of what one might call tonal catalepsy, internally it is in a state of constant motion." Drew goes on to draw the paradoxical conclusion that if we regard the tonality as being at once ubiquitous and unchanging we have arrived at a concept which could well serve as an allegory for the Divine Order. (29)

The analogous relationship between the 'modes of limited transposition' on the one hand and 'non-retrogradable rhythms' on the other is a very simple one, according to Messiaen, (30) "the modes realizing vertically (transposition) what the non-retrograde rhythms accomplish horizontally, (retrogradation)." This simple definition enables us to view Messiaen's overall style as one possessing a certain coherent and logical aesthetic. However, it is important to point out that the composer's principal concern is that the listener shall be charmed and that "in spite of himself he will submit to the strange charm of impossibilities ; a certain effect of tonal ubiquity in the non-transpositions, a certain unity of movement (where beginning and end are confused because identical) in non-retrogradations, all things which will lead him progressively to that sort of theological rainbow which the musical language, of which we seek edification and theory attempts to be." (31)

Messiaen's music thus requires an extraordinary intensity of response : as Armfelt comments, "it has the quality of statement, rather than an argument or question and is a statement expressed emphatically and intensely. The critical listener is disturbed by this. He wants to question the validity of the statement : he regards music as an argument. But Messiaen's music seems not to allow this : it demands all or nothing. Indeed it seems to demand all. That is why it has often provided such violent reactions and many listeners, while admitting the expression to be forceful, have found it hard to cope with a music so extreme in its emotive demands." (32)

Remarkably, a characteristic effect of Messiaen's music is to induce in the listener a trance-like state of heightened response, rather akin to that of mild hypnosis, and a state "wherein he experiences simultaneously several different rates of time flow. This is sometimes achieved, of course, by superimposing several rhythms. More amazingly, it is also often achieved by the juxtaposition of contrasting rhythms where one's sense of the first rhythm continues to be effective long after it has been succeeded by another. Paradoxically, the result of all this is to make the listener feel outside time, so that all the movement seems but a complex decoration of an eternal stillness behind all things." (33)

This awareness of an 'eternal stillness' is further enhanced by an important factor which might be described as 'monotonicity' in Messiaen's music and as such be expressed in harmonic terms as the progression I - I, since the mode colour dominates, and despite the fact that foreign tonalities will often emerge, quite by chance, in the modal interplay. Thus, as Drew (34) puts it, "when the structure is scarcely more complex than that afforded by two book ends enclosing a number of uniformly bound books, everything depends on the intrinsic interest of the prolongations their figuration, sonority, sequence and so on." This helps to explain why a great deal of the interest in Messiaen's music is aroused chord by chord, and to some extent accounts for his considerable preoccupation with chord-building, an aspect of his harmonic vocabulary dictated by colouristic considerations rather than structural ones and which plays an integral part, quite naturally, in the pianoforte music. I say 'colouristic' considerations because Messiaen may suffer from what the psychologist calls visual audio synaesthesia, a mild form of psychological disorder which permits a visual stimulus, here colour, to activate an auditory sense organ, thereby forming an arbitrary association between colour and sound. Hence, Messiaen associates with special chords what he refers to (35) as 'multi-colour work', or 'the effect of a stained glass window.' His description of 'natural harmony' as set out in 'Technique de mon langage musical' will help to clarify this last statement and for

this reason is quoted in full :

"My secret desire of enchanted gorgeousness in harmony has pushed me towards those swords of fire, those sudden stars, those flows of orange-blue lavas, those plants of turquoise, those violet shades, those garnets of long-haired arborescence those wheelings of sounds and colours in a jumble of rainbows of which I have spoken with love in the Preface to my 'Quatuor pour la fin du temps'; such a gushing out of chords should necessarily be filtered; it is the sacred instinct of the natural and true harmony which, alone, can so change itself." (36)

Very often, the colours of which Messiaen speaks are expressed musically by polymodal block-chord progressions and this procedure plays an important part in the 'Catalogue d'Oiseaux', where the colours of the dawn, sunrise and sunset are all incorporated into the score with a meticulous regard for detail and authenticity. More recently, in the 'Couleurs de la Cité Céleste', (1963) Messiaen has composed a work which combines this expression of colour with bird song, Hindu rhythm and permutational devices, directly inspired by writings from the Book of Revelation and forming a synthesis of his compositional processes and interests up to this time.

Of this composition, Messiaen writes (37);

"The form of the piece depends entirely on colours. The themes, melodic or rhythmic, the complexes of sounds and timbres evolve like colours. In this perpetually renewed variations can be found (by analogy) colours that are warm and cold, complimentary colours that influence their neighbours, shading down to white, or toned down by black. Plainsong Alleluias, Greek and Hindu rhythms, permutations of note values, the bird-song of different countries : all these accumulated materials are placed at the service of colour and of the combinations of sounds that assume and call out for it."

"The sound colours, in their turn, are a symbol of the Celestial City and of Him who dwells there. Above all time, above all place, in a light without light, in a night without night ... That which the Apocalypse, still more terrifying in its humility than in its visions of glory, describes only in a blaze of colours ... To the song of two New Zealand birds (the Tui Bird and the Bell Bird) is opposed 'the Abyss', with its pedal notes for the trombones and the resonance of tam-tams. To the cries of the Brazilian Araçonga is opposed 'the coloured ecstasy' of pedal-points : Sard red, red flecked with blue, orange, gold, milky-white-emerald green, amethyst violet, purple violet and blue violet..... The work ending no differently from the way it began, but turning on itself like a rose-window of flamboyant and invisible colours."

Messiaen's conception of the composer's art is thus indeed a rather strange one, the more so when we attempt to form a critical appraisal of his works based on purely musical considerations : considerations which are without recourse to the peculiar mystical implications which seem to imbue both preface and page of almost all his scores. Evidently this is a difficult question and one which cannot be adequately resolved in terms of a simple paragraph. I shall therefore in the course of this treatise attempt to show chronological development of Messiaen's musical language as reflected in the pianoforte works and to show that the consistency of the many aspects of his compositional techniques transcends the manifold expression of a highly subjective imagery. This is in no way to deny the existence of those powerful extra-musical stimuli which are integral to Messiaen's creative process : rather, it is the musical transformation of these sentiments which I shall attempt to illuminate.

CHAPTER 2

THE 'PRELUDES' OF 1929 AND THEIR IMPORTANCE
IN A CONTINUING LINE OF DEVELOPMENT.

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THE 'PRELUDES' OF 1929 AND THEIR IMPORTANCE IN A CONTINUING LINE OF DEVELOPMENT

Messiaen composed his eight 'Préludes' for piano in 1929 while he was still a pupil at the conservatoire, and they were the first of his works to be published - at the instigation of Dukas - appearing in an edition of 500 copies in 1930. These 'Préludes' certainly affirm many important aspects of Messiaen's personality whilst a superficial glance at the score seems to be reminiscent of the subtle style of Debussy. This is perhaps most evident in the titles, + and Goléa points out the striking absence of any allusion towards mysticism, theology or religion whatever. (38)

Debussy placed his titles at the end of his 'Préludes' instead of at the beginning, thereby indicating that the 'programmatic' element is in a suggestive state. Roger Smalley (39) postulates that the Messiaen 'Préludes' exhibit similar features in that they are orientated towards 'programmatic' music in that the exact relationship between 'programme' and music is indefinite. The music, so to speak, "takes off" from the basic 'programmatic' idea but does not follow it in any specific way, though this

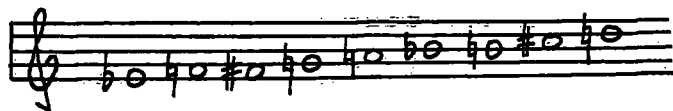
+ 1 La Colombe : 2 Chant d'extase dans un paysage triste :
 3 Le Nombre léger : 4 Instants défunts : 5 Les sons
 impalpables du rêve : 6 Cloches d'angoisse et larmes
 d'adieu : 7 Plainte calme : 8 Un reflet dans le vent.

'programme' illumines the whole piece. This observation is a general one and can be applied to a great deal of Messiaen's music, especially, for example in the 'Vingt Regards', each movement of which serves as an excellent illustration of this principle.

Drew (40) points out that the Messiaen 'Préludes' are the legitimate off-spring of the piano music of Debussy and Ravel "and that the ancestry can be detected, not in the ideas themselves, but in the sonorities (which are often Debussyan) and the figurations (which tend to be Ravellian). Occasionally, Messiaen will adopt a procedure alien to both composers (Debussy and Ravel), while still operating within their familiar fields of expression. The canonic working in the second and sixth preludes affords a notable example of this. At other times the ideas and the syntax are entirely personal, as for example in the opening of the fifth prelude, 'Les sons impalpables du rêve', which is incidentally the only instance of polymodal ostinato in Messiaen's early works anticipating by some years what is to become a common structural principle."

Whilst admitting that his titles are certainly reminiscent of Debussy's, Messiaen points out (41) that the music is distinguished by the use of his modes of limited transposition, which are already very characteristic and the fact that there are obvious formal

EXAMPLE 1a



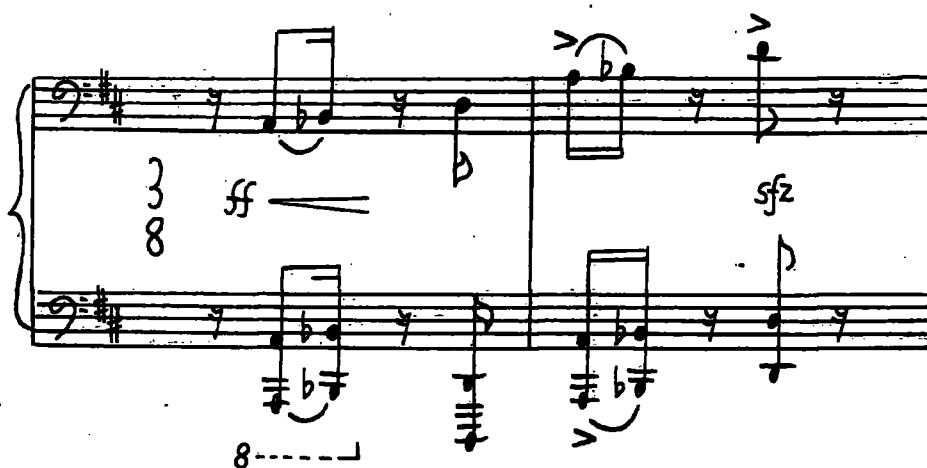
Mode 3, third transposition

EXAMPLE 1b



Introductory material

EXAMPLE 1c



First subject

differences - for example the final prelude, 'Un reflet dans le vent' follows the principles of sonata form. Finally from a rhythmic point of view, Messiaen concedes that he was very far from the unique flexibility achieved by Debussy.

I shall first consider the final prelude of the set, 'Un reflet dans le vent', as it perhaps affords the best example of Messiaen's attempt to mould his new-found language to the formal and tonal requirements of traditional sonata form.

'Un reflet dans le vent' is the most extended prelude in the collection and opens with a short figuration, perhaps of programmatic significance, which leads directly to the first subject, almost reminiscent of late Beethoven in its fragmentary, motivic-like construction. Both the introduction and the first subject are made up from Messiaen's third mode using the notes available in its third transposition. (Examples 1a, and 1c - opposite).

The 'bridge-passage' between first and second subjects employs

piano.

technique of Messiaen's 'harmonic litanies'

EXAMPLE 2

Organ

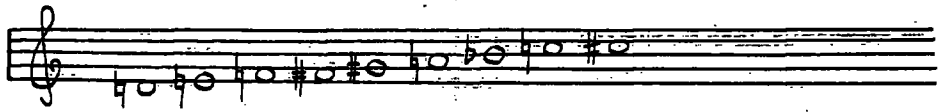
litany groups

'Les Mages'

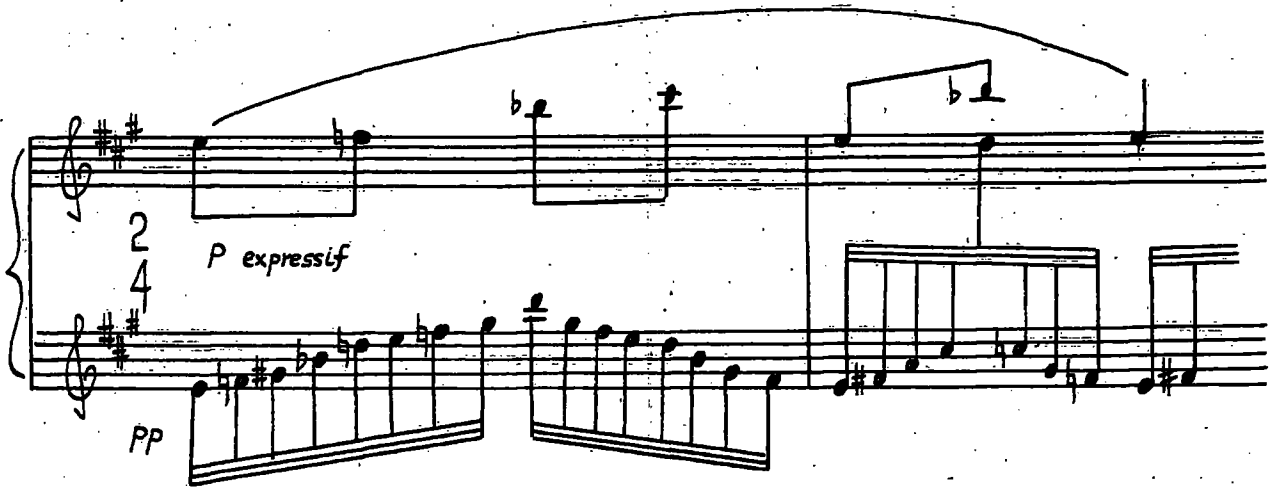
EXAMPLE 3

a device which Messiaen has named 'harmonic litany' (42) or simply a melodic fragment of two or several notes repeated with different harmonizations. (Example 2) This is an important device of Messiaen's which we shall make further reference to, but it is of interest to note that it forms an integral part of the structure in the organ piece, 'Les Mages', from the cycle, 'La Nativité du Seigneur'. (Example 3)

The second subject is an ideal complement to the first in its lyrical, expansive and song-like melodic contour which Messiaen claims (43) has its origins in Grieg's 'Chanson de Solveig' from 'Peer Gynt'. Whilst there is a vague resemblance between the two, Grieg's melody does not contain Messiaen's characteristic



Mode 3, 2nd transposition



second subject

EXAMPLE 4

GRIEG 'Chanson de Solveig'



EXAMPLE 4a

RECHANT
Un peu vit

MESSIAEN 'Cinq Rechants'



trou - ba - dour Vi ————— viane. Y — seult

EXAMPLE 5

augmented fourth interval and indeed not all the other intervals correspond either. (Example 4a) This affords an important conclusion concerning the composer's melodic invention : namely that Messiaen's self-confessed indebtedness to a given composer, style or form is of the most rudimentary nature. The 'inspiration' which these influences generate forms a point of departure which, interpreted in a highly subjective way, motivates a creative process the end product of which acknowledges only the most cursory allegiance to its pre-existent source. Certainly, from an objective and purely musical viewpoint it is undeniable that the two examples share little in common. The harmonic colour of the Grieg extract is stronger and more clearly defined than that which Messiaen's implies. (Example 4) Significantly, however, Messiaen's rising and falling melodic contour framed by the interval of the augmented fourth engineers a greater impulse in the line and is entirely typical of his invention, appearing in a similar form in many of his later works. I quote but one example from the third movement of the 'Cinq Rechants' (1949) to illustrate this. (Example 5).

The second subject is drawn from Mode 3, this time in its second transposition, and it is thus evident that the change of transposition is motivated by the traditional need for a tonal shift at this point. Thus if we can

'Un reflet dans le vent'

A musical score for a piece titled 'Un reflet dans le vent'. It consists of two staves, likely for piano. The key signature has two sharps (F# and C#). The music features a melody in the upper staff with accents (>) and a accompaniment in the lower staff. The melody includes some chromaticism and rests.

A single musical staff showing a sequence of notes: G#4, A4, B4, C5, B4, A4, G#4, F#4, E4, D4. This represents the 1st transposition of mode 2.

mode 2, 1st transposition

A single musical staff showing a sequence of notes: G4, A4, B4, C5, B4, A4, G#4, F#4, E4, D4. This represents the 2nd transposition of mode 2.

mode 2, 2nd transposition

EXAMPLE 6

'Dieu parmi nous'

Organ

A musical score for a piece titled 'Dieu parmi nous', labeled 'Organ'. It consists of two staves. The key signature has two sharps (F# and C#). The music features a melody in the upper staff and a accompaniment in the lower staff. The melody includes some chromaticism and rests.

mode 2, 2nd transpositions

mode 2, prime form

EXAMPLE 7

A single musical staff showing a sequence of notes: G#4, A4, B4, C5, B4, A4, G#4, F#4, E4, D4. This represents the 2nd transposition of mode 2.

A single musical staff showing a sequence of notes: G4, A4, B4, C5, B4, A4, G#4, F#4, E4, D4. This represents the prime form of mode 2.

EXAMPLE 7a

regard the mode as the equivalent of the major tonality represented scale-wise, the transposition could be viewed as a quasi-dominant. It is evidently at any rate a conscious procedure and I shall attempt to evaluate the musical effect of this at a later stage in the chapter.

Some of the figurations are worth noting : for example, at the top of page 44 of the score there is a passage which I would cite as the 'nucleus' of a later development in the organ composition, 'Dieu parmi nous' from the cycle 'La Nativité du Seigneur'. Notice, incidentally, that both these passages are written in the second mode of limited transpositions, a mode which, as I pointed out in chapter I, Messiaen chooses to associate certain characteristic harmonies and certain melodic or cadential formulae. (Examples 6 and 7) Notice especially in example 7, the much greater rhythmic flexibility and the avoidance of a sequential melodic pattern which tends to be mechanical in example 6. Both extracts are governed harmonically, however, by the stepwise pattern of the augmented 4th. (Example 7a)

The development section is exclusively concerned with first

3/8

ff *>* *sfz* *f* *Ped.*

1st subject

EXAMPLE 8

3/8

sfz

EXAMPLE 9

f *mf* *p*

EXAMPLE 10

subject development, (Example 8) the motive being subsequently harmonized in triads, (Example 9) and a fragment is repeated to allow a passing reference to the melodic second subject in the right hand. This is limited, however, to the interval of the augmented fourth. (Example 10)

The recapitulation commences with a varied reprise of the opening which ushers in the first subject in the 'tonic' or 'home'

Mode 3, third transposition

Recapitulation of second subject : down perfect 5th

EXAMPLE 11

1 poco allegro on A

2 andante grazioso on E

3 allegro on D

EXAMPLE 12

mode of the exposition. The 'bridge-passage' is again formed by the use of Messiaen's 'harmonic litanies', this time modified to allow the second subject to appear also in the 'tonic' mode; namely mode 3, third transposition. Notice as a result that the second subject appears transposed down a perfect fifth, thus following Classical tonal usage and accounts for the composer's choice of mode transposition in the exposition.

(Example II) A similar procedure, albeit couched in twelve-tone series, can be found in the row positions of Schönberg's 'Violin Concerto' where a respect for traditional tonal considerations influences the choice of notes for the opening of each of the three movements. (Example 12)

The prelude ends with a pedal ostinato, motivically derived from

The image shows a musical score for two staves, likely piano and bass. The key signature is one sharp (F#) and the time signature is 4/4. The score is divided into two measures by a vertical bar line.

Measure 1:
The upper staff contains a sequence of notes: G2, A2, B2, C3, D3, E3, F#3, G3. Above the notes are dynamic markings: *f* (forte) and *puf* (pianissimo).
The lower staff contains a sequence of notes: G2, F#2, E2, D2, C2, B1, A1, G1. Below the notes are dynamic markings: *f* and *puf*. There are also articulation marks: accents (>) and slurs over the notes.

Measure 2:
The upper staff contains a sequence of notes: G3, A3, B3, C4, D4, E4, F#4, G4. Above the notes are dynamic markings: *f* and *puf*.
The lower staff contains a sequence of notes: G2, F#2, E2, D2, C2, B1, A1, G1. Below the notes are dynamic markings: *f* and *puf*. There are also articulation marks: accents (>) and slurs over the notes.

Below each measure, there is a dashed line with the number '8' and a vertical line, indicating an 8-measure rest.

EXAMPLE 13

the first subject (Example 13), and interestingly enough the only attempt which Messiaen actually makes to develop the possibilities inherent in this motive. Here then, is an important conclusion : Messiaen's 'development section' is really a misnomer if we apply criteria based on the Classical usage of this term. The whole section is built up by a process of addition and superimposition of ideas (Examples 8 and 9), and this technique can be observed in many of his important subsequent works such as the 'Turangalîla Symphonie'.

Messiaen could also be accused of being very repetitive in the course of this movement, thereby revealing a poverty of invention within the confines of this form. Whether this observation is based on a false criteria or not remains another question to which considerations of space preclude further commentary here.

It is a characteristic of Messiaen's language that it should move within its own time-world and in terms of juxtaposed units of sounds resembling, as Drew (44) says, 'the component parts of a mobile, which are both reversible and divisible but never developable'. With Beethoven it is what happens that matters : Messiaen is merely concerned with what it is.' This was the

clarinets
cor anglais
horns

p (at pitch)
mf
p *expressif*

Debussy: 'Pelléas et Mélisande', full score p.346

EXAMPLE 14

Mode 3, prime form

EXAMPLE 15

very fact which Hodeir (45) overlooked when he rejected Messiaen the composer as 'an ultimate failure'; a consideration based principally on the grounds of an incapacity to develop traditional forms and the fact that when Messiaen points out his liberal 'transformation' of a 'measure of Debussy's' (Examples 14 & 15), Hodeir finds this a "faulty pedagogical expression of a procedure that would otherwise be glaringly corrupt". (46)

Comments of this nature, however, tend to reveal more about the critic than the composer, for it must be evident to anyone who cares to listen to the music that the experiences of these two composers are poles apart. Messiaen's admission of indebtedness to Debussy must be viewed with the same caution as his 'indebtedness to Grieg' witnessed earlier in Example 4. These are merely points of departure which serve as a stimulus for the composer's creative imagination and the result can never become ersatz Debussy, or for that matter, ersatz Grieg, precisely because we are dealing with a composer whose profound musical sensibility imbues each new work with a hallmark peculiar to him alone.

The fifth prelude, 'Les sons impalpables du [^]rêve' foreshadows, from a structural point of view, many devices of Messiaen's later works and in this respect is perhaps the most representative

example in the whole collection. Here in the opening, we have an early example of ostinato pattern in the upper stave, and the use of polymodality (mixed modes), which here arises from the superimposition of mode 3 (2nd transposition) upon mode 2 (prime form). Notice the attention to dynamic marking in the melodic line (lower stave) which affords it a certain emancipation from the almost suffocating tension generated by the chordal ostinato. Each of the two textures draws freely on the harmonic resources of the chosen mode (Example 16) although the prelude is firmly centred on an A-major tonality. The writing in this particular piece typifies much of Messiaen's later work, and can best be demonstrated by comparing the music of Example 16



Mode 6; 4th transposition

bien modéré

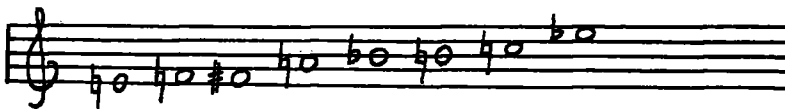
8

aérien

pp

P Ped

EXAMPLE 17



Mode 4, 4th transposition

original rhythm



added quarter value



EXAMPLE 17a

with that of the final movement of the song cycle, 'Harawi', entitled 'Dans le Noir'. (Example 17) In this latter example, Messiaen not only superimposes two different modes, but also engineers the polymodal ostinato (top two staves) in a form of rhythmic canon. (Example 17a).

Here then, is a logical development of language : in the fifteen years which separated the composition of these two works witness on the one hand a keener sense of timbre and sonority, with a corresponding subtlety of rhythmic invention on the other. Nevertheless, the fact that the foundation of such a highly original language could be so firmly established in the 20-year-old composer of the 'Préludes' is indeed something to marvel at, and in the course of this chapter we shall observe other such pointers, albeit in their infancy, towards what are to become some of the most mature aspects of his compositional process.

A consideration of the melodic structure of the music of example

modéré

mf

EXAMPLE 18

Mode 2, prime form

5
4
p

EXAMPLE 19

16, part of which is quoted as example 18 opposite, reveals a marked affinity with the undulation of a plaint-chant line and one is here reminded of Messiaen's early Conservatoire studies. Notice particularly a melodic emphasis on the tritone, which by virtue of its positioning is brought into considerable prominence. The melody continues, on page 22 of the score, with a sequential repetition of the final phrase of the music of Example 18, stated in octaves and incorporated in a new texture drawn from the prime form of Messiaen's second mode. (Example 19).

After a restatement of the music of the opening bars of the prelude, there follows a very interesting section, entirely written in the fourth transposition of the sixth mode, and which foreshadows one of Messiaen's favourite devices of later works - namely the employment of complex rhythmic canon. Here, however, the canonic working is quite straightforward, the

outer parts being cast in close mirror form at the quaver distance, and the third free part maintaining a constant semiquaver movement (reminiscent of Bach's 'Goldberg' canons), which incidentally echoes the opening ostinato.

(Example 20) Although Messiaen's canon is 'non-tonal' in a conventional sense, it is interesting that he should choose the perfect fifth as the 'mirror interval' and that, in common with the construction of a truly tonal canon, he makes the necessary adjustments to retain his working within the confines of the chosen mode. (Example 20a).

Thus, an examination of this prelude provides us with a rich source of early examples of Messiaen's structural devices : polymodality, ostinato technique, melodic augmented fourth, canonic working and chord building. We must always bear in mind, however, that it is the way in which these devices and techniques are used that is important and of special interest. In this latter connection and as a general example of the extent to which one can compare the early 'Préludes'¹⁰ with Messiaen's

Rall -----

ostinato pause melody +
sustained harmony

EXAMPLE 21

Manuals Rall -----

ostinato pause melody +
sustained
harmony

EXAMPLE 22

later works I point out the remarkable similarity between the ending of this prelude and one of the important transition passages in the organ piece 'Alléluias sereins' from 'L' Ascension'. Notice in each example (Examples 21 & 22) the downward movement of the ostinato, the rallentando and the pause (comma in Example 22), and how in each case there follows an essentially melodic section supported by sustained harmony. This particular procedure also serves to emphasise the sectional nature of much of Messiaen's writing.

In the 'Technique de mon langage musical', Messiaen refers to a phenomenon which his teacher Paul Dukas called the 'effects of resonance' and describes these as "special effects of pure fantasy, similar by a very distant analogy to the phenomenon of natural resonance." He offers an explanation by pointing out that in the resonance of a low 'C' for example, an 'extremely fine ear' will perceive all the notes of what he calls the 'resonance chord', and that this same chord, in its various inversions, produces "all the notes of the third mode of limited transpositions." (47)

The opening of the prelude 'Cloches d'angoisse et larmes d'adieu'

is quoted opposite in Example 23 to demonstrate one of the earliest examples of Messiaën's usage of these 'resonance chords', and also to illustrate the way in which they are entirely derived from the third mode of limited transpositions. Notice also the further example in bar 5 which makes recourse to polymodal chord-building, here combining modes six and two.

Mode two forms the harmonic basis of the canonic section which follows and once again we observe the prominence of



Mode 2, 2nd transposition

A musical score for piano consisting of three staves. The key signature is one sharp (F#) and the time signature is 2/4. The first staff (treble clef) contains a melodic line with dynamics *P* and *md*. The second staff (treble clef) contains a melodic line with dynamics *mf* and *md*. The third staff (bass clef) contains a bass line with dynamics *pp* and *mf*. The score is divided into two measures by a vertical bar line. The first measure contains the first two staves, and the second measure contains all three staves. The notation includes various note values, rests, and dynamic markings.

EXAMPLE 24

v

as a vehicle for the expression of his musical ideas, despite the fact that he is an organist by profession, and as the piano therefore plays an important role in nearly all his major scores + it thus affords us a highly comprehensive account of his development as a composer from the early 'Préludes' of 1929, his first published work, to the monumental 'Catalogue d'Oiseaux' written between 1956 and 1958. As an organ composer, he has not added appreciably to his repertoire since the publication of the virtuosic 'Livre d'Orgue' of 1951 and has in fact declared a present reluctance in this field.* (5) A survey of the piano music, then, will enable us to examine his structural techniques in terms of a developing interest in this medium and will assist an assessment of his innovations in a continuous perspective. Moreover, the piano writing embraces many of the interests with which he is preoccupied : these include the 'themes of love and of death' in 'Turangalîla' his fervent and poetic Catholicism in 'Vingt Regards sur l'Enfant -Jésus', an obsession with Hindu rhythm and self wrought modality which together imbue all his scores to a greater or lesser extent with a sense of 'other worldliness' and finally his characteristic use in 'Catalogue d'Oiseaux' of

+ These include the 'Turangalîla-Symphonie', 'Trois Petites Liturgies', and the song-cycles 'Poèmes pour Mi', 'Chants de Terre et de Ciel' and 'Harawi'.

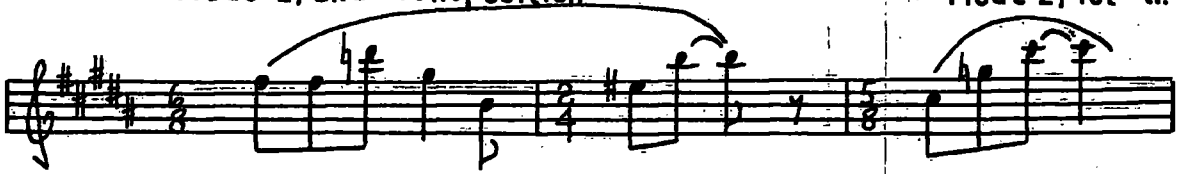
*This was written before the appearance of 'Le Mystère de la Sainte Trinité (1989)

the augmented fourth interval used melodically. (Example 24)

This interval, together with the major sixth, forms much of the melodic structure of the ensuing half of the prelude, the music of which is suggestive, in its rich expression and delicate figuration (see Example 26) of the 'larmes d'adieu'. It is of interest in this connection to observe Messiaen's reasoning behind the particular choice of these intervals : 'Paul Dukas used often to speak to his students of intervals and their choice. Let us follow his counsel and see which will be our preferred intervals. A very fine ear clearly perceives an F sharp in the natural resonance of a low C, which becomes its normal resolution. We are in the presence of the first interval to choose : the descending augmented fourth. Because of the importance of the added sixth in the perfect chord, foreseen by Rameau and established by Debussy, and because Mozart, that great melodist, often used the descending major sixth, we shall choose that interval anew.' (48) A short extract

Mode 2, 2nd transposition

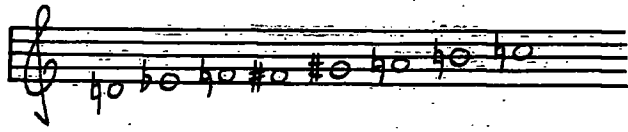
Mode 2, 1st tr.



of Messiaen's melodic invention in this prelude is given opposite in Example 25. Notice the prominence of augmented fourth and sixth intervals.

It is neither here nor there whether these intervals were rather the natural choice of Dukas than Messiaen but Messiaen's attempted 'historical' justification for his particular choice is comparatively insignificant compared to the important and characteristic way in which he chooses to employ them.

As a final point of interest in this prelude, notice the delicacy of



Mode 2, 2nd transposition

A musical score for three staves (treble, alto, and bass clefs) in a key signature of one sharp (F#). The score includes various musical notations such as notes, rests, and dynamic markings. The first staff has a '6' and '8' written vertically on the left and a 'PPPP' dynamic marking. The second staff has a 'PPP' dynamic marking and a 'P' dynamic marking. The third staff has a 'PPP' dynamic marking. There are also some handwritten annotations like '4' and 'b' above notes in the first staff.

EXAMPLE 26

the piano writing, the extreme use of dynamics and the piano figuration which is very much in a Debussyan manner.

(Example 26).

The second prelude in the collection, 'Chant d'extase dans un paysage triste', shows many of the characteristics of 'Cloches d'angoisse et larmes d'adieu', perhaps most evidently in the melodic invention and canonic working. In the opening music, for example, the augmented fourth and major sixth assume melodic prominence whilst at the same

Lent et triste

3/4 p

mode 2, prime form

pp

EXAMPLE 27

Moussorgsky

EXAMPLE 28

EXAMPLE 29

time there is a strong affinity with the undulation of a plainchant line. + (Example 27) Notice also the sparse two part texture of the writing and Messiaen's use, in bars 7 and 8, of a form of cadential progression bringing in a melodic prominence to his favoured tritone interval and which he further attempts to justify by recourse to Moussorgsky : (49)

"Keeping our choice of intervals thoroughly in mind, let us look at some beloved melodic contours and endeavour to draw the essence of them. In the shadow of the five notes which open Moussorgsky's 'Boris Godounov' let us try our first formula of melodic cadence." I quote the Moussorgsky example which Messiaen cites (Example 28) and his resultant 'melodic cadence' (Example 29) if only to demonstrate to what extent this self acknowledged influence has been subjected, as he puts it, to the "deforming prism" of his musical language. (50)

With Messiaen, this constitutes in reality no more than the subjection of an idea, be it melodic, rhythmic or harmonic,

+ see also Example 18

'La Nativité du Seigneur'

Organ

Musical notation for Example 30, Organ part. It consists of two staves. The upper staff is in treble clef with a key signature of one flat (B-flat major) and a common time signature. It features a melodic line with notes G4, A4, B-flat4, A4, G4, F4, E4, and D4, with a fermata over the final note. The lower staff is in bass clef with the same key signature and time signature, featuring a bass line with notes G3, F3, E3, D3, and C3. A dynamic marking of *mf* is present in the upper staff.

EXAMPLE 30

Musical notation for Example 31, a single staff in treble clef with a key signature of two sharps (D major) and a common time signature. It features a melodic line with notes D4, E4, F4, G4, A4, B4, and C5, with a fermata over the final note.

EXAMPLE 31

Piano

Musical notation for Example 31a, Piano part. It consists of three staves. The upper staff is in treble clef with a key signature of two sharps (D major) and a common time signature, featuring a melodic line with notes D4, E4, F4, G4, A4, B4, and C5, with a fermata over the final note. The middle staff is in treble clef with the same key signature and time signature, featuring a bass line with notes D4, E4, F4, G4, A4, B4, and C5, with a fermata over the final note. The lower staff is in bass clef with the same key signature and time signature, featuring a bass line with notes D3, E3, F3, G3, A3, B3, and C4, with a fermata over the final note. Dynamic markings include *ppp* and *p*.

EXAMPLE 31a

to considerations governed either by modality or by rhythmic distortion occasioned by the superimposition of 'added-values'.

In order to clarify this, let us return to the music of Example 27 (1st two bars) and compare the melodic cadence with its more sophisticated usage in the organ piece 'La Vierge et l'Enfant' from the cycle, 'La Nativité du Seigneur'. (Example 30) Notice how both examples are contained harmonically within the resources of Mode 2, prime form, but that in example 30 Messiaen employs the further device of 'added values' (indicated at the cross) thereby enhancing the effect of his musical 'prism'. Thus, in order that Messiaen's creation may truly reflect its creator in unanimity, his scope of development is 'limited' by the employment of a fixed number of possible procedures or 'uniforms' which, by their very nature, may easily be superimposed upon the musical material of his choice. I quote one example from the prelude to amplify this ; it incidentally affords a further use of 'harmonic litanies', previously referred to in the music of examples 2 and 3. The fourth bar of 'Chant d'extase dans un paysage triste' is shown opposite (Example 31) together with its form of 'development' at a later stage in the movement. (Example 31a).

Example 32 is a musical score for three staves. The top staff begins with a treble clef, a key signature of three sharps (F#, C#, G#), and a common time signature. It contains a measure marked with an '8' and a dashed line, followed by two measures of chords. The dynamic marking 'ppp' is placed below the first measure. The middle staff also starts with a treble clef and the same key signature, containing a measure marked 'mf' and a measure with a slur over a chord. The bottom staff begins with a treble clef and the same key signature, followed by three measures of eighth-note patterns. The dynamic marking 'pp' is placed below the first measure of this staff.

EXAMPLE 32

Example 33 is a musical score for three staves. The top staff begins with a treble clef, a key signature of two sharps (F#, C#), and a common time signature. It contains a measure marked with an '8' and a dashed line, followed by two measures of chords. The dynamic markings 'ppp' and 'pppp' are placed below the first and second measures respectively. The middle staff also starts with a treble clef and the same key signature, containing a measure with a slur over a chord and a measure with a slur over a chord. The dynamic marking 'pppp' is placed below the second measure. The bottom staff begins with a bass clef and the same key signature, followed by a measure with a slur over a chord and a measure with a slur over a chord. The dynamic marking 'pp' is placed above the second measure. Below the bottom staff, there are two additional musical notations: a chord with a slur and a note with a slur.

EXAMPLE 33

Notice particularly dynamic markings, the varied harmonic resources and the juxtaposition of the rhythm of the second bar framing an additional set of 'harmonic litanies'.

The central section of the prelude, 'un peu plus vif', page 6, ushers in a wisp of melody which Messiaen refers to as an example of 'a typical melodic contour'. (51) Notice in examples 32 the augmented fourths, and also that the canonic section which follows is characteristic of other examples in the collection. After a large section of thematic repetition the piece ends with rich, F-sharp major chords plus 'added-sixths'. (Example 33) Incidentally, the 'added-sixth' chord is a common occurrence in Messiaen's music although he makes no specific attempt to rationalize its usage in the way, for example, that he justifies the employment of 'effects of resonance' or a 'normal' resolution of the augmented fourth. He is content to merely claim a distinguished precedent in the music of Debussy, Rameau, Massenet and Chabrier. (52) Whilst this may constitute sufficient explanation, David Drew (53) postulates a more important reason why this chord should hold such a special attraction for the composer :

"The 'added sixth' has been described as the 'inhibitory degree par excellence', because in an odd way it is half-concord and

half-discord. The consonance and dissonance exist side by side in a state of mutual frustration. Thus the 'added-sixth' satisfies Messiaen's need for musical materials that subvert the traditional tension-relaxation pattern

The fourth prelude, 'Instants défunts' perhaps affords the best example of the young composer's variation technique. In this connection we have already discussed that Messiaen's art lies more in his ability to 'transform' or 'illumine' an idea rather than 'develop' it in an orthodox sense. I include the

3
4 *mf*

3

3

rhythmic parallelism

EXAMPLE 34

3
4 *mf*

3

pp ostinato

EXAMPLE 35

P

3
4 *pp*

3

EXAMPLE 36

examples opposite (examples 34, 35 & 36) to illustrate an early application of this. Notice in each quotation how a basic idea is subjected to differing figurations of accompaniment and how in Example 36, the inner voice frames a tritone interval which reflects the structure of the melodic line. The opening music of the prelude again reflects a preoccupation with the

Lent

3
4

ppp *expressif*

mf

EXAMPLE 37

7
8

P

EXAMPLE 38

augmented fourth interval (Example 37) and in the right-hand chords, the semitone stepwise movement is reminiscent of parallel organum. In common with the majority of the preludes, 'Instants défunts' includes a short section of close mirror canon of which Example 38 is a part.

During the course of this chapter, I have attempted to point out important structural devices of Messiaen's early technique as revealed by analysis of the most representative of the piano 'Préludes'. That these devices are important, indeed integral to Messiaen's creative process will become evident from a study of the ensuing chapters of this thesis.

CHAPTER 3

SUPREME AFFIRMATION OF FAITH : 'VINGT REGARDS
SUR L'ENFANT JESUS', 1944.

CHAPTER 3

SUPREME AFFIRMATION OF FAITH : 'VINGT REGARDS SUR L'ENFANT JESUS', 1944.

'Vingt Regards sur l'Enfant - Jésus', written in 1944, brings to the pianoforte medium a personal expression of Messiaen's zealous Catholicism which, being reflected in a series of religious contemplations, has a structural precedent in the organ cycle, 'La Nativité du Seigneur', (1935) and the two piano piece, 'Visions de l'Amen'. (1943) The composition is of a virtuoso nature and remains one of the most difficult and taxing works ever written for the piano. However, it would be dangerous to assume that these difficulties are intended for mere display on the performer's part. Each effect or technical demand which the composer conceives is directed towards an expressive or colouristic end.

'Vingt Regards' (literally translated as 'twenty gazes on the Child-Jesus') draws for its principal sources of inspiration on the 'Christ dans ses mystères' by Dom Columba Marmion, and the 'Douze Regards' of Maurice Toesca, both of which Messiaen acknowledges in the preface to the score.

'Dom Columba Marmion and after him, Maurice Toesca have spoken of the gaze of shepherds, angels, of the Virgin and



'Thème de Dieu'

EXAMPLE 39



'Thème de l'Etoile et de la Croix'

EXAMPLE 40



'Thème d'accords'

EXAMPLE 41

of the Celestial Father : I have taken up the same idea and treated it in a slightly different way and added sixteen new 'regards'. More than in all of my preceding works, I have found here a language of mystic love, of true faith, powerful and tender, sometimes even brutal, and which is written in multi-coloured arrangements.' (54)

In common with his other works which make use of Christian symbolism, and of which this incidentally represents the summit of his achievement, Messiaen employs cyclic themes which serve as valuable points of reference. In 'Vingt Regards', three main themes are employed, the most important and significant of which is the 'Thème de Dieu', (Example 39) This quite naturally frames the music of the first movement, the 'Regard du Pere'. The second theme, the 'Thème de l'Etoile et de la Croix', which first appears in the second movement, is symbolic of both Nativity and Crucifixion. (Example 40) Finally, there is the 'Thème d'Accords', which, represented as a succession of chords, (Example 41) is made the subject of continual variation. 'Vingt Regards' tends in much of the writing towards an orchestral conception and, as Robert Sherlaw Johnson

points out (55), 'Messiaen has said, in fact, that it was from Debussy that he discovered the 'piano-orchestre', the idea of simulating flutes, clarinets, horns, trumpets and other instruments.' *

From a purely technical viewpoint, the score abounds with Messiaen's favourite devices ; rhythmic canon, polymodality, non-retrograde rhythms, asymmetrical enlargements, added-values, resonances and so on, but the conscious process is always tempered, indeed bridled, by a foremost concern for expressive or colouristic considerations, as I pointed out earlier. Owing to the large-scale nature of 'Vingt Regards', I have thought it best for our present purposes to examine a selected number of movements which will afford, I hope, a representative and characteristic cross-section of Messiaen's structural resources. Prior to commencing this, some general observations about the music will serve to illustrate a logical continuation and development of the piano style exemplified in the 'Préludes', and already considered in Chapter 2.

Perhaps the most important points of contact between Messiaen's 'Préludes' and the 'Vingt Regards' lie in his melodic emphasis coupled with a highly expressive and decorative piano style. We have already seen, in our examination of the prelude 'Instants Défunts', for example, that Messiaen will employ the use of varied

* reference is not given

score p 119

$\text{♩} = 72$

8r

PP : legato

PP

(mode 2, prime)

EXAMPLE 42

Detailed description: This musical score for Example 42 is written for piano and bass. The piano part (top staff) features a melodic line with eighth notes and quarter notes, starting on a treble clef. The bass part (bottom staff) consists of chords and single notes, starting on a bass clef. The key signature has three sharps (F#, C#, G#). The tempo is marked as quarter note = 72. The piano part is marked 'PP : legato'. The bass part is marked 'PP'. A bracket labeled '8r' spans the first eight measures of the piano part. The text '(mode 2, prime)' is written below the bass staff. The example is labeled 'EXAMPLE 42'.

score p 113

P

EXAMPLE 43

Detailed description: This musical score for Example 43 is written for piano and bass. The piano part (top staff) features chords and single notes, starting on a treble clef. The bass part (bottom staff) features a melodic line with eighth notes and quarter notes, starting on a bass clef. The key signature has three sharps (F#, C#, G#). The piano part is marked 'P'. The bass part is marked 'P'. A bracket spans the first four measures of the piano part. The example is labeled 'EXAMPLE 43'.

figurations in the piano writing to effect a subtle transformation of a thematic idea which, in itself, remains unchanged and unaffected, the relationship of the parts to the whole remaining constant and functioning in this respect as an auditory Gestalt, despite possible changes of register. We have a good instance of this procedure in the fifteenth 'regard', 'Le Baiser de l'Enfant Jésus', where the 'Thème de Dieu', 'en berceuse', is decorated in a wealth of differing figurations, two examples of which are quoted opposite. (Examples 42 & 43).

The 'Thème de Dieu' also occurs in canonic form and is illustrated

Musical score for Example 44. It consists of two staves. The upper staff has a treble clef and a key signature of three sharps (F#, C#, G#). It contains three measures of music, each with a dynamic marking of *mf* and a *Cresc.* instruction. The lower staff has a treble clef and the same key signature. It contains three measures of music, each with a dynamic marking of *mf* and a *Cresc.* instruction. The text "(mode 2, prime)" is written below the lower staff.

EXAMPLE 44

Musical score for Example 45. It consists of two staves. The upper staff has a treble clef and a key signature of three sharps (F#, C#, G#). It contains three measures of music, each with a dynamic marking of *pp*. The lower staff has a treble clef and the same key signature. It contains three measures of music, each with a dynamic marking of *mf* and a *espress* instruction. The text "(mode 2, 1st transposition)" is written below the lower staff.

EXAMPLE 45

opposite as Example 44. Notice that the canonic parts are supported by a scalic semiquaver ostinato, the notes of which are chosen to retain the whole passage within the prime form of mode 2. This makes an interesting comparison with the extended canonic working in the prelude, 'Le Nombre léger' which in a similar way is confined to mode 2 (here in the first transposition) and which is quoted in part as Example 45.

In the prelude 'Les sons impalpables du rêve', we have already witnessed Messiaen's earliest usage of the polymodal ostinato as a structural device, + and I mentioned the textural affinity with the final movement of the song cycle, 'Harawi' an extract of which was quoted in Example 17. In 'Vingt Regards' a more advanced use of this technique is demonstrated in the fifth movement of the work, the 'Regard du Fils sur le Fils'. This movement significantly reflects many facets of Messiaen's musical personality and sensibility, the outlines of which we have briefly discussed in chapter 1, and it is thus not inappropriate to our purpose to commence analysis at this juncture.

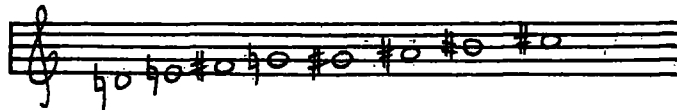
There is a strong similarity between the musical textures and idiom of the 'Regard du Fils sur le Fils' and the opening

+ see Example 16

'Amen de la Creation' of the two piano work, 'Visions de l'Amen'. Both make use of polymodal ostinati, treated in rhythmic canon by the addition of the dot, and are essentially conceived as three independant strands of music, the lowest of which is entrusted with the theme. (In the case of the 'Regard du Fils sur le Fils' movement, this is the 'Thème de Dieu'.) Unlike the 'Amen de la Creation' which begins in hushed mystery at a 'pppp' dynamic crescendoing during the course of the movement to an 'fff' conclusion, the 'Regard du Fils' is constructed dynamically as well as structurally upon the interplay of differing concepts and emotions. Messiaen prefaces the movement with the following words :

'Mystère, rais de lumière dans la nuit - refraction de la joie, les oiseaux du silence - la personne du Verbe dans une nature humaine mariage des natures humaine et divine en Jésus - Christ' (56)

The polymodal ostinato, conceived in rhythmic canon between the upper two parts, is constructed from the second transposition of mode 6 and the third transposition of mode 4 and it happens that these two modes include the twelve available notes of the chromatic scale. The 'Thème de Dieu' is written in mode 2, utilizing



Mode 6, 2nd transposition

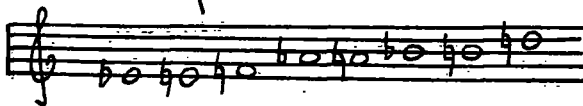
$\text{♩} = 76$

score p 18

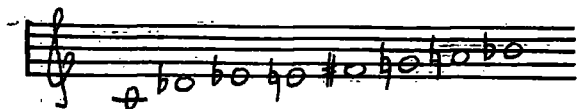
8

ppp doux et mystérieux

p



Mode 4, 3rd transposition



Mode 2, prime form

varied transpositions, (Example 46) and thus the opening polymodal texture is formed as the result of the interplay of three different modes. Three dynamic levels are also indicated and a footnote in the score requests the performer to 'clearly differentiate the three sonorities'. That Messiaen should use the word 'sonority' is interesting for it is just on account of dynamics that the sonority works. Finally, in the three-dimensional layout of the parts one can detect a symbolic allusion to the presence of the Trinity, although its expression in musical terms hardly constitutes an innovation with which Messiaen may be credited. The mediaeval musician, for example, had already expressed a similar concern in his 'perfection' of triple division, known as 'tempus perfectus', where the breve divided into three equal semibreves. There exists, however, in Messiaen's opening bars, a more apparent affinity with mediaeval practice in that the independent rhythmic layout of each of the three ostinati is strongly reminiscent of the 14th century structural technique of isorhythm.

Within what appears to be three rhythmically independent parts, one can discern by analysis a triple rhythmic structure

1 1 1 6 6 6 6 6 6 6 6 6 1 1 etc

1st Stave

1 1 1 6 6 6 6 6 6 6 6 6 6 6 6 6 1 1 etc




2nd Stave

1 1 1 1 1 1 1 1 1 etc

3rd Stave, 'Thème de Dieu'

EXAMPLE 47

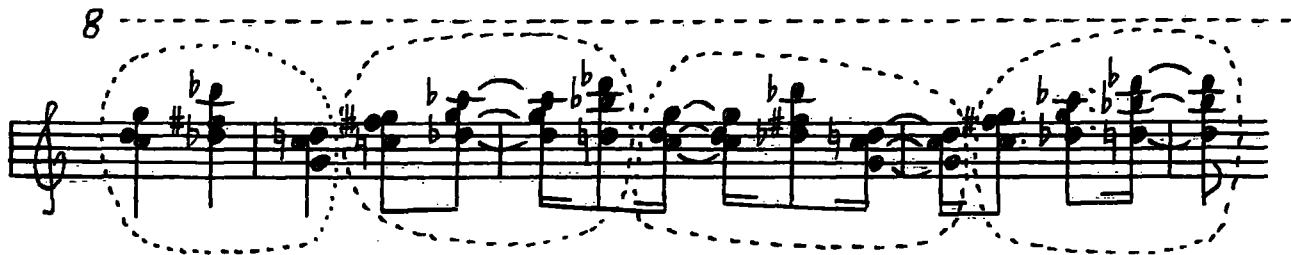
which, shown opposite, also serves to clarify Messiaen's construction, in the centre voice, of rhythmic canon by augmentation, here achieved by the addition of a dot to each value of the top part. (Example 47) It is of considerable interest to know that Messiaen has constructed this top stave from three Çârngadeva rhythms : Ragâvardhana, Candrakalâ and Lakskmiça + (Example 47a)

Ragâvardhana :	
Candrakalâ :	
Lakskmiça :	

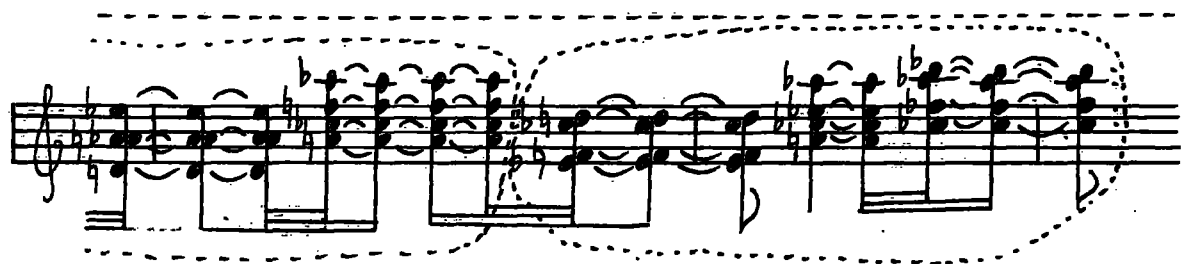
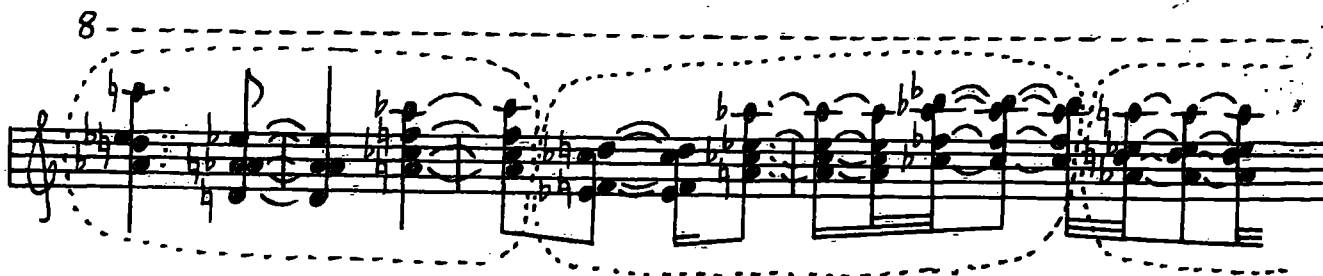
Example 47a

If we consider that Schönberg's use of twelve-tone series can be reasonably compared with Beethoven's use of melodic thematicism as a structural device in musical composition, so the rhythmic series of the isorhythmic motet can be said to resemble Messiaen's use of rhythmic thematicism. It is this kind of rhythmic process that is involved in the construction of the two polymodal ostinati

+ see Appendix 2 - Table of Indian names



EXAMPLE 48



EXAMPLE 49

and a glance at the music of Examples 48 and 49, shown opposite, reveals that similar chord sequences are varied rhythmically for this reason.

The polymodal / canonic section occurs three times in all during the course of the movement, with contrasting 'birdsong' section interspersed, and it should be further noticed that with each appearance of the polymodal music, the position of the 'Thème de Dieu' is altered in relation to the upper parts which remain 'fixed' with regard to each other. However, it can be observed that these recurring sections are not of equal-length, and the 'tighter' juxtaposition of the 'Thème de Dieu' in its third presentation (see Example 50) is a good illustration of varying tensions coupled with a subtlety of form. Thus Messiaen exploits a new range of harmonic possibilities in much the same way as a kaleidoscope constantly re-arranges patterns. However, it should be mentioned that owing to the particular qualities which imbue this interplay of mode colours, and I use the word 'colour' with extreme caution (1), Messiaen's ingenuity is often difficult to perceive at first hearing, and indeed demands acute concentration on the part of the listener if it is not to be missed altogether. It is for this reason that Armfelt (57) quite rightly postulates that Messiaen's music 'demands an extraordinary intensity of response.'

8 -----

The musical score consists of three systems of staves. The first system has three staves: the top two are grouped by a brace and labeled 'Constant', and the bottom one is labeled 'P'. The second system has two staves, both labeled 'P'. The third system has two staves, both labeled 'P'. The score includes various musical notations such as notes, rests, and dynamic markings like *pp*, *ppp*, and *P*. There are also performance instructions: 'Constant' and 'Variable placing'. A dashed line at the top is labeled '8'. Vertical dashed lines separate the measures.

pp

ppp

P

P

P

P

Constant

Variable placing

EXAMPLE 50

From a purely formal angle, the whole movement can be expressed as a simple binary plan variation, which, applied to the upper two staves of music may be expressed thus : -

A	B	A1	B1	A2	B2
long		long		short	

where 'A' refers to the polymodal ostinati and 'B' the birdsong sections. This structure is underpinned by the 'Thème de Dieu' which is stated once. The references to birdsong not only provide a musical contrast in the movement : they are formed as free structures, perhaps symbolic of an order which Nature reveals, and appear to follow very much the dictates of the composer's fanciful imagination. It is of interest to observe, however, how the favoured 'tritone'

8. -----

EXAMPLE 51

mode 3, 3rd transposition

$\text{♩} = 66$

PPP impalpable

Red. Red. Red.

mode 4, 3rd transposition

EXAMPLE 52

interval achieves some degree of melodic prominence.

(Example 51) Before leaving this movement, it is worth remarking on the structural similarity which it shares with a later 'regard', the 'Regard du Silence'. In this latter movement we have a further instance of polymodal ostinato (notice the use of mode 4, again third transposition) which, coupled with rhythmic canon by augmentation of the dot, utilizes the same rhythmic template as the music of the 'Regard du Fils sur le Fils'. (Example 52)

In the prelude, 'Un reflet dans le vent', we have already observed Messiaen's attempt to create a structure within the formal bounds which Sonata-form imposes. That this prelude lacked the necessary musical requirements of the form has already been discussed and it is thus interesting to find within the course of 'Vingt Regards' the employment of another traditional form, namely fugato, as the basis of an extended movement. In the sixth 'regard' 'Par lui tout a été fait', Messiaen's conception is rhythmic and dynamic, and as the problems of tonal structure are not so crucial in the same way, he has been able to avoid the more obvious pitfalls of 'Un reflet dans le vent.' Musically, 'Par lui tout a été fait' is one of the most exciting movements in the whole collection and for this reason alone is worth an 'in-depth' study.

♩ = 160

score p 25

"counter-subject"

A musical score for two staves. The top staff is labeled "counter-subject" and the bottom staff is labeled "subject". Both staves begin with a dynamic marking of *f* and a staccato instruction. The top staff contains a sequence of notes with various accidentals (sharps and naturals) and rests. The bottom staff contains a sequence of notes, including a triplet of eighth notes, and various accidentals. The two staves are bracketed together on the left side.

"subject"

A single staff of music in treble clef showing a sequence of notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4. The notes are marked with various accidentals (sharps and naturals) to indicate their specific pitch classes.

Mode 4, 4th transposition

A rhythmic pattern consisting of seven groups of notes, each enclosed in a box. The first group has two notes, the second and third have three notes, and the fourth, fifth, and sixth have two notes. The seventh group has one note. The notes are connected by stems. The pattern is enclosed in a larger box with a vertical line on the left and right sides. Below the pattern is a plus sign and the text "[centre]".

EXAMPLE 53

The movement opens with a simultaneous statement of 'subject' and 'counter-subject', as given in Example 53. Both lines have strong, easily identifiable musical characteristics - for example the opening insistence on the note D sharp in the 'subject' or the spiky angularity of the fragmentary 'counter-subject', but closer examination reveals that the notes which comprise the 'subject' are exclusively drawn from Messiaen's 4th mode (4th transposition) and the notes which form the 'counter-subject' stem from the chromatic scale.

As Messiaen indicates in the third bar of the movement, the notes of the subject are now subjected to simultaneous presentation in the right and left-hand part respectively, the music of the upper stave being a variation in terms of rhythm and register, while that of the lower stave, disposed in continuous semiquaver movement, is described in the score

(p 25)

8 -----

'subject' varied in rhythm and register [both staves]

EXAMPLE 54

'Agrandissement asymetrique'

A [notes of subject]

B

C

D

Blue - down semitone

Red - up semitone

Yellow - constant

EXAMPLE 54a

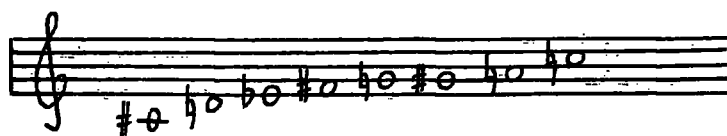
by Messiaen as 'agrandissement asymetrique'. (Example 54)

The principle of these 'asymmetrical enlargements' is demonstrated opposite in Example 54a and can briefly be described as follows : notes of the 'subject', circled in blue, move down a semitone, while those circled in red move up a semitone with each successive presentation. Notes ringed in yellow remain constant and a comparison of the music of Examples 54 and 54a will clarify this. There is thus the obvious analogy with Messiaen's employment of 'personnages rythmiques' as a structural device where one rhythm expands, another contracts, while a third remains constant. (58)

Arising out of this observation, it is worth remarking that similar analogies exist between this employment of 'agrandissement asymetrique' and other facets of Messiaen's diverse compositional technique. Hence in the course of this chapter 'agrandissement asymetrique' is further compared to the 'added-value' technique in rhythm and to the 'modes of limited transposition' in harmony. †

Messiaen's adoption of 'agrandissement asymetrique' in this particular context however can, I think, be viewed in two different ways : firstly, the process is justified by the need to vary and 'develop' the possibilities of the 'subject' material in an

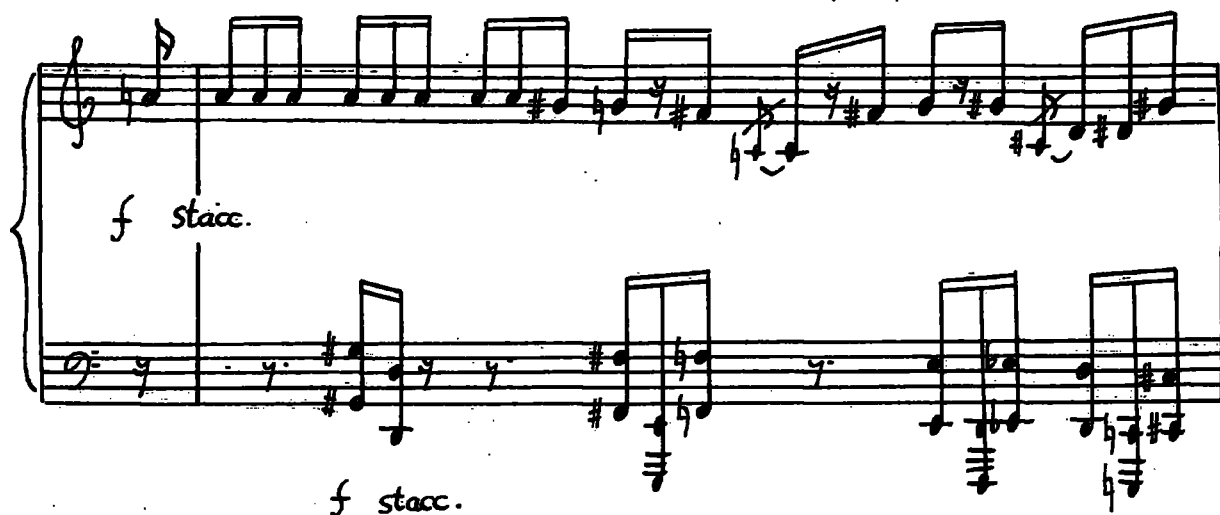
† see pages 67 and 79 respectively



Mode 4, 1st transposition

'Answer' [subject in contrary motion]

(p25)



counter-subject: contrary motion

EXAMPLE 55

economical way - as, for example, the fugal writing of J.S. Bach is economical. But secondly, and of greater importance when viewed in the light of Messiaen's later works, the employment of this process functions as a form of continuum which makes possible the generation of specific patterns of sounds, pitches and durations and all, so to say, 'compelled into being' by virtue of the nature of the technique employed.

The 'subject', now presented in what Messiaen labels 'reponse contraire' (in fact inversion) forms the 'answer' and the 'counter-subject' is present, as before, though also in contrary motion. Notice that the 'reponse' is made at the interval of the augmented fourth, on this occasion drawing on the resources of mode 4, first transposition. (Example 55).

As had applied in bar 3 to the 'subject', so now the 'answer' is varied in rhythm and register, but although the rhythmic patterns of the music of the upper staves differ (compare the right-hand music of Examples 54 and 56, which is

'answer' changed in rhythm and register

ff

mf stacc.

8

F etc

L.H. notes of subject in continued permutation from example 54

EXAMPLE 56

E

F

G

H

EXAMPLE 56a

shown opposite) the semiquaver movement in the lower stave (left-hand) continues the mechanical permutation where it left off in Example 54a. (Example 56a).

A further comparison between Examples 54a and 56a reveals that during the whole course of these permutations, only three notes remain constant : C-natural, B-natural and A -sharp. Perhaps it would not be too fanciful to ascribe this as symbolic of the immoveable Trinity.

It is important to observe for later stages of this analysis that the intervals formed between the first two notes of

[from examples 54 & 56: 1st two notes of each permutation]

The image shows musical notation for eight examples (A-H) on a single staff. Each example consists of two notes with an interval label below them. Example A shows a major interval of 5. Example B shows a minor interval of 3n. Example C shows a major interval of 4. Example D shows a minor interval of 5. Example E shows a major interval of 6 and a minor interval of 3n. Example F shows a major interval of 5. Example G shows a minor interval of 5. Example H shows a minor interval of 3n.

note intervals reduced to minimum by inversion

* 'n' indicates a minor interval

EXAMPLE 57

D# E b D b F b C# F# C b G b B b G# A# A b



EXAMPLE 57a

the first five permutations are as shown opposite ;
namely semitone, minor third, perfect fourth, perfect
fifth and major sixth. (Example 57).

Because these intervals move up and down in a stepwise
direction away from the note D-sharp, the D-sharp can
be seen as the centre of these permutations. Hence one
can describe this procedure by forming a series,
consisting of all twelve notes, with the note D-sharp
in the centre and from which the notes of the series
recede on either side. I refer to this 'row generation'
as a 'spiral permutation', the principle of which is
amplified by Example 57a.

The music which follows (at bar 1, Page 26) is, in my opinion
one of the most tightly wrought sections of canonic writing that
Messiaen has given us, being a close, three-part stretto
of the 'subject' embracing rhythmic canon, non retrograde
rhythmic units and a continuous semiquaver movement of

Score p 26

bars 1-3

Voice 1



3 5 8̇ 5 3

bars 4-6

Voice 2



4 3 7̇ 3 4

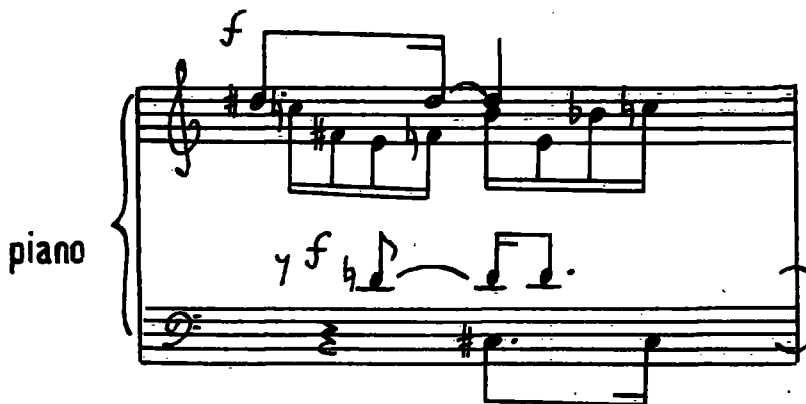
bars 6-8

Voice 3



2 2 3 5̇ 3 2 2

EXAMPLE 58



score, page 26
bar 1

[opening of canonic section]

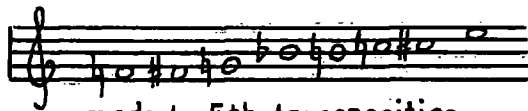
(part of subject)



EXAMPLE 59

symmetrical interval construction. Example 58, opposite, shows the rhythmic layout of the canonic voices together with resultant durations expressed numerically in terms of semiquaver values. The resultant non-retrograde units, indicated for convenience by coloured brackets, thus form a numerical sequence in which the central duration of each group is always greater than any one of its individual components. The canonic entries, which commence on the notes D-sharp, D-natural and C-sharp respectively, also comprise a 'mirroring' of the opening three notes of the 'subject', D-sharp, E-natural and F-natural. (Example 59)

The continuous semiquaver movement is of particular interest as it appears that the succession of intervals when



mode 4, 5th transposition

A - augmented 4th

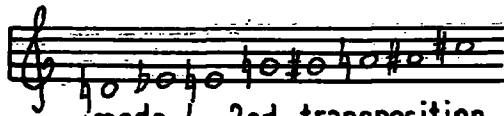
4 - fourth

T - tone

S - semitone

3 - major third 3n - minor third

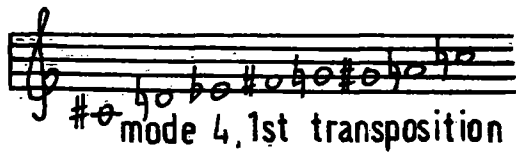
[score p 26 bar 1 onwards]



mode 4, 2nd transposition

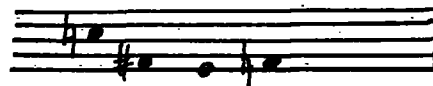
centre
→ + ←

3n A T S A 4 A T S A 3 A T S A 4 A T S A 4 A T



mode 4, 1st transposition

S A 4 A T S A



(opening)

reduced to their smallest form by inversion (e.g. a perfect 5th becoming a perfect 4th) follow a clear pattern which is illustrated opposite in Example 60. Notice also that, whereas from the central minor third onwards the interval sequence is retrograde, the adjacent group of tone and semitone remains as before. The yellow brackets in the example define a ten-note ostinato the transpositions of which are clearly related to Messiaen's fourth mode.

We have already briefly mentioned the principle of 'agrandissement assymetrique' (asymmetrical enlargement) in the music of Examples 54a and 56a, and it is not surprising that this technique should be developed in the course of the movement.

On page 28 of the score, a bass ostinato-pattern, built up on a

fragment of the subject, is treated in 'agrandissement assymetrique'. (Example 61). Notice that no two presentations of this rhythmic idea are alike, certain notes remaining constant while others either move up or down a semitone with each successive permutation. This addition of a very small interval each time (semitone) is analogous to the concept of the small 'added-value', already discussed in chapter I; the one being a vertical addition, the other a horizontal one in almost complimentary manner. As in Examples 54a and 56a, the coloured circles refer to the movement of the permutation.

The total note value of each fragment shown in Example 61 (numbers 1 - 8 inclusive) is 23 semiquavers, and when we further observe that the total duration of the 'subject' is also one of 23 semiquavers, we see that the second half of the 'subject' is expanded in each of the fragments to the same length as the 'subject' itself. The groups of semiquavers (5 + 5 + 5 + 8) are also interesting in this expansion as the

subject



centre of non-retrograde rhythm

The diagram illustrates a musical subject and an ostinato. The subject is a sequence of notes: a quarter note, followed by two groups of eighth notes, and a final quarter note. The ostinato is a sequence of notes: a quarter note, followed by two groups of eighth notes, and a final quarter note. A central vertical line is labeled "centre of non-retrograde rhythm". A dashed line outlines the subject and ostinato. A solid line outlines the central vertical line. An arrow points from the label "added-value" to a note in the ostinato.

ostinato


[added-value]

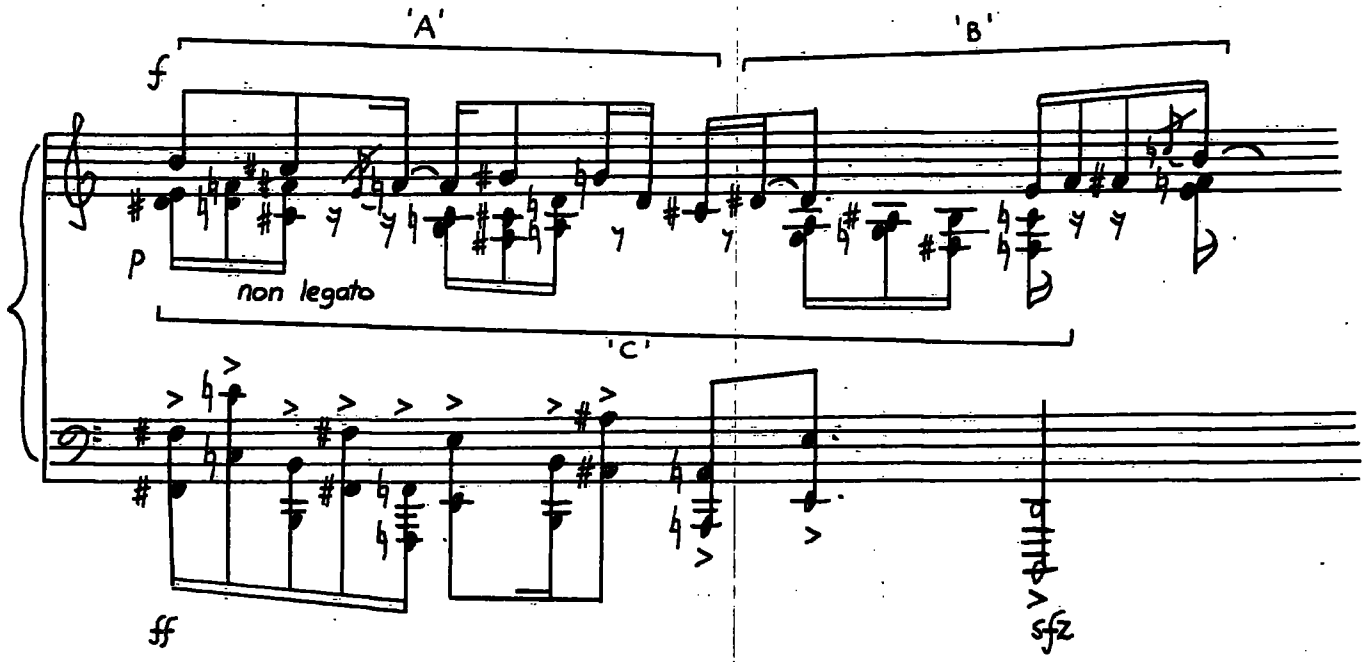
EXAMPLE 62

first five semiquavers preserve the semiquaver movement of the opening of the subject, and as the second cell,  is a repetition of the  rhythm. (Example 62).

Part of the music of page 28 of the score is illustrated

score p. 28, bar 1

 = 132



'A'

'B'

f

p

non legato

'C'

ff

sfz

[ostinato]

EXAMPLE 63

opposite in Example 63 to demonstrate the relationship of the upper parts to the first presentation of the 'ostinato' music already shown in Example 61. Notice the division of these upper parts into three component groups which I have labelled 'A', 'B', and 'C', and which, for convenience, may be described as follows :-

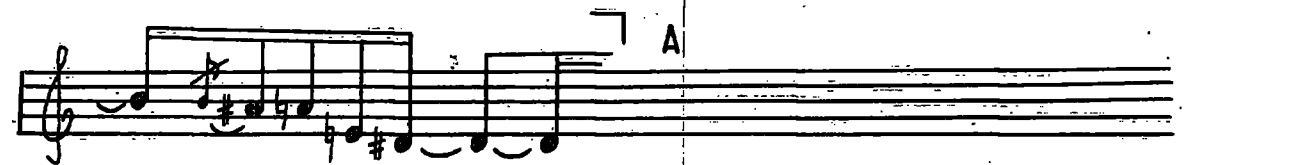
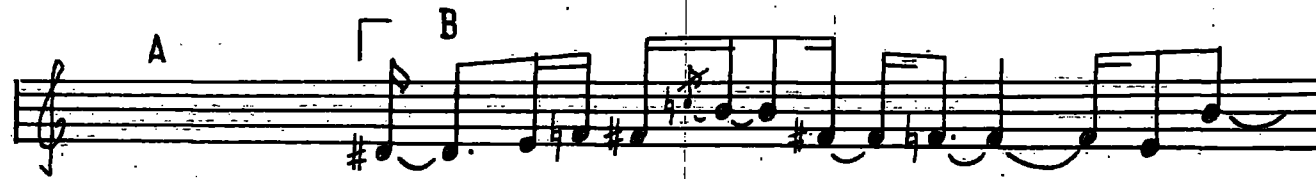
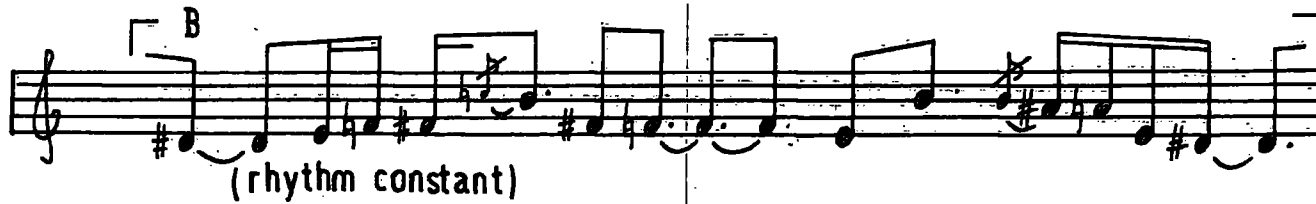
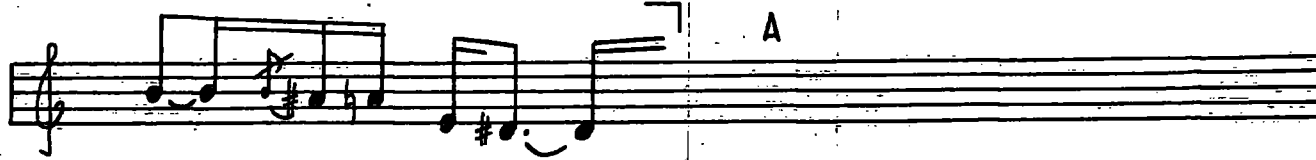
- 'A' motive group (combines rhythmic and intervallic interest)
- 'B' notes of 'subject' in non-retrograde rhythmic plan
- 'C' semiquaver groups (expanding intervals)

If we consider group 'B' which occurs three times, we find that each presentation is flanked by what I referred to as

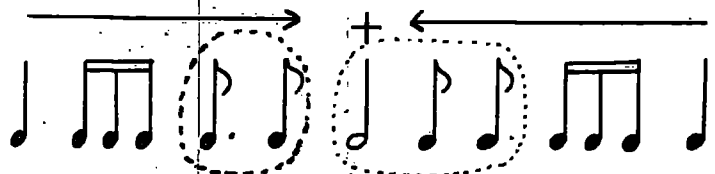
EXAMPLE 64



[notes of subject in non-retrograde rhythm]

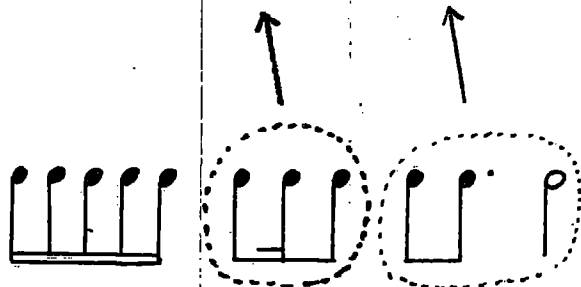


non-retrograde
rhythmic plan:



EXAMPLE 64a

ostinato rhythm:



the motive group 'A'. Each appearance of group 'B', shown opposite in Example 64, comprises all the notes of the 'subject' and is ordered in such a way as to form a non-retrograde rhythmic pattern. Notice also that the component durations of this pattern can in part be related to those which comprise the bass 'ostinato'. (Example 64a).

A B [subject ex 64]

A B

'X'

A B A

'Y'

subject in rhythmic diminution

B

EXAMPLE 65

In Example 65, opposite, the music of the motivic group 'A' is illustrated and the relationship of this to 'subject' material 'B' (Example 64) can be seen principally in the rhythmic construction. For example, use is made of non retrograde units (marked 'X' and 'Y') and there are whole sequences of notes which in part derive from the 'subject'. These are indicated by red brackets. Observe how unit 'X' contains a central group of five quavers which is an expansion of the semiquaver quintole of the ostinato. Unit 'Y' is based on the rhythmic plan of the subject (compare with Example 64).

Prior to considering the final component of this section of music, namely the semiquaver group 'C' of Example 63, I should like to make passing reference to the music of Examples 57 and 57a where I pointed out that a 'spiral' process, applied to the chromatic scale, produced an expanding series of intervals from a given central note, and that the nature of the permutation involved limits these intervals as follows :-

semitone, minor third, perfect fourth,
perfect fifth, major sixth.

Beyond the interval of the major sixth, the sequence is repeated and in the course of repetition the intervals are subjected to octave displacement or transposition. This process I will refer to as 'Permutation 1'. *

* We will observe 'Permutation 2' at a later stage in the thesis (Chapter 5, p. 129)

score p.28, bar 1 onwards

group 1 group 2 etc

The image shows a handwritten musical score for three groups of instruments, labeled 'group 1', 'group 2', and 'etc'. The score is written on three staves, each with a treble clef. The first staff is divided into three sections corresponding to the groups. The notation consists of chords and melodic lines, with various accidentals (sharps, flats, naturals) and stems. The second and third staves continue the musical material, with some parts written in bass clef. The overall style is that of a working draft or a student exercise.

EXAMPLE 66

If we now turn to the group 'C' semiquaver movement, we find further application of this permutation in the music of

Example 66, opposite. In this case, from the point of view of the spiral permutation, each group of semiquavers, starting with two notes, may be read off two notes at a time. As the intervals between each pair of notes expands within each group of consecutive notes, it stands to reason that the longer a group is, the wider will be the interval with which it finishes and this also results in clear phrases of varying length. Consequently one finds a counterpoint of different parameters with the accompanying phenomena of cohesion and asymmetry - the 5 + 5 + 5 + 8 sequence of ostinato as against the semiquaver patterns which are rhythmically dominated by this ostinato but which fall into different and in fact 'syncopated' phrases as a result of the systematic expansion of intervals. Further counterpoint is of course provided by the top line, the rhythmic pattern of which is set out opposite in

A musical staff containing a sequence of notes. The notes are grouped into measures by vertical bar lines. Labels 'A' and 'subject B' are placed above the notes to indicate different sections. The sequence starts with 'A', followed by 'subject B', then 'A', 'A', and finally 'B'.

A musical staff containing a sequence of notes. The notes are grouped into measures by vertical bar lines. Labels 'A', 'B', and 'B diminution' are placed above the notes to indicate different sections. The sequence starts with 'A', followed by 'B', then 'B', and finally 'B diminution'.

B diminution

A musical staff showing a sequence of notes. Below the notes are rhythmic markings: '4', '7', and '4'.

Example 67. For the sake of completeness the overall grouping of the semiquaver patterns is also included to demonstrate the rhythmic pattern of

Semiquaver groups C

Line 1 of musical notation for Semiquaver group C. It features a series of semiquaver notes with various accents and dynamic markings. A bracket above the first four notes is labeled with a '5'. A 'B' dynamic marking appears above the eighth note. The sequence ends with a fermata over the final note.

Line 2 of musical notation for Semiquaver group C. It continues the sequence of semiquaver notes with accents and dynamic markings. A 'B' dynamic marking is present above the eighth note.

Line 3 of musical notation for Semiquaver group C. It continues the sequence of semiquaver notes with accents and dynamic markings. A 'B' dynamic marking is present above the eighth note.

Line 4 of musical notation for Semiquaver group C. It continues the sequence of semiquaver notes with accents and dynamic markings. A 'B' dynamic marking is present above the eighth note.

Ostinato

Musical notation for the Ostinato section. It shows a short sequence of semiquaver notes, followed by a fermata over the final note.

5 5 5 8

semiquavers enforced by the ostinato against which they play. (Example 68).

Immediately this section ends on page 29 of the score, we have a simultaneous presentation of 'subject' and 'answer' which concludes the first part of the movement. After a central section (which begins on page 30 of the score) the entire first part of the whole movement is stated in retrograde + forming a definitive A1 - B - A2 pattern.

To return to the music of page 30 of the score, which comprises the 'B' section of this plan, we find, amongst certain interesting points, Messiaen's great predilection for building rhythmic cells upon primary numbers, a feature of his constructive technique already mentioned in chapter I. Here, two contrasting ideas are juxtaposed, the first one

+ It is interesting to speculate to what extent, if at all, the third movement of Berg's 'Lyric Suite' might have influenced Messiaen in the construction of this large-scale 'retrograde'. The 'Lyric Suite', written in 1926, was one of the few scores in his possession while he was a prisoner of war in Silesia during the years 1940-41. (59).

Score p 30

The musical score consists of two staves. The upper staff is in treble clef and the lower staff is in bass clef. Both staves feature complex chordal textures with various accidentals (sharps, flats, double flats) and articulation marks. Dynamics include *fff* and *pp*. A bracket labeled "Red." spans the first few measures of the lower staff. Below the staves, two groups are identified: "group 'D'" and "group 'S'". "group 'D'" is associated with a single eighth note in the lower staff, and "group 'S'" is associated with a single eighth note in the upper staff. An asterisk (*) is placed below the lower staff in the right-hand section. The text "etc" with an arrow is located in the right-hand section of the upper staff. Above the staves, there are two dashed lines with the number "8" and a bracket, indicating an eighth-note duration.

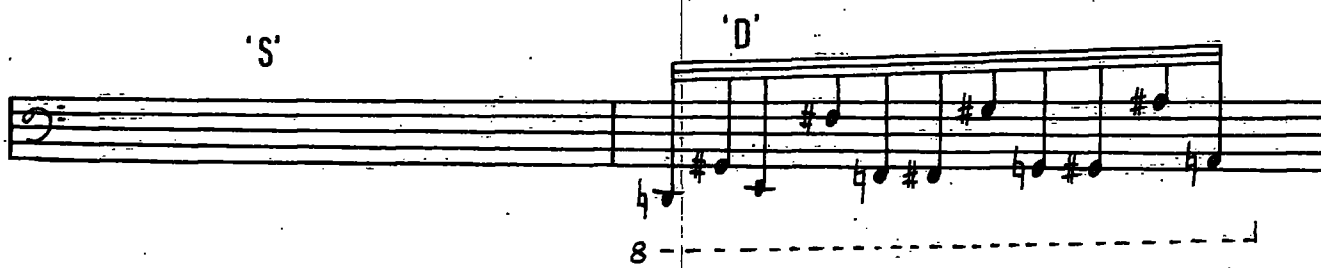
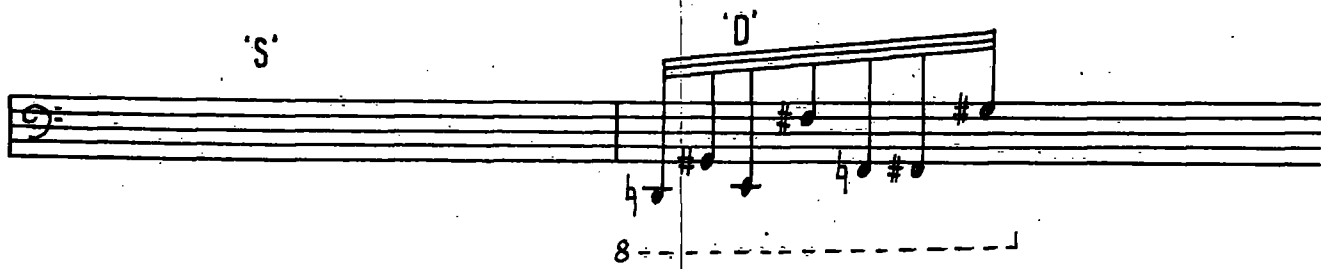
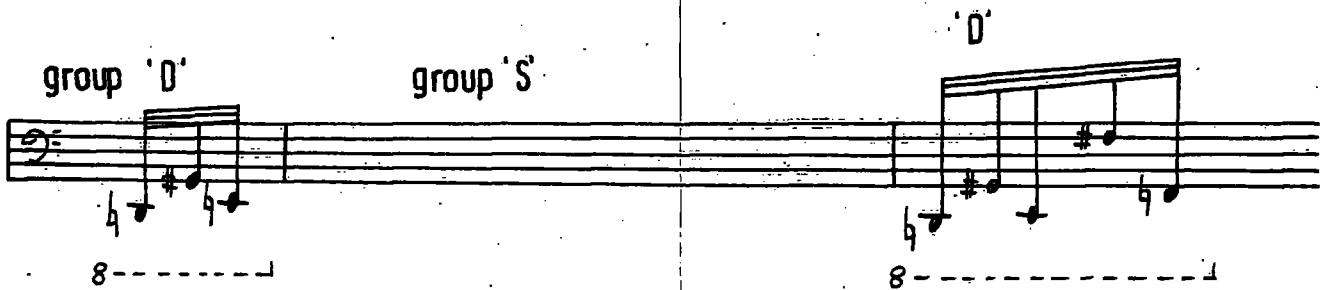
EXAMPLE 69

of demisemiquaver units and the second of canonic semiquaver movement. (Example 69) For convenience we shall call these groups 'D' and 'S' respectively.

Group 'D' expands on each appearance from the initial unit duration of three demisemiquavers to one of eleven demisemiquavers and it derives its notes from those of the



('counter - subject')



EXAMPLE 70

'counter subject'. (Example 70).

Group 'S', however, contracts on each appearance, the durations of which are 31, 29, and 23 semiquavers respectively. Owing to considerations of space, I will only point out two further structural aspects arising from this section. These are firstly an adaptation of the 'Thème d'accords', which

score p 26, bar 11

8

p

(thème d'accords concentré)

score p 30, bar 2

8


pp

etc

pp

EXAMPLE 71

incidentally appeared in a more recognizable form on page 26, bar 10 of the score, and secondly, the passage quoted as Example 71 opposite affords a further instance of Messiaen's versatile canonic technique.

After the large repetition of music in retrograde form, to which I referred earlier, and which gave us an A1- B - A2 plan to this point, we have now arrived at an extended three voice 'stretto' on the notes of the 'subject'. Throughout this 'stretto' semiquaver movement is maintained, grouped in 'threes' () and is subject to a strict, recurring permutation in 'agrandissement asymmetrique', the principle of which has already been observed. Here, however, the process is conceived on a somewhat larger scale, the length of the section being governed by the length of the permutation. This permutation equally affects all three parts.

The image displays a handwritten musical score for a voice part, consisting of 12 numbered phrases. Each phrase is written on a single staff in treble clef. The notation includes various accidentals (sharps, flats, naturals) and phrasing marks (brackets and asterisks). The phrases are as follows:

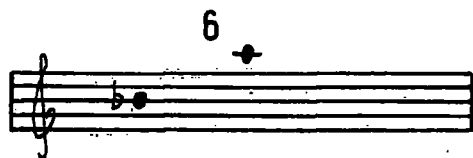
- Phrase 1: Starts with a sharp sign, followed by a sequence of notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 2: Similar to phrase 1, with an asterisk above the first measure.
- Phrase 3: Starts with a flat sign, followed by notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 4: Starts with a flat sign, followed by notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 5: Starts with a flat sign, followed by notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 6: Starts with a flat sign, followed by notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 7: Starts with a flat sign, followed by notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 8: Starts with a flat sign, followed by notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 9: Starts with a flat sign, followed by notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 10: Starts with a sharp sign, followed by notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 11: Starts with a sharp sign, followed by notes with various accidentals. An asterisk is placed above the first measure.
- Phrase 12: Starts with a flat sign, followed by notes with various accidentals. An asterisk is placed above the first measure.

score p 35 bar 12 top voice

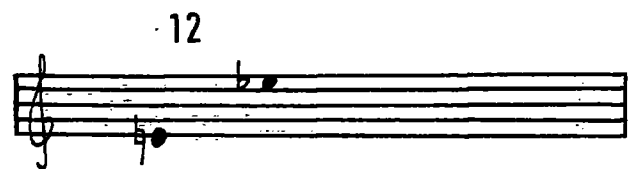
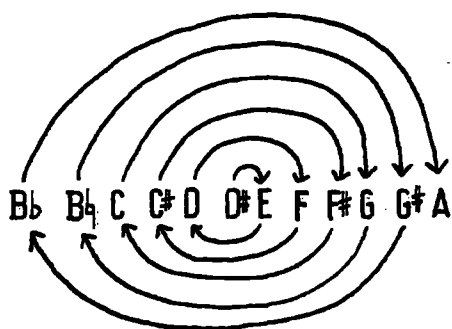
Example 72, opposite, shows how the 'permutation' affects the top voice. The orange coloured bracket frames the group of four notes which remain unaffected and constant, in this case B - natural, A - sharp, A natural and E - natural whilst the blue bracket covers a series of notes which move upwards by the interval of a semitone with each successive presentation. An asterisk indicates the first linear interval in each group which in the first bar of the example is a semitone (D-sharp - E-natural). This is followed in the second bar by a minor third (D - natural - F - natural) and by a perfect fourth (C - sharp - F - sharp) in the third bar. It will be recalled that we have already observed the generation of this sequence of intervals in the music of earlier examples + and that I labelled this particular type of interval sequence - 'spiral' permutation 1'.

+ i.e. Examples 57, 57a and 66.

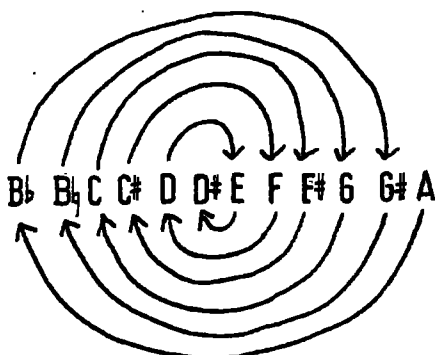
EXAMPLE 73



permutations 1 - 6



permutations 7-12



The intervals indicated by the asterisk in Example 72 are shown opposite in summary form as Example 73 and are numbered I - I2 to correspond to the twelve bars of music quoted.

It can be seen that if we continue the process shown opposite a thirteenth permutation would effect a return to the notes of the outset (D sharp and E natural). Thus this particular permutation is 'limited' by the nature of the twelve note chromatic scale to twelve possible intervallic presentations (similar intervals, but different notes) and it may be added that this form of 'limited permutation' has a precedent in Messiaen's use of 'modes of limited transposition' which, as we observed in chapter I, by their nature satisfy his need for a music that will 'éloigner le temporel' and at the same time reflect his preoccupation with what he calls the 'charm of impossibilities'. (60).

The second and third voices which complete the 'stretto' are constructed in an identical way, but begin on the notes G - natural and B - natural respectively. As with the top voice, four notes remain constant and are unaffected by the permutation. The three groups of 'fixed' notes within each

♩ = 60

pp

score p35

pp

non legato

pp

B A# A \flat E

D# D \flat C# A \flat

G F# F \flat C \flat

12 notes of chromatic scale

EXAMPLE 74

part are framed by an orange bracket in Example 74, opposite, and taken together comprise the twelve notes of the chromatic scale thus :-

B-natural	:	A - sharp	:	A - natural	:	E - natural.	Group 1
D-sharp	:	D - natural	:	C - sharp	:	A - flat	Group 2
G-natural	:	F - sharp	:	F - natural	:	C - natural	Group 3

Perhaps it might not be unreasonable to postulate, at a purely subjective level, that this 'fixed' presence of twelve notes of the chromatic scale is a symbolic reflection of the title of the movement, 'Par lui tout a été fait' + - an unchanging and Divine order around which, and from which all is created.

David Drew, however, makes the point that the adoption of these methods (i. e. permutations) governed by strictly numerical considerations, "was the outcome of Messiaen's attempt to destroy traditional thematicism and replace it by rhythmic thematicism, just as his attitude to chromaticism is a consequence of his desire to overthrow traditional tonality." (61)

The further section of music on page 37 - 38 of the score need not detain us here as its construction follows a similar pattern to that described in Example 72. The conclusion of this, however, on page 38 of the score (bar 9) prepares for an extensive thematic exposition which embodies three

+ literally 'by Him all things were made'.

score p 38 bar 10

$\text{♩} = 132$

'thème de Dieu'

7 *fff* *p*

8

Detailed description: This musical score is for a piano piece titled 'thème de Dieu'. It consists of two staves, treble and bass clef, with a common key signature of three sharps (F#, C#, G#) and a 4/4 time signature. The tempo is marked as quarter note = 132. The score begins with a dynamic of *fff* (fortissimo) and transitions to *p* (piano) after the first few measures. The music features complex chordal textures and melodic lines. A bracketed section of eight measures is indicated by a dashed line below the staff.

score p 26 bar 11

8

'thème d'accords' concentré

Detailed description: This musical score is for a piano piece titled 'thème d'accords' concentré. It consists of two staves, treble and bass clef, with a common key signature of three sharps (F#, C#, G#) and a 4/4 time signature. The score begins with a dynamic of *fff* (fortissimo) and transitions to *p* (piano) after the first few measures. The music features complex chordal textures and melodic lines. A bracketed section of eight measures is indicated by a dashed line above the staff.

EXAMPLE 75

themes : the 'Thème de Dieu', the 'Thème d'accords' and a
'Thème d'amour' which derived from the 'Thème de Dieu,'
later appears as a principal theme in the 'Turangalîla-
Symphonie' symbolising human and Divine love.

Example 75, opposite, shows Messiaen's entirely typical
technique of superimposition ; here the 'Thème de Dieu'
being juxtaposed with a section of music which first appeared
on page 26 of the score (bar II) and incorporating a
concentrated version of the 'Thème d'accords'.

On page 41 of the score, we observe at bar 13 the music which

score p 41 bar 13

mf

prime number group
[7 semiquavers]

EXAMPLE 76

5 3n 4 5 3n 4 5 3n 4 5 3n S 5 3n S S 3n S S 3n [see ex 60]

EXAMPLE 76a

forms Example 76 opposite. This makes an interesting comparison with the intervallic expansion demonstrated in Example 66. Notice how the first interval of each group forms a series which is the result of an application of 'Permutation 1' to a series of notes which receded on either side of a central E - flat. (Example 76a). Example 76 also serves to demonstrate the 'prime number' group of seven semiquavers and the 'fan-shaped' layout of the music which is a common feature in much of Messiaen's piano writing. +

On page 44 of the score, Messiaen's favourite device of

+ See, for example, the piano pieces 'Ile de feu I' and 'Cantéyodjayâ'.

score p 42 bar 10

$\text{♩} = 88$

ff

'thème de Dieu' canonic treatment

EXAMPLE 77

score p 43. bar 7.

♩ -----

ff

etc

'thème d'amour'

EXAMPLE 77a

close-canon is applied to the 'Thème de Dieu' (Example 77) after which a semiquaver reiteration of the 'Thème d'amour' (Example 77a) ushers in a rhythmic reprise of the music of page 30 of the score, and which was in part illustrated in Example 69. On this occasion, however, the demisemiquaver

score p 44, bar 9

'D' 'S' 'D'

ff *ff*

'thème de Dieu' 3 5

EXAMPLE 78 [similar to rhythmic framework of ex.70]

8

ff *pp*

31

EXAMPLE 78a [see ex.71]

transposed

'thème d'accords'

material, group 'D' in Example 69, comprises the 'Thème de Dieu'. (Example 78), and the semiquaver groups 'S' are formed from a transposition of eight notes of the 'Thème d'accords' as shown in Example 78a. That these two thematically derived units are then subjected to the same 'rhythmic clothing' as the music of Examples 70 and 71 affords us yet another instance of Messiaen's rhythmic thematicism with the new juxtaposition of apparently unrelated pitch materials.

These points then, all serve to illustrate a variety of techniques which Messiaen has brought to bear in the construction to this movement. The examples given in no way claim to be exhaustive, but adequately represent, I feel, the most significant of the many structural devices which have been employed.

The large-scale conception of 'Vingt Regards' obviously makes it impossible to deal with the very many applications of structural processes already observed. However, if in the course of this analysis the nature of these becomes evident, a detailed study of aspects of later scores, for example the 'Four Studies of Rhythm' will be considerably facilitated.

♩ = 80

score p 138

8 -----

1 p 2 3 4 5 6 7 8

cresc. 9 10 11 12 1 2 3 4

8 -----

4

A4

4

A4

EXAMPLE 79

Therefore, as a conclusion to this chapter, I cite certain other constructive techniques which Messiaen employs in 'Vingt Regards' and which will serve to amplify and consolidate our information to date.

In the opening of the eighteenth movement, 'Regard de l'Onction terrible', for instance, we have the transposition of one chord or colour which he organised to produce a symmetrical contour formed by the judicious manipulation of two musical parameters - in this event those of rhythm and pitch. Messiaen's rhythmic template for each stave is based on a series of related durations which can be approximately represented by an accelerando in the upper stave which is matched by a rallentando in the lower one. It can be further observed that, pitchwise, the chords are so disposed as to produce the effect of ascent (lower stave) and descent (upper stave). In Example 79, the opening bars of music are quoted to illustrate this chord (numbered 1) and its eleven possible transpositions (numbered 2 - 12).

The stepwise chromatic descent of the upper part is mirrored by a corresponding ascent in the lower one although the rhythmic disposition of these two strands is yet to be observed. This ordering of ascent and descent, however, helps to explain the pitch extremities at the opening of the movement.

The progressive convergence of the two musical strands follows the rhythmic template set out as shown in

Upper rhythm

EXAMPLE 80

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

12 1 2 3 4 5 6 7 8

Lower rhythm

[chords numbered as in ex 79]




2 1 12 11 10 9 8 7 6 5 4

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

Composite rhythm [non-retrograde]

Example 80, opposite, and a glance at this will show that the ascent = (roughly) the accelerando and the descent = (roughly) the rallentando.

Rhythmically, the first nineteen bars of the movement are disposed in a scheme of durations so that in the upper part, after the statement of the four groups of semiquavers, the semiquaver, marked with the blue star, represents the start of a series of durations each one of which successively increases in duration by a total value of one semiquaver. In the lower part, the duration series is reversed so that the first duration is of sixteen semiquavers and the second one of fifteen semiquavers. The numbers given above each duration refer to the component chords as shown in Example 79.

Superimposed simultaneously, these rhythms combine to produce, quite naturally, a non-retrograde resultant pattern of durations Example 80a, and although sixteen possible durations are involved, ranging from  to  the interplay of the two strands allows a maximum duration of eleven semiquavers () which occurs at the centre. (indicated by the cross).

From a Christian viewpoint, Messiaen's structural process may be seen to be a manifestation in musical terms of the descent of God's Word, incarnate in Jesus Christ to all mankind which rises, symbolically, from the depths of sin to receive it. The supreme uniqueness of this awesome event is further enhanced by a continuous crescendo which, because it endows the lower part with the greater sonority on account of register and hence timbre,

EXAMPLE 81

(battements du cœur de l'Enfant)

♩ = 160
8

EXAMPLE 82

(comme des cloches)

♩ = 126

EXAMPLE 83

(La stupeur des anges s'agrandit)

projects with the listener an illusion of *accelerando* throughout, which in turn generates an exciting momentum.

More often, however, Messiaen's compositional devices have a more immediate programmatic significance, and many bars of his output are carefully labelled as to the precise intentions behind the sentiments which the music is intended to illuminate. For example, in the eleventh 'regard', 'Première communion de la Vierge', Messiaen denotes the heartbeats of the Christ-Child by a reiterated low F - natural, built into varied rhythmic groups and veiled by pedalled arpeggios. (Example 81).

Other examples taken at random and of special programmatic significance are from 'Noël' (Example 82) where the musical texture illustrated creates a sonority reminiscent of the jubilant pealing of bells, and the 'Regard des Anges' (Example 83) where an 'agrandissement' technique is employed to project the growing astonishment of angels.

Of the numerous other examples these will suffice as representative of the superb integration of Messiaen's poetic ideas with the musical processes illustrated.

Finally, two examples of the 'orchestral' conception of much

8

fff

(trombones)

EXAMPLE 84

[thème d'accords]

$\text{♩} = 58$

8

mf

stacc.

ff

sfz

EXAMPLE 85

(comme un air de chasse,
comme des cors)

of the writing in the score : Example 84 - 'the powerful blast of immense trombones' (Regard des Anges) and Example 85, 'comme un air de chasse', the 'hunting horns' of the 'Regard de l'Esprit de joie'. In connection with this latter movement, one further point of contact with Messiaen's early Conservatoire studies can be mentioned, affording an excellent instance of how the composer has thoroughly adapted his researches in plainsong to the requirements which his rhythmic preoccupations had begun to demand. Robert Sherlaw Johnson indicates that the opening music of the 'Regard de l'Esprit de

GRADUAL Haec dies

Haec di _____ es, quam fe__cit [Dominus]

8

Detailed description: A single staff of music in treble clef. The melody begins with a quarter rest, followed by a series of eighth and sixteenth notes. The lyrics 'Haec di _____ es, quam fe__cit' are written below the staff, with a bracket under 'di' and a dashed line indicating a long note. The text '[Dominus]' is in brackets to the right. A small '8' is written below the first measure.

EXAMPLE 86

$\text{♩} = 160$

score p 58

f staccato

ff (vibrant)

f

8

Detailed description: A complex musical score with two staves. The top staff is in treble clef and the bottom staff is in bass clef. The music is in a key with one sharp (F#) and a common time signature. The top staff features a melodic line with various dynamics: *f* staccato, *ff* (vibrant), and *f*. The bottom staff provides harmonic support with chords and moving lines. A bracket groups the first two measures of the bottom staff. A dashed line with the number '8' is positioned below the bottom staff.

EXAMPLE 87

'joie' has its origin in the plainsong melody for the Easter Gradual 'Haec Dies' (62) (Example 86) and in Example 87 notice the rhythmic interest which Messiaen has imposed upon the plainchant contour. +

In conclusion to this chapter, I quote a remark made by

+ We shall later observe certain parallel procedures in the studies of rhythm, 'Ile de feu I' and 'Ile de feu II', where two Indian 'jâti's' serve a similar framework for Messiaen's 'transformation'.

score p 157

mode 2, prime

mode 2 1st transposition

EXAMPLE 88

Nicholas Armfelt (63) which, although specifically directed towards the nineteenth movement, 'Je dors mais mon coeur veille', can equally apply to the whole of the 'Vingt Regards'.

'One of the most striking things of some of Messiaen's music is that it makes one conscious that everything in it is within a context of something bigger. There is the sound behind the sound, the longer duration behind the shorter one, the slower rhythm behind the quicker one. And behind all movement there is an awareness of stillness, behind all sound an awareness of silence, and behind all measured time an awareness of eternity.'

So, too, it is that in this 'poem of mystic love' + the sounds are progressively converted into silence. (Example 88)

+ Messiaen's own description of this penultimate movement. (64)

CHAPTER 4

THE SIGNIFICANCE OF 'CANTEYODJAYA' AS A SUMMARY
OF MESSIAEN'S DEVELOPMENT UP TO 1949

CHAPTER 4

THE SIGNIFICANCE OF 'CANTEYODJAYA' AS A SUMMARY OF MESSIAEN'S DEVELOPMENT UP TO 1949

Messiaen's 'Cantéyodjayâ' was written in 1949 after the composition of the 'Turangalîla Symphonie' and shortly before the 'Quatre Etudes de Rythme'. It comes at a significant point in the composer's creative development and represents a synthesis of his work up to this time. This synthesis is perhaps most apparent when the writing in 'Cantéyodjayâ' is compared with Messiaen's preceding scores which are directly concerned with an emotional expression of the themes of love and of death. + In fact, when we come to observe the close affinity which much of the music of 'Cantéyodjayâ' shares with the piano writing in 'Turangalîla', and more especially in view of the many varying moods of which it is expressive, it would seem not unreasonable to view the work as a miniature 'Turangalîla', albeit in highly condensed form.

These 'moods' in 'Cantéyodjayâ' are conveyed to a certain extent by the writing (i.e. register, timbre and dynamics) and also by tempo factors, but Messiaen's inclusion of such singularly

+ these are 'Vingt Regards', 'Harawi', 'Turangalîla-Symphonie' and 'Cinq Rechants'.

ALBA 'avec une nostalgie passionnée'

Musical score for 'ALBA'. The score consists of two staves. The upper staff is the vocal line, marked with a forte *f* dynamic and the name 'laksmiça'. The lower staff is the piano accompaniment, featuring chords with dynamic markings *p*, *mf*, and *pp*. A dashed line with the number '8' is positioned below the piano part. An arrow points from this dashed line to a detailed view of a tritone interval.

EXAMPLE 89

A detailed view of a tritone interval on a musical staff. The interval is labeled 'tritones'. The notes are G^b and D[♯] in a bass clef.

Four musical notes with stems, followed by the text: [NB. augmented values in example 89]

laksmiça: Çarngadeva's 'deçi-tala' No. 88

EXAMPLE 89a

descriptive adjectives in the score as 'carressant', 'tendre', 'passionée', 'brutal') belies a distinctly humanist function at once characteristic of the theme of 'love'.

The 'theme of love' has very distinct overtones in 'Cantéyodjayâ' especially in the music of pages 6 and 7 of the score marked 'alba', 'avec une nostalgie passionnée'. Messiaen explains his use of this term 'alba' as follows :

'The choruses of Claude le Jeune are divided into couplets and refrains. The melodic style of 'Cinq Rechants' and the spirit which animates it is equally found in the music of the troubadours (notably Janfré Rudel, Folquet de Marseille and Guiraut de Bornelh.) In the song forms of these composers, I have especially chosen l'alba (from l'aube, which means 'dawn' in French), a song in which each sentence is terminated by the voice of a nightwatchman who announces daybreak and the separation of lovers.' (65)

Of further interest in this 'dawn-song' is a melodic insistence on the interval of the augmented fourth (Messiaen's favoured tritone) which is here spanned by the notes D-natural and A flat. (Example 89).

Alain Danielou's remarks (66) are of particular interest in this latter connection. He writes, 'modes sung at sunrise and sunset are known as 'samdhiprakasha', (twilight) rāgas. Most of them include Ri and Dha komala. '+ Perhaps Messiaen was aware of this fact and consequently chose his melodic notes with regard to their authenticity within this special context. Notice also that the lower part of the music of Example 89 is prefixed 'lakskmiṣa'. This is the name given to Çârngadeva's 88th 'deçî-tâla', the rhythm of which is indicated in Example 89a.

'Cantéyodjayâ' is a work which abounds in carefully labelled sections (e.g. 'Cantéyodjayâ', 'alba') some of which recur as couplets or refrains, and the cyclic repetition of motives resembles that in 'Turangalîla'. For example, the 'Cantéyodjayâ' motif itself occurs seven times and the 'alba' three times, whilst other sections appear but once only. In addition, subsequent statements of a 'section' are often curtailed (as the second appearance of the 'alba' on page 10 of the score) when Messiaen only wishes to recall a mood within our earlier experience and then juxtapose upon it some new, apparently unrelated material. It is further significant, as we shall see, that the motives which recur to any extent in 'Cantéyodjayâ' also happen to possess more or less dominant characteristics when

+ D-natural and A-flat.

piano

Messe de la Pentcôte Communion

organ

Turangalîla-Symphonie

piano

viewed in relation to their surrounding sections. They are of great importance because apart from their obvious cyclic function, they are easily perceived by the listener.

The music headed 'linéacourbârasa', on page 15 of the score, occurs once only in the piece and does not bear any obvious resemblance to other parts of the work. It is memorable because its placing and conception within the composition endow it with the qualities of a point of repose, occupying a similar place in 'Cantéyodjayâ' to that of the 'Jardin du sommeil d'amour' in 'Turangalîla'. It is of interest to observe, however, that the particular progression which forms the 'lineacourbarasa' is very dear to Messiaen and appears in many of his other works even if in a different form. * Perhaps the best examples of this occur in the 'Messe de la Pentecôte' (Communion, movement 4), the piano cadenza in the fourth movement of 'Turangalîla' (Example 90) and as a semiquaver 'ostinato' in the 'Amen de la Consommation' of 'Visions de l'Amen'.

A glance at the score reveals an abundance of mysterious title headings, printed in large italics, such as 'mousikâ', 'trianguillonouarki' and 'doubléafloréalîla'. None of these, however, are Çârngadeva rhythms. The latter appear in small italics in order to distinguish them. ** Although the use

* For the 'origin' of this progression in Ravel's 'Ma mère l'Oye', see note 68.

** see, for example, page 12 of 'Cantéyodjayâ'. (bars 8, 10 and 12).

these and similar terms serve to emphasise the sectional appearance presented by the score, in performance the listener is made aware of an aural cohesion, astonishing in its assurance and fascinating in communication.

In a description of the score (67), Messiaen refers to 'Cantéyodjayâ' as a 'study of rhythm' and certainly a preoccupation with rhythm is perhaps the most important single characteristic of the work. In addition to the employment of Çârngadeva's rhythms, analysis of the score reveals an enlargement of the 'upbeat-accent-termination' principle referred to in chapter 1, the use of rhythmic ostinati, added-values, and what Messiaen calls 'chromatic scales of durations'. This leads us to a very important point, in which respect the work is a real innovation : 'Cantéyodjayâ' contains a mode a durations, pitches and dynamics which is organised on a serial basis. This foreshadows a later expansion in the 'Mode de valeurs et d'intensités' (1949) rightly acknowledged as the first European work to apply a serial basis to the organisation of all available parameters. Thus 'Cantéyodjayâ' offers to the analyst, a wealth of fascinating features the more significant of which we shall attempt to discern in the course of this chapter.

Messiaen's use of Hindu rhythm as a structural element is discussed by André Hodeir in his provocative book, 'Since Debussy', and his remarks (69) will serve as a point of

[sédia - non-retrograde rhythm amplified at the centre]

Example 91 consists of three rhythmic patterns. The first pattern has four notes with a dynamic marking p on the first and f on the last, connected by a double line. The second pattern has three notes with a dynamic marking ff . The third pattern has four notes with a dynamic marking f on the first and p on the last, connected by a double line. Below these patterns, a bracketed sequence shows a quarter note with a dynamic marking p followed by the number 14, then the number 10, and finally the number 14.

EXAMPLE 91

Example 92 consists of five rhythmic patterns. The first pattern has four notes with a dynamic marking p on the first and f on the last, connected by a double line. The second pattern has two notes with a dynamic marking mf . The third pattern has three notes with a dynamic marking ff . The fourth pattern has two notes with a dynamic marking mf . The fifth pattern has four notes with a dynamic marking f on the first and p on the last, connected by a double line. Below these patterns, a bracketed sequence shows a quarter note with a dynamic marking p followed by the number 14, then the number 7, then the number 10, then the number 7, and finally the number 14.

EXAMPLE 92

departure:-

'He (Messiaen) generally builds rhythms on prime numbers (eg. 5, 7, 11, 13) and in order to vary a given rhythm, will use more complex methods than the usual augmentations and diminutions: simple asymmetry and added time values, added notes, rests, or occasionally, a dot added to one of the rhythmic cell's component notes. His rhythms are often non-retrograde, that is to say symmetrical with respect to a fixed, central time value.' An extended example of the latter principle is to be found on page 22 of the score, the music of which is marked 'sédia' - 'rythme non-rétrogradable amplifié au centre'. Here, a central three-note cell, conceived as a non-retrograde rhythmic unit, is flanked by two surrounding symmetrical rhythmic units, the second of which is the retrograde of the first. (Example 91) Dynamic levels, it will be noticed, are also subjected to the palindrome plan with the central unit always remaining at the centre of the arch, accordingly modified to an 'fff' dynamic on its last presentation. This conscious use of dynamic symmetry is related to the principle of 'upbeat-accent-termination', the effect of which we shall observe in the course of analysis.

The expansion of the non-retrograde unit (shown in example 91) is accomplished by simply inserting rhythmic blocks of identical pitch on either side of the central unit, whilst at the same time adding a further dynamic dimension to the passage concerned.

EXAMPLE 93

(+NB-added value)

Musical staff 1: A single staff with a treble clef and a 6/8 time signature. It contains a sequence of notes: a quarter note G4, a quarter note A4, a quarter note B4, a quarter note C5, a quarter note B4, a quarter note A4, a quarter note G4, a quarter note F#4, and a quarter note E4. There are accents (<) above the first three notes, a slur over the last three notes, and a dynamic marking of *ff* above the final note. There are also some small markings below the staff, including a '+' and a '-'.

Musical staff 2: A single staff with a treble clef and a 6/8 time signature. It contains a sequence of notes: a quarter note G4, a quarter note A4, a quarter note B4, a quarter note C5, a quarter note B4, a quarter note A4, a quarter note G4, a quarter note F#4, and a quarter note E4. There are accents (<) above the first three notes, a slur over the last three notes, and a dynamic marking of *ff* above the final note.

Musical staff 3: A single staff with a treble clef and a 6/8 time signature. It contains a sequence of notes: a quarter note G4, a quarter note A4, a quarter note B4, a quarter note C5, a quarter note B4, a quarter note A4, a quarter note G4, a quarter note F#4, and a quarter note E4. There are accents (<) above the first three notes, a slur over the last three notes, and a dynamic marking of *ff* above the final note.

[Regard de l'Eglise d'amour]

(Example 92). The subsequent expansion and structure of this section is best observed by setting out the units in terms of durations relative to the lowest common denominator thus :-

durations in demisemiquavers

i) 14 + 10 + 14 ii) 14 + 7 + 10 + 7 + 14

iii) 14 + 7 + 8 + 10 + 8 + 7 + 14

iv) 14 + 7 + 8 + 14 + 10 + 14 + 8 + 7 + 14

This helps to explain why Messiaen dispenses with time signatures, his rhythmic working, as Drew points out, (70) being intended to supplant the cadential impulse, and to provide with the aid of polyrhythm, the impression of expansion and completion that may no longer be inherent in the harmony.

It is of interest to observe that in the opening of the final movement of the 'Vingt Regards' ('Regard de l'Église d'amour') there is a similar amplification of a rhythmic cell, although the conception here is of a more elementary nature. (Example 93).

We have already witnessed in the analysis of the sixth movement of 'Vingt Regards' (Par Lui tout a été fait) Messiaen's extraordinary predilection for constructing rhythmic cells or patterns of durations upon prime numbers. This love of his can be demonstrated in his own writings :

[gamme chromatique des durées, droit et rétrograde]



UPPER VOICE



LOWER VOICE

'When I was a child, I already liked prime numbers, which because of the simple fact that they are not divisible into equal fractions, release a hidden force - and you know also that Divine power isn't divisible either' (71)

On page 13 of 'Cantéyodjayâ', there is a section of music marked 'Modéré-gamme chromatique des durées, droite et rétrograde', in fact the 'chromatic scale of durations' to which I referred earlier in this chapter. The music is constructed as a two-part rhythmic canon, the upper voice of which is the rhythmic retrograde of the lower one, producing a similar resultant pattern to the opening music of the 'Regard del'Onction terrible', already quoted as Example 80 in chapter three. In the 'Cantéyodjayâ' extract, each successive duration either increases (in the case of the upper part) or decreases (in the lower) by the addition or subtraction of a simple demisemiquaver value. (Example 94). This structure does not reveal at once any obvious relationship with a system of durations based upon primary numbers. However, let us look more closely at this passage.

The upper voice, unlike the lower, consists of one melodic cell of seven notes which happens to repeat the two notes

[gamme chromatique]

black numbers indicate durations in demisemi-quavers

8

pp 1 4 8 p

11

mf 15 18 cresc.

ff 22 più f

EXAMPLE 95

D-sharp and C-sharp at different octaves. The two D-sharps and the two C-sharps are of course distinct from one another and a glance at Example 95, shown opposite, will make this clear. With each repetition of the cell, here indicated by blue brackets, the duration of each corresponding note increases by seven units, there being seven notes.

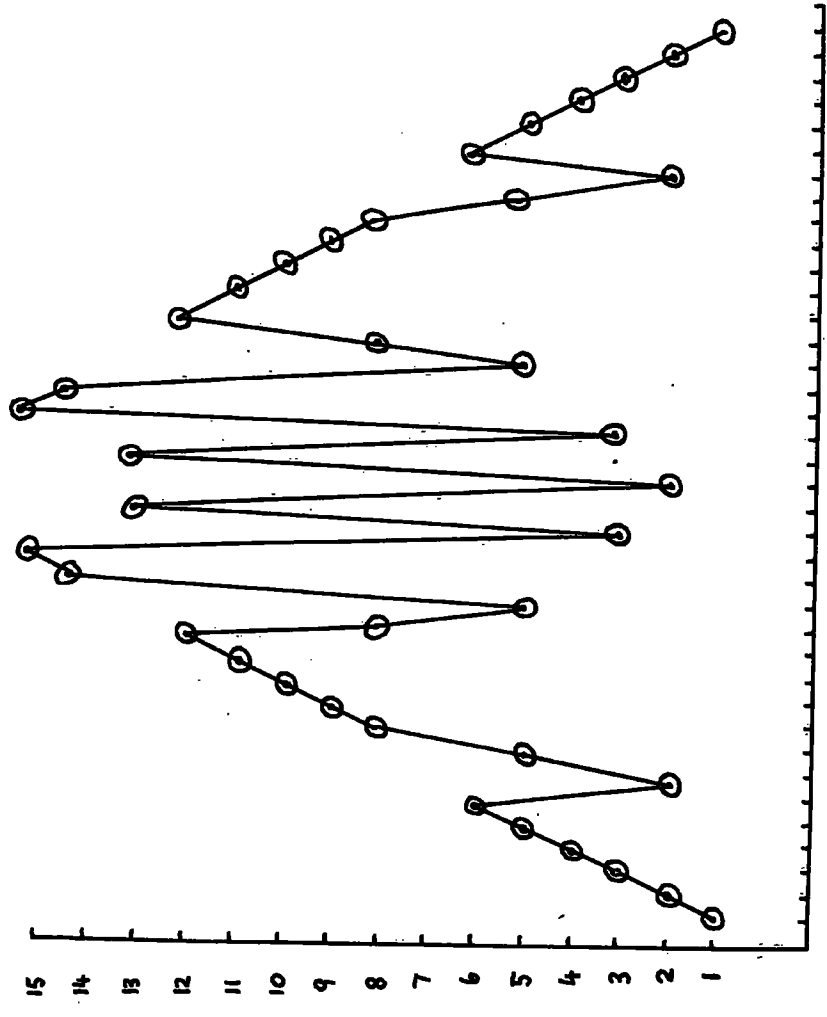
The music of the lower part is constructed from twelve notes of the chromatic scale, treated as we have described, as a rhythmic retrograde of the upper part. Moreover, Messiaen's arrangement of these twelve notes is by no means arbitrary, the scale being constructed in order to produce a set of 'non-retrograde' intervals thus:-

A-natural		
B-flat	.....	semitone
B-natural	.....	semitone
C-sharp	.....	tone
C-natural	.....	<u>semitone</u>
D-natural	.....	tone
D-sharp	.....	<u>semitone</u>
F-natural	.....	tone
E-natural	.....	<u>semitone</u>
F-sharp	.....	tone
G-natural	.....	<u>semitone</u>
G-sharp	.....	semitone

We shall see later how this 'row' makes an interesting comparison with that used in the 'Interversion' structure in the piano work 'Ile de Feu II'.

The composite rhythm produced by the two canonic parts is quoted

composite
rhythm



durations

EXAMPLE 96

no. of note

opposite as Example 96 and for convenience I include this as a graphical representation which will serve to clarify the palindrome resultant.

A continuation of this musical texture which occurs later in the work (on page 18) is simply a re-statement of the second half of the music already partly quoted in Example 95.*

* see page 13 of the score at bar 15.

We have already observed on page 92 of this chapter, Messiaen's indebtedness to the song-forms of the troubadours and especially to the 'couplet-refrain' structure found in the works of Claude de Jeune. + Furthermore, this same 'couplet-refrain' plan is the most frequent form employed by the 17th century clavecinists in their instrumental rondeaux where, by describing the refrain as 'A' and the different couplets as 'B', 'C' and 'D' (etc.) we evolve the following plan:

A B A C A D A

Historically speaking, each refrain comprised a well-marked strain of 8 or 16 measures with the interspersed couplets providing a contrast of key, figuration or mood. In 'Cantéyodjayâ', Messiaen has chosen to employ three 'refrains' with three corresponding 'couplets' and these are clearly marked in the score as 1st, 2nd or 3rd refrain and 1st, 2nd or 3rd couplet. A historical link with the clavecinists is thus clearly manifest. What is, however, of greater interest is the way in which Messiaen disposes these couplets and refrains in the overall context of the work and additionally, his treatment of the musical materials which actually comprise them.

For our present purposes we will ignore Messiaen's use of Çârngadeva rhythms in 'Cantéyodjayâ' and by so doing, the names of those which he carefully quotes, as stated earlier,

+ Messiaen's 'Cinq Rechants', for example have a historical prototype in Claude de Jeune's 'Le Printemps'.

CANTÉYODJAYÂ

Cantéyodjayâ

djayâ

Cantéyodjayâ

djayâ

Cantéyodjayâ

râgarhanakî

Cantéyodjayâ

alba

Cantéyodjayâ

MODÉRÉ (mode de durées, de hauteurs et d'intensités)

Cantéyodjayâ

alba

FIRST REFRAIN doubléafloréalîla

SECOND REFRAIN mousikâ

THIRD REFRAIN trianguillonouarkî

FIRST COUPLET

{ plisséghoucorbélinâ
bocléadjayakî
globouladjhamapâ

MODÉRÉ (gamme chromatique des durées)

FIRST REFRAIN doubléafloréalîla

SECOND COUPLET

{ soufflinâ linéacourbârasa
piccoulanéki collinâlaya

MODÉRÉ (gamme chromatique des durées)

SECOND REFRAIN mousikâ

THIRD COUPLET

{ colonnoulévalaghou
grénouditâ statoua
loudjéa potançiaourou
sédia

FIRST REFRAIN doubléafloréalîla

râgarhanakî

THIRD REFRAIN trianguillonouarkî

Cantéyodjayâ

alba

in small italics in the score. This leaves large number of terms which do not describe Çârngadeva rhythms but which in fact identify musical sections endowed with specific and recognisable characteristics. These sections are set out opposite in Example 97 to demonstrate the groundplan of the composition.

What is at once apparent from this example is the way in which the 'Cantéyodjayâ' music functions as a form of refrain in the opening pages of the score. This fact is very easily perceived by the listener, the more so on account of the contrasted musical material which Messiaen chooses to intersperse - 'djayâ', 'râgarhanakî', 'alba' and the 'mode de durées, de hauteurs et d'intensités'. We can further observe from the music that these latter sections function as 'couplets' to the 'Cantéyodjayâ' 'refrain' and that each couplet is chosen to emphasise a specific and characteristic musical feature. Thus 'djayâ' is concerned with monody while 'alba' is the expression of accompanied melody. Similarly, whereas 'râgarhanakî' is directly concerned with a chordal exposition of 'upbeat-accent-termination', the 'mode de durées, de hauteurs et d'intensités' is a fascinating section concerned with the adoption of a serial process to parameters of duration, pitch and intensity. Both of these latter sections will be discussed more fully in the course of this chapter.

An expansion of this opening 'refrain-couplet' structure now appears with the presentation of the three contrasted refrains 'doubléafloreâlîla', 'mousikâ' and 'trianguillonouarkî' which recur in the course of the work as shown in the example.

1st refrain — doubléafloréalîta

16.....

p *più f* *P* *più f*

8.....

2nd refrain — mousikâ

16.....

f *pp* *f* *f* *pp*

8.....

3rd refrain — trianguillonouarkî

9

ff *sfz* *ff* *sfz*

8.....

Cantéyodjayâ

p *f* *p* *f*

The first refrain, 'doubléafloréalîla' (un peu lent et tendre) is essentially melodic and decorative whereas, in complete contrast, the third refrain 'trianguillonouarki' (un peu vif) is savage and abrupt in effect. 'Mousikâ', the second refrain, is a hushed mystery of extreme sonorities, varied dynamic interplay and stepwise chromaticism. Example 98, shown opposite, serves to illustrate these musical qualities in stave-form and by way of providing a more complete picture, I include the first bar of the 'Cantéyodjayâ' refrain as an interesting comparison. Finally, the music of the 1st, 2nd and 3rd couplets is made up of extremely varied writing, some of which, as we shall see, + has been freely adopted from Messiaen's earlier works.

Messiaen's 'mode of durations, pitches and intensities', found on page 8 of the score, is perhaps the most highly organised in terms of a serial approach to various parameters of anything that Messiaen had attempted up to that time. Briefly, the three staves of music are written according to a pre-conceived plan which organises durations, pitches and dynamics on a serial basis. The eight notes which comprise each strand, however, are drawn from Messiaen's seventh mode, unlike the fully twelve-tone composition, 'Mode de valeurs et d'intensités', but it is significant that the aural effect of this process in each of these two works is remarkably similar. This can, to some extent, be attributed to an identical texture.

+ See, for example, examples 106 and 107.

score p. 8

Line 1

pp pp pp pp ff ff ff ff

Musical staff for Line 1, treble clef, 4/4 time signature. The staff contains eight measures of music. The notes are: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter), F4 (quarter). The notes are marked with various accidentals: G4 has a flat, A4 has a sharp, B4 has a flat, C5 has a sharp, B4 has a flat, A4 has a flat, G4 has a flat, and F4 has a flat. There are slurs over the first four notes and the last four notes.

Fingering for Line 1: 1 2 3 4 5 6 7 8

[durations]

Line 2

mf mf f f p p f f

Musical staff for Line 2, treble clef, 4/4 time signature. The staff contains eight measures of music. The notes are: G4 (quarter), A4 (quarter), B4 (quarter), C5 (quarter), B4 (quarter), A4 (quarter), G4 (quarter), F4 (quarter). The notes are marked with various accidentals: G4 has a flat, A4 has a flat, B4 has a flat, C5 has a sharp, B4 has a flat, A4 has a flat, G4 has a flat, and F4 has a flat. There are slurs over the first four notes and the last four notes.

Fingering for Line 2: 1 2 3 4 5 6 7 8

Line 3

ff ff ff ff pp pp ff pp

Musical staff for Line 3, bass clef, 4/4 time signature. The staff contains eight measures of music. The notes are: G3 (quarter), F3 (quarter), E3 (quarter), D3 (quarter), C3 (quarter), B2 (quarter), A2 (quarter), G2 (quarter). The notes are marked with various accidentals: G3 has a flat, F3 has a flat, E3 has a flat, D3 has a flat, C3 has a sharp, B2 has a flat, A2 has a flat, and G2 has a sharp. There are slurs over the first two notes and the last two notes.

Fingering for Line 3: 8 7 1 2 5 6 3 1 2 4

in Example 99, shown opposite, the construction of the 'mode des durées' in 'Cantéyodjayâ' is set out to demonstrate the organisation of each of the three staves which comprise the music. Notice how each line is made up of eight possible durations which in turn are based upon different time units : hence the upper part comprises multiples of demisemiquavers, the central part, semiquavers, while the lowest part utilizes quavers. It is therefore evident that the upper part moves more quickly than the lower, for example, the net result being one of three differing 'tempi' brought into close juxtaposition so as to move forward together in their own rates of time flow.

Cantēyodjayâ p. 8

Musical score for Cantēyodjayâ p. 8. The score is written for piano and consists of three staves. The top staff is in treble clef, the middle in treble clef, and the bottom in bass clef. The key signature has one flat (B-flat). The first measure of the top staff is marked *pp*. The second measure of the top staff is marked *ff*. The middle staff has a *p* dynamic in the second measure and a *mf* dynamic in the fourth measure. The bottom staff has a *ff* dynamic in the first measure. The score includes various musical notations such as slurs, ties, and accidentals.

Mode de valeurs p. 1

Musical score for Mode de valeurs p. 1. The score is written for piano and consists of three staves. The top staff is in treble clef, the middle in treble clef, and the bottom in bass clef. The key signature has one flat (B-flat). The first measure of the top staff is marked *PPP*. The second measure of the top staff is marked *ff*. The third measure of the top staff is marked *f*. The fourth measure of the top staff is marked *ff*. The fifth measure of the top staff is marked *mf*. The middle staff has a *sff* dynamic in the second measure, a *mf* dynamic in the third measure, a *mf* dynamic in the fourth measure, a *p* dynamic in the fifth measure, and a *pp* dynamic in the sixth measure. The bottom staff has a *ff* dynamic in the fourth measure. The score includes various musical notations such as slurs, ties, and accidentals.

Example 10D serves to show the opening layout of this music and to afford a textural comparison with the opening of the 'Mode de valeurs et d'intensités'.

In a cursory description of 'Cantéyodjayâ', (67) Messiaen refers to the principle of 'upbeat-accent and termination' which he employs and which we mentioned in Chapter I. This he has evolved from a study of Greek metre, plainchant, and in particular the music of Mozart with its 'masculine and feminine' note groups. Messiaen explains : -

'The first comprise a single volley, finishing in a heap, exactly like a masculine character ; they make up a preparatory period called 'l'anacrouse'. A summit more or less intense is 'l'accent', and a falling back, more or less weak is 'la muette' or 'la désinence', formed by one or many sounds, by one or many durations.'

In 'Cantéyodjayâ', the 'râgarhanakî' section of music on page 5 of the score illustrates this principle, a subtle distinction in the sounds marked 'muette' and 'désinence' being apparent to the listener on account of the interval spacing of the note groups which make these up. This expansion of the 'tension-relaxation' principle echoes the threefold concern of Renaissance polyphonists towards their treatment of dissonance : namely, that preparation and resolution both take place on the weak accent whereas the actual

Cant éyodjayâ p.5

râgarhanakî

A musical score for two staves. The top staff is in treble clef with a key signature of two sharps (F# and C#). The bottom staff is in bass clef with a key signature of two flats (Bb and Eb). The music consists of eighth and sixteenth notes with various accidentals. A dynamic marking 'mf' is present in the first measure of the top staff. There are several slurs and accents throughout the piece.

EXAMPLE 101

A musical score for two staves. The top staff is in treble clef with a key signature of two sharps. The bottom staff is in bass clef with a key signature of two flats. The music consists of chords and dyads. The text 'thème d'accords' is written to the right of the staves.

Turangalîla p.52

A musical score for two staves. The top staff is in treble clef with a key signature of two sharps. The bottom staff is in bass clef with a key signature of two flats. The music consists of eighth and sixteenth notes with various accidentals. A dynamic marking 'fff' is present in the first measure of the top staff. There are several slurs and accents throughout the piece.

EXAMPLE 102

dissonance is sounded on a strong one. Let us now consider the 'râgarhanakî' music.

The first point to notice and before any other considerations is that the music of this section is evolved from the 'thème d'accords' of the 'Turangalîla-Symphonie' and this is illustrated opposite, together with a relevant piano passage from the 'Chant d'amour I' movement. (Examples 101 & 102). Observe how the chord structure of both these examples is identical albeit transposed by two octaves. Now the piano writing in 'Turangalîla' was conceived in advance of 'Cantéyodjayâ' and this may lead one to postulate that the harmonic outline of the 'thème d'accords' was not necessarily constructed with a view to the exposition of an 'anacrusis-accent' principle. However, what emerges from the 'Cantéyodjayâ' extract is the superimposition of a rhythmic pattern, the 'râgarhanakî' rhythm, upon a melodic one, the 'thème d'accords'.

We have already observed that the technique of superimposing unrelated ideas, regarded as complete within themselves is not strange to Messiaen's aesthetic and in a similar way, the theoretical ordering of pre-existent material does not create an incongruous situation. Rather, the primary conception is enhanced by the addition of some new dimension which illuminates the material under review without in any way detracting from the essential characteristics of that material.

râgarhanakî score p.5

The image displays a musical score for the râgarhanakî, page 5. It consists of two systems of staves, each with a treble and bass clef. The first system is marked with a '1' and includes annotations such as 'mf (anacrouse) (accent) (muette)', '2 (anacrouse)', and '3 (accent) (muette)'. The second system is marked with a '3' and includes annotations such as '4 (accent)', '5 (désinence)', and '(anacrouse)'. The score features various musical notations, including notes, rests, and dynamic markings, with some notes grouped by brackets and others marked with accents or slurs.

Let us now turn to a consideration of Messiaen's expansion of the principle of 'upbeat-accent-termination' in the 'râgarhanakî' music.

In the first two bars, the duration of the accented chord is always greater than the value of the termination and it either equals or exceeds the total value of the upbeat. These bars may be expressed rhythmically thus :-

$$\frac{5 + 5 + 4}{\text{♩}} \qquad \frac{11 + 13 + 10}{\text{♩}}$$

The distribution of these durations endows the accent with a certain prominence which is further enhanced by an important harmonic consideration ; namely that the wider interval structure of the accent chords, as compared with the flanking chords on either side, generates a greater range of frequencies, relatively speaking, and this is at once aurally perceptible. (Example 103) Furthermore, the phrasing of the music plays an important part and sensitive performance can hardly fail to observe the accent where it is placed. Why then, the need for the composer's carefully inserted instructions? The answer to this question can clearly be found in the long duration of the third phrase of 'râgarhanakî' which provides an overriding accent, thereby changing an accent into an upbeat. To place an accent on the third chord of the third bar, where the listener might expect it to fall in terms of his experience of the music of the first two bars, would clearly have the effect of destroying Messiaen's intention. In this example the experience

of upbeat-accent-termination as a musical entity in the first bar becomes transformed into an upbeat in terms of the musical experience of bar two, where the accent chord, as we have seen, is of longer duration than in bar one. The extensive phrase in the third bar in turn endows the musical experience of the second bar with that of an upbeat also, so that in effect a performance of these first three bars engineers, in retrospect, a large cumulative upbeat to the real accent in the fourth bar and its termination in bar five.

Before leaving these 'râgarhanaki' chords, it is of interest to witness yet further devices of superimposition in a 'reprise' of this music on page 22 of the score (marked potançagourou) and a

Example 104 is a musical score for two staves. The top staff features a series of chords with dynamic markings of *f* and *fff*. A bracket labeled "superimposition" spans the first two measures. The bottom staff contains a melodic line with dynamic markings of *f* and *fff*. A bracket labeled "superimposition" is placed below the bottom staff, corresponding to the first two measures. Both staves include eighth-note patterns and various accidentals.

'râgarhanakî' chords

EXAMPLE 104

Example 105 is a musical score for a single staff. It features a series of chords with dynamic markings of *fff*. A bracket labeled "superimposition" spans the first two measures. The score includes performance instructions: "(anacrouse)" under the first measure, "(accent)" under the second measure, and "(muette)" under the third measure. A bracket labeled "superimposition" is placed above the first two measures. The staff includes eighth-note patterns and various accidentals.

EXAMPLE 105

perhaps more obvious final statement of page 25. (Examples 104 and 105).

We have already observed Messiaen's use of the 'thème d'accords' from 'Turangalîla' in the music of 'râgarhanakî' in 'Cantéyodjayâ', and it would therefore seem an opportune moment to point out numerous further instances of his 'self-borrowings' in the work. For example, the music headed 'plisséghoucorbélinâ', on page II,

score p.11

plisséghoucorbâlină

EXAMPLE 106

(caressant)

Turangalîla p.345/346

boucléadjayakî , score p.12

EXAMPLE 107

Turangalîla p277

and the section described as 'boucléadjayaki', on page 12 of the score can be found in different parts of the 'Turangalila-Symphonie' as shown in Examples 106 and 107 opposite. However, other works are also echoed in 'Cantéyodjayâ' and

Collinâlaya

A musical score for 'Collinâlaya' consisting of two staves. The upper staff features a melody with notes marked with accents (>) and various accidentals (sharps, flats, and naturals). The lower staff provides a harmonic accompaniment with chords and single notes, also marked with accents. The notation is presented as a transposed version of the original piece.

(transposed)

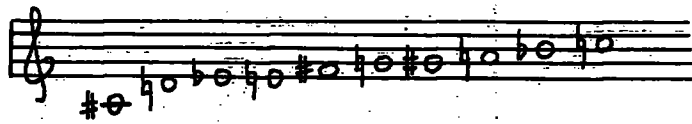
'Vingt Regards' - 'thème d'accords'

A musical score for 'Vingt Regards' - 'thème d'accords' consisting of two staves. The upper staff contains a sequence of four chords, each marked with a sharp sign (#). The lower staff contains a sequence of four chords, each marked with a flat sign (b). The notation is presented as a chordal theme.

EXAMPLE 108

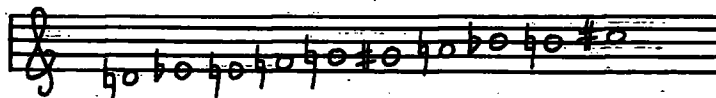
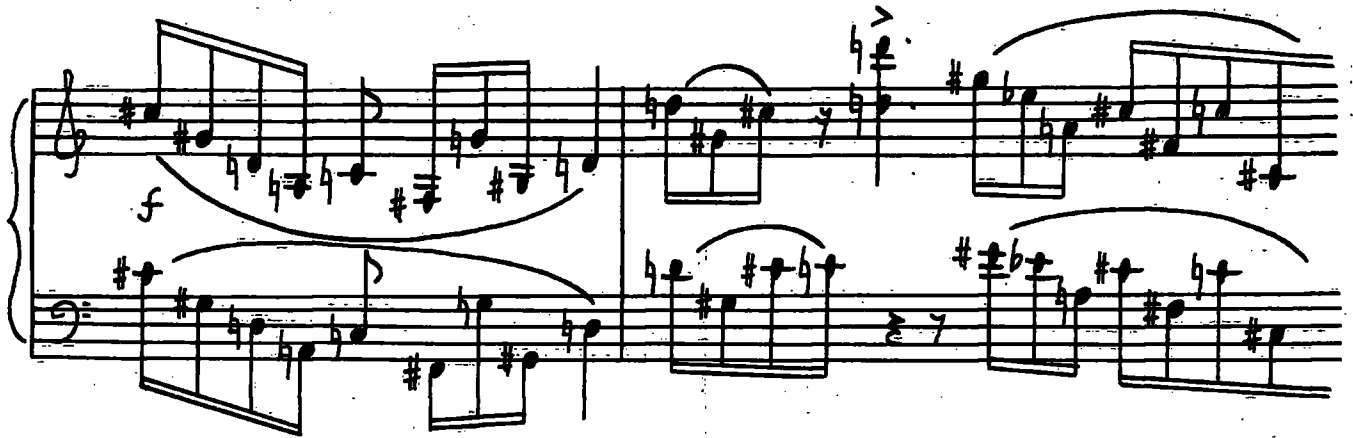
in this respect the work is a true synthesis of much of Messiaen's earlier writing. Thus the 'thème d'accords' from 'Vingt Regards sur l'Enfant-Jésus' comprises the chord structure of part of the 'Collinâlaya' music of page 17 as can be seen in Example 108, opposite.

Analysis of parts of 'Cantéyodjayâ' reveals that much of the composer's harmonic and melodic thought has been drawn from the seventh mode of limited transpositions. The 'djayâ' music of the opening page of the score shows a juxtaposition of three transpositions of this mode, all of which allow the inclusion of the note D-natural. It is of interest to observe how the tritone

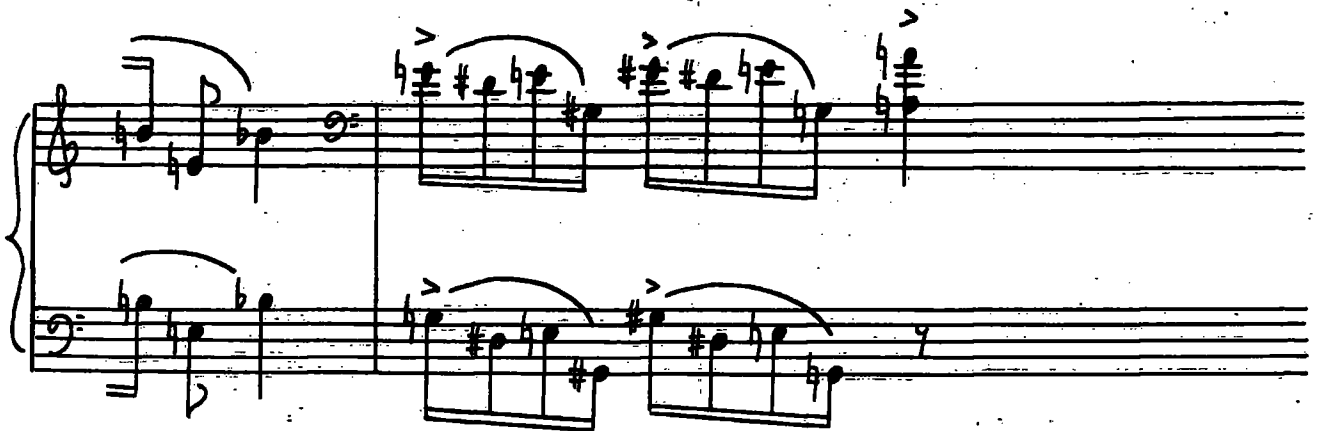


mode 7: 1st transposition

djayâ



mode 7: 2nd transposition



EXAMPLE 109

(framed by notes D-natural and G-sharp) assumes melodic importance, and in this respect the music echoes the ensuing 'alba' section, already discussed earlier in this chapter. (Example 109) This example also affords a good instance of an extended melodic idea which reflects the many other occurrences of pure monody in Messiaen's music. +

+ See for example the 'abîme des oiseaux', ('Quatuor pour la fin du Temps') and 'Alléluias sereins', ('L'Ascension').

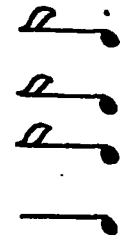
A later example of 'hármonic litanies' is shown opposite in Example 110 and the chord structure of the extract is afforded by the notes of the seventh mode, here in the second transposition.

In a short article on 'Cantéyodjayâ', Colin Mason has pointed out (72) that the various 'sections' of the work 'develop' one from another with increasingly complex relationships, direct and implied. It would, however, be dangerous to assume this statement as being indicative of truly organic growth or development at least in a conventional sense. The techniques which Mason refers to are essentially those of camouflage, of the presentation of the same ideas in new surroundings.

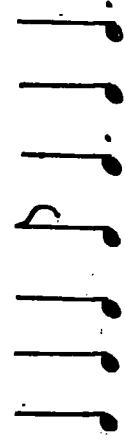
We have already observed an obvious relationship between the 'djayâ' and the 'alba' music of 'Cantéyodjayâ' where the presence of the melodic augmented fourth outlined by the notes D-natural and A-flat (G-sharp) is all important. Similarly, a glance at the 'globouladjhamapâ' section on page 12 of the score, reveals an obvious affinity with the chords of 'Collinâlaya', quoted in Example 108. In the 'globouladjhamapâ' music, the conception is predominately a rhythmic one, two Çârngadeva rhythms 'gajajhampa' and 'simhavikrama' being set in a juxtaposition upon which is superimposed three fragmentary chords. (Example 111).

globoulad jhamapā [score p. 24]

The musical score consists of three systems of staves. The first system includes a piano part with a **ff** dynamic marking and a melodic line with a **gajajhampa (augmented values)** bracket. The second system features a **SimhaviKrama** section with a **(diminution)** bracket. The third system concludes with a **fff** dynamic marking and an **8** measure rest. The score is written in a complex rhythmic notation with various accidentals and dynamic markings.



gajajhampa



'simhaviKrama'

These chords provide an accelerative urgency to the music on account of their skilful positioning, and the whole texture is so integrated as to blend naturally with a further rhythmic expansion which embodies the 'deçî-tâlas' 'Candrakalâ' and 'Râgavardhana' respectively. A fortissimo rhythmic climax is then most magically released with the music of the 'gamme chromatique' which starts in a hushed sonority at the extreme registers of the keyboard. This is typical of many such changes of mood in the score and has been conceived by the composer with singular precision for an effective contrast of musical ideas throughout.

A reference to the 'first refrain', 'doubléafloréalîla', on page 25, shows that the ostinato structure embodies the three fragmentary chords of Example III and that the melodic outline of these, framed by the tritone intervals in parallel

Musical score for piano, measures 8-11. The score is written for a grand piano with a treble clef on the upper staff and a bass clef on the lower staff. The key signature has one sharp (F#) and one flat (Bb). The dynamic marking is **fff** (fortissimo). The music consists of a melodic line in the treble clef and a harmonic accompaniment in the bass clef. The treble clef line features a series of chords and intervals, with a slur over the first two measures. The bass clef line features a series of chords and intervals, with a slur over the first two measures. The score is framed by dashed lines with the number 8 at the top and bottom.

Musical notation for a treble clef staff showing a chord labeled **A4**. The chord consists of the notes G#4, A4, B4, and C5. Arrows point from the label **A4** to the G#4 and A4 notes.

Musical notation for a bass clef staff showing a chord with notes G#2, A2, B2, and C3. The chord is a fragmented chord, with the notes G#2 and A2 beamed together.

fragmented chords from ex. 111

movement, is immediately reminiscent of the 'alba' melody of Example 89. This is demonstrated in Example 112, opposite.

Within the course of the composition there occur two sections of canonic writing, and the first of these, which incidentally leads directly into the second, is strongly reminiscent of the 'toccata-like' conclusions of each of the 'Ile de feu' studies. This similarity is most evident in the use of a limited number of

Vif

8

The musical score is written for a violin and piano. The violin part is in the upper staff, marked *mf staccato*, and consists of a series of eighth notes with various accidentals. The piano part is in the lower staff, marked *ff*, and features a bass line with dotted rhythms and eighth notes. The piece is in 4/4 time and is labeled 'Vif' and 'rhythmic canon'. The score is enclosed in a bracket on the left side. There are two dashed lines with the number '8' at the top and bottom of the score, indicating the number of measures.

rhythmic canon

EXAMPLE 113

repeated notes. (Example 113). The second canonic section is short and exciting, the interplay of six voices giving rise to frequent unisons within what is essentially a three-part texture.

EXAMPLE 114

p.23

"Ile de feu" p.3

EXAMPLE 115

Two final examples from the score serve to demonstrate some of the varied 'patterning' in the piano writing. Messiaen himself refers to the 'fan-shaped hand positions' (67) given opposite in Example 114, and Example 115 shows the highly typical device of superimposition of 'black-upon-white notes' with a supporting example from the study of rhythm, 'Ile de feu 1'.

'Cantéyodjayâ', then, is a work with close spiritual affinities with 'Turangalîla' : it is furthermore a work couched in the same language and expressive of the same sentiments. In 'Cantéyodjayâ', Messiaen has summed-up in a concise way much that is highly expressive of his preoccupations with the 'theme of love' in the compositions up to 1949 and its completion marks an important turning point in the composer's immediate interest. This interest, as we know, was to take the form of manifestations of serial and permutational techniques which first appeared in an organized form in the rhythmic study, 'Ile de feu 2' and later reached a point of ultimate precision in the non-tonal 'Livre d'Orgue' of 1951.

CHAPTER 5

SERIES, PERMUTATIONS AND COLOUR : THE FOUR STUDIES
OF RHYTHM. 1949/1950.

CHAPTER 5

SERIES, PERMUTATIONS AND COLOUR : THE 'FOUR STUDIES OF RHYTHM.' 1949/1950

The title 'Four Studies of Rhythm' is a collective one given to the four piano works, 'Neumes rythmiques', 'Mode de valeurs et d'intensités', 'Ile de feu 1' and 'Ile de feu 2'. 'Neumes rythmiques' was composed in 1949 at Tanglewood, Massachusetts, where Messiaen also completed 'Cantéyodjayâ', and 'Mode de valeurs et d'intensités' was written in Darmstadt during the same year ; the latter is rightly acknowledged as the first European work to employ a serial approach to musical parameters other than pitch. That is simply to say that in addition to pitch, the further dimensions of dynamics, attack and note-duration are controlled with regard to the serial process. The titles of the remaining two pieces, 'Ile de feu 1' and 'Ile de feu 2', belie a musical similarity which is indeed evident to the listener perhaps on account of the vaguely programmatic nature of the writing. Both compositions carry the same dedication to 'La Papouasie', an ancient French name for one of the three territories comprising the Pacific island of New Guinea and now a part of Australian New Guinea. Owing to the singular dedication of the 'Ile de feu' studies, a short description of the island will not, I feel, be inappropriate

presque vif
(martelé)

[centred on E]

The main musical score consists of two staves. The upper staff begins with a dynamic of *f* and a sharp sign (#). It contains several notes with accents (>) and a crescendo hairpin. The lower staff starts with a dynamic of *f* and a sharp sign (#), followed by a section marked *ff* with a greater-than accent (>). Below the lower staff, there are performance markings: *p*, *mf*, *f*, *mf*, *f*, and *ff*, each with a greater-than accent (>). A dashed line with the number 8 below it spans the final portion of the score.

A musical staff showing notes with a sharp sign (#) and a dynamic of *f*. Below the staff are the letters 'S' and 'S'.

A musical staff showing notes with a sharp sign (#) and a dynamic of *f*. Below the staff is the letter 'A4'.

A musical staff showing notes with a sharp sign (#) and a dynamic of *f*. Below the staff are the letters 'S', 'S', and 'S'.

to our purpose :

'Isolated because of its remoteness from centres of civilisation and because of the difficulty of access through dense jungle, New Guinea is a museum of primitive populations, and the tribal inhabitants live in small, fortified villages owing to the frequency of tribal warfare. A long chain of ridges and volcanic rocks originating in erupting volcanos dominate the island, especially Mts. Lamington and Oranje, and earthquakes are of frequent occurrence.' (73)

Both studies reflect this 'primitive colour' and share a predominant rhythmic interest which, in parts, endows the writing with characteristics highly evocative of tribal dances. To this, the composer adds his habitual use of birdsong, chord-building and melodic augmented fourth. 'Ile de feu I' opens with a powerful theme, 'martelé', in the bass register of the keyboard and supported by percussive chords which highlight the spiky, jagged rhythm by means of carefully placed accents and dynamic markings.

(Example 116) Notice the emphasis on the semitone interval, shown in the bass note groups and in the melody, and how the tritone assumes melodic prominence on account of its placing. Tonally, the melody is centred on E.

In the third bar, the intervals of semitone and augmented fourth are focused in a melodic sequence, which, devoid of any harmonic support provides in its upward, 'rocket-like' cascade striking contrast in register and timbre to the music of Example 116. (Example 117)

The section marked 'très vif' on page 2 is of particular interest to our analysis, especially with regard to Messiaen's attitude towards development, in that it shows precisely how so many bars of his music are in fact constructed. His use of sequential patterns of intervals in the melodic sense, together with juxtaposed chords in a harmonic one, provide a wealth of figurations which, aided by a lively rhythmic interest, seek to illumine rather than develop the musical substance. Here, unquestionably, the 'material' is the chromatic scale and the 'development' is but a peep at one of its many qualities. In the passage which is quoted, Messiaen is essentially concerned with a tonal ambiguity which

Score p.2

Musical score for the first system, measures 8-15. The score is written for two staves. The left staff contains a melodic line with a dashed bracket above it labeled '8'. The right staff contains a harmonic accompaniment. Both staves feature a key signature of one sharp (F#) and a common time signature (C). The music consists of eighth and sixteenth notes, with some chords and rests. A large slur covers the right staff from measure 10 to 15.

Musical score for the second system, measures 16-23. The score continues from the first system. The left staff has a dashed bracket above it labeled '16'. The right staff has a dashed bracket above it labeled '16'. The key signature remains one sharp (F#) and the time signature is common time (C). The notation includes eighth and sixteenth notes, chords, and rests. A large slur covers the right staff from measure 18 to 23.

results from the juxtaposition of black upon white notes.

This Example 118 makes an interesting comparison with the extract from 'Cantéyodjayâ', quoted as Example 115 in the previous chapter. . . . Messiaen's use of interval symmetry

8

Stacc

Stacc

symmetrical intervals

4 3 4 4 3 4 4 3 4 4 3 4 4 3

3n 3 3n T 3n 3 3n T 3n 3 3n T 3n 3

EXAMPLE 119

Superimposition of ideas

from example 118

8

8

ff >

f

> 'theme'

ff 7 f ff 7 f ff

8 --- percussive chords

8 ---

EXAMPLE 120

is set out in a short passage of music demonstrated opposite as Example 119.

Two further uses of this 'scalic' building technique must be mentioned, the first of these comprising an evident re-arrangement of the music already quoted in Example 118. (Example 120).

Carried to a logical conclusion and combined with similar movement in the bass part, this scalic movement makes up our second example, which, as a fan-shaped progression towards the end of the piece is at once reminiscent of a similar procedure in 'Cantéyodjayâ'. + It is interesting, however, to note how this

+ See Example 114

from example 120

Stacc. 8

p cresc.

Stacc.

score, p 4

EXAMPLE 121

Vif staccato

A4

EXAMPLE 122

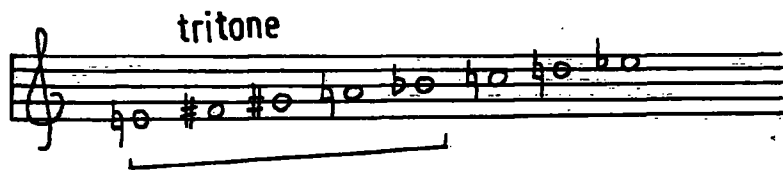
progression is in fact the continuation of the music of Example 120. (Example 121).

The final section of 'Ile de feu 1' (page 3, 'vif') written in a percussive, two-part texture, is highly evocative of the rhythmic colour and sonority of tribal war dance - notice the adjective 'Violent' with which the composer marks the lower melodic part. This music is closely associated with a corresponding counterpart in 'Ile de feu 2' despite an employment in the latter of more obviously schematic devices as twelve-tone series and non-retrograde rhythm. In 'Ile de feu 1', this toccata-like dance has a strong harmonic interest which is very much in Messiaen's earlier manner - note particularly the presence of the major third interval - and despite the rhythmic disguise there is also the much-beloved cadence formation of augmented fourth to tonic as a normal resolution. (Example 122).

I am much indebted to Robert Sherlaw Johnson for pointing out

(74) that the melodic contour of this passage has its origin in the Indian 'Jâti', 'shadjodicyavâ', 'tâla pancapâni', and quoted by Lavignac in his 'Encyclopedie de la musique et Dictionnaire du Conservatoire'. (75) The opening of this 'jâti', shown opposite together with its transformation in 'Ile de feu I', will serve to clarify this point. (Example 123)

Structurally, the section comprises two elements in counterpoint, the one thematic and the other a form of semiquaver ostinato which derives from the 'jâti' as already shown. The thematic intervals of the first bar of the whole piece provide the melodic basis of the



Mode 6, 4th transposition



Mode 6, 5th transposition

EXAMPLE 124

lower part which divides into four phrases, and the music derives from Messiaen's sixth mode, fourth and fifth transposition, shown opposite in Example 124. Notice especially the way in which the 'head' of phrase 'a' becomes phrase 'b', and how phrase 'c' is clearly derived from the 'tail' of 'a'. It will easily be seen that both the latter phrases develop by the addition principle; in 'b' by the increased duration of the low E from quaver to minim, and in 'c' by the diminution of the C - natural by one crotchet beat. The addition of the notes G - natural and C - sharp within phrase 'c' also frame the intervals of perfect and augmented fourth already established. Phrase 'd' serves as a cadential tailpiece re-establishing the tonic, E, and finally asserting the tritone relationship which characterises Messiaen's full close. The theme is repeated, overlapping at the final cadence into a reprise of the music of bar 5 and a recapitulation of the opening theme of the work. The upper part appears to be modally

opening

Vif

f

ff

reprise

sfz

f

displacement gap

conceived although the actual choice of notes are determined by the contour of the 'jâti'. The music of upper and lower parts runs together until a reprise of the melodic bass part (page 4, bar 3) when the semiquaver movement is displaced by extension, the recapitulation occurring on the eighth semiquaver of bar 3. This remarkable juxtaposition has the effect of producing a new spectrum of sonorities which at once gives an aural impression of varied development. Such an illusory process - there are many in Messiaen's output - is made manifest in his bid to 'éloigner le temporal', to bemuse the listener subtly so that 'he will succumb, in spite of himself, to the strange charm of impossibilities' (76) and finally in the course of the music to induce a mild form of hypnosis which will gradually erode the keenest perception. The opening of this section of music together with its reprise is illustrated opposite in Example 125. What I have labelled the 'displacement gap' will clarify precisely what happens musically.

The 'Ile de feu 2' study is a logical musical extension of much of the writing to be found in 'Ile de feu 1', but the similarities which exist between the two pieces are essentially found in the colouristic, almost 'programmatic' nature of the writing.

Ile de feu 2

Vif et feroce

8

Musical score for 'Ile de feu 2'. It consists of two staves. The upper staff is in treble clef and contains a series of chords, each marked with a sharp sign (#) and an accent (>). The lower staff is in bass clef and contains a series of notes, each marked with an accent (>). A bracket above the first two measures of the lower staff is labeled 'mf'. A 'ff' dynamic marking is placed below the first measure of the lower staff. A dashed line with the number '8' is positioned above the first measure of the upper staff.

Ile de feu 1

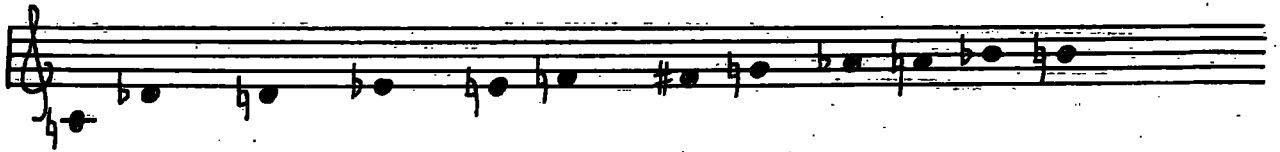
Musical score for 'Ile de feu 1'. It consists of a single staff in bass clef. The staff contains three notes: a quarter note, a quarter note with a sharp sign (#), and a quarter note. A bracket is placed above the first two notes.

EXAMPLE 126

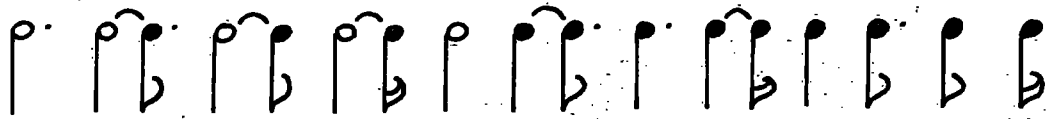
'Ile de feu 2' opens with a section of spiky, jagged chords written in a high keyboard register affording a strong textural contrast with the opening of 'Ile de feu 1'. Notice in Example 126 the superimposition of 'black upon white notes' and how the rhythm of the opening bar corresponds to that outlined by the first three melodic notes of 'Ile de feu 1'. This forms a 'head motif' which, it will be remembered, was a common structural device to the composers of 15th century masses and perhaps best represented in the works of Dufay.

We now arrive at a section of music of some considerable importance in Messiaen's pianoforte output - indeed his whole output : namely, the employment of series in the twelve tone sense and the extension of serial principles to other musical parameters such as dynamic levels and durations. To this, Messiaen brings an interest in permutation already observed in our study of the 'Vingt Regards sur l'Enfant - Jésus' in an earlier chapter. The passage in question is musically based

12 notes



12 durations



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



> - - - - - > - - - - - >

1 2 3

4

4 attacks



sfff ff f mf mf ff ff p p f f ff

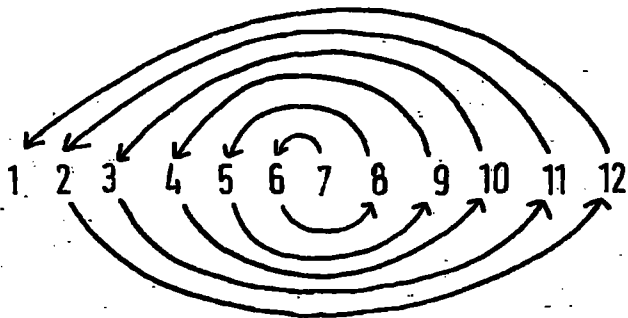
1 2 3 4

5

5 dynamic levels

on twelve notes, twelve durations, four attacks and five different dynamic levels, the ordering of these being set out opposite in Example 127. The sections of music in 'Ile de feu 2' which utilize this particular ordering of material are named 'Interversions' and occur in pairs, one being played by

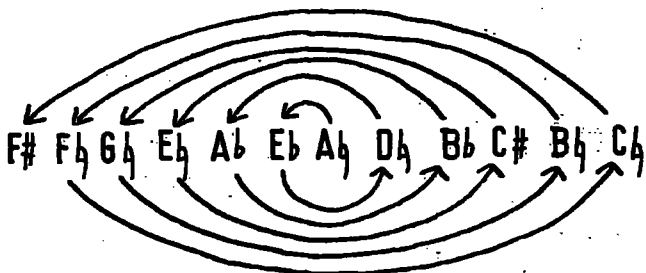
C \flat C \sharp D \flat E \flat E \flat F \flat F \sharp G \flat A \flat A \flat B \flat B \flat



note row generated:

F \sharp F \flat G \flat E \flat A \flat E \flat A \flat D \flat B \flat C \sharp B \flat C \flat

these are the notes of Interversion 1



note row generated:

A \flat E \flat D \flat A \flat B \flat E \flat C \sharp G \flat B \flat F \flat C \flat F \sharp

these are the notes of Interversion 2

the right hand while the other is entrusted to the left. Example 128 illustrates how the first two 'note sets' of the music of Interversions 1 and 2 are 'generated' from the twelve notes of the chromatic scale starting on C. This 'generation', it will be recalled, follows a mechanical process the principle of which was demonstrated in our study of 'Par Lui tout a été fait' from 'Vingt Regards'. It is of further interest, in this special connection, to point out that in the organ work 'Livre d'Orgue' Messiaen uses the term 'Permutation in the form of a fan' + to describe a formal process very similar to what is being described here in relation to these Interversions.

The permutation in Example 128 starts on the seventh note (a prime number) which in this context is F-sharp, a tritone from the opening note of the series. The movement from the note F-sharp is anti-clockwise, as demonstrated in blue ink, and will be described as 'Permutation 2' in order to distinguish a process which is the inversion of 'Permutation 1' already described in the music of Example 57a. The notes of Intervention 2 are similarly generated from Intervention 1 by applying the same procedure, adopting the row of Intervention 1. The music quoted in Example 129 gives an indication of the layout of Interventions 1 and 2 ; as a further point of interest notice that the interval

+ "Livre d'Orgue," 'Reprises par Intervention' p 2.

Intversion 1 (notes from ex 128)

Musical score for Intversion 1, consisting of two staves. The upper staff is in treble clef and the lower staff is in bass clef. The music features a series of notes with various dynamics and articulation marks. Dynamics include *ff*, *p*, and *mf*. Articulation marks include slurs and accents. The piece concludes with the word "etc." in the upper right corner.

Intversion 2

EXAMPLE 129

F# F# G Eb Ab Eb Ab D# Bb Db Bb C#

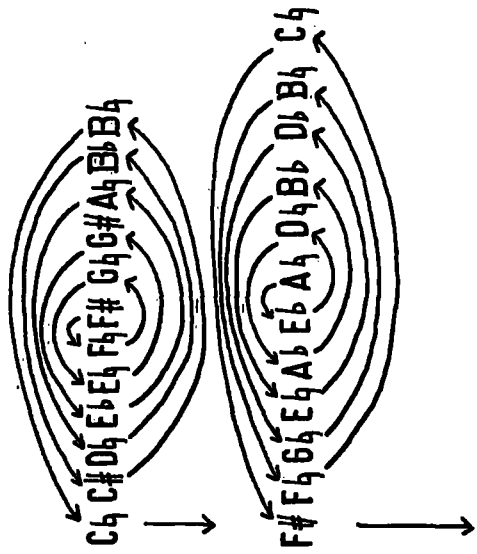
S T 3n 3 4 A4 4 3 3n T S

EXAMPLE 129a

series which arises when Permutation 2 is applied to the chromatic scale is non-retrograde and features the augmented fourth at the centre. (Example 129a) In the course of the composition these 'Interversion-Sets' occur five times and are presented in the pairings 1-2, 3-4, 5-6, 7-8, and 9-10.

Whereas the note sets of Interversions 3-10 are all generated by an identical method to that set out in Example 128 what is significant is the wide variety of content produced by the application of this Permutation process. As convenient

EXAMPLE 130



1 | 2 | 3 | 4

Musical notation for measures 5 through 10, showing pitch classes on a staff:

- Measure 5: C \flat , C \sharp , D \flat , E \flat , E \sharp , F \flat , F \sharp , G \flat , G \sharp , A \flat , B \flat , B \sharp
- Measure 6: F \sharp , F \flat , G \flat , E \flat , A \flat , E \sharp , A \sharp , D \flat , B \flat , D \sharp , B \sharp , C \flat
- Measure 7: C \flat , C \sharp , D \flat , E \flat , E \sharp , F \flat , F \sharp , G \flat , G \sharp , A \flat , B \flat , B \sharp
- Measure 8: F \sharp , F \flat , G \flat , E \flat , A \flat , E \sharp , A \sharp , D \flat , B \flat , D \sharp , B \sharp , C \flat
- Measure 9: C \flat , C \sharp , D \flat , E \flat , E \sharp , F \flat , F \sharp , G \flat , G \sharp , A \flat , B \flat , B \sharp
- Measure 10: F \sharp , F \flat , G \flat , E \flat , A \flat , E \sharp , A \sharp , D \flat , B \flat , D \sharp , B \sharp , C \flat

Interversion sets

illustration of this, the complete table is given opposite.

(Example 130) It is perhaps of considerable significance to observe that the tenth Interversion comprises the original notes of the chromatic scale : as if Permutation 2 imposed a restriction which has the same effect as the use of modes of limited transposition. + Thus Messiaen's attitude to twelve - tone series is still governed by an allegiance to his fundamental concept of a 'charm of impossibilities'.

A similar outlook is apparent in the music of page 6 (the section

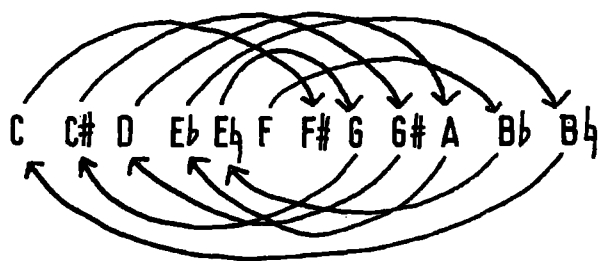
+ See also the chapter on 'Vingt Regards' - analysis of 'Par Lui tout a été fait'.

score p.6

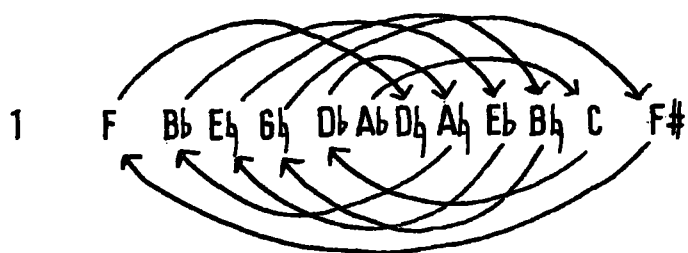
Vif 1

PP legato

2



starts on F



2 Ab C Db A Bb Eb E B G F# F D

marked 'vif') where some six bars of music evolve from the chromatic scale by yet another form of 'Permutation'.

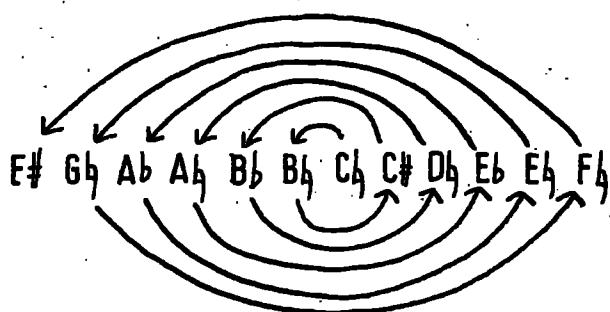
This I will refer to as Permutation 3. Example 131 indicates how the two staves of music derive from the chromatic scale, and from each other, and the subsequent five bars work in a similar way. Permutation 3 is also one of 'limited

transposition' and the complete table of possibilities follows the same plan as that set out in Example 130. Other numerous

chromatic scale on F sharp

F# Gb Ab Ah Bb Bh Ch C# D# Eb Eh Fh

apply Permutation 2:



which gives:

Ch Bh Db Bb Dh Ah Eb Ab Eh Gh Fh F#

score, p 6

8...—

examples of permutations occur in 'Ile de feu 2' as for example, the bass line of the first bar of music on page 6 of the score. If we apply the Permutation 2 to a chromatic scale starting on F-sharp, we evolve the notes given in Example 132.

As in 'Ile de feu 1', the 'Ile de feu 2' study concludes with a toccata like section, although in the latter piece the writing is more extensive, and an impetus and urgency, rather akin to that produced by complex polyrhythmic drumbeats, is maintained by incessant semiquaver movement in both hands. The excitement which a good performance of this arouses is accentuated by the virtuosic demands of the writing which necessitates frequent crossing of hands, and the use of a low keyboard register throughout further enhances the simulation of a primitive dance.

The upper part of the two-voice texture is derived from the melodic contour of another Indian 'jâti', this time the 'Jâti-naishadi', 'tâla caccatputa', (74) The lower part of the two-voice texture

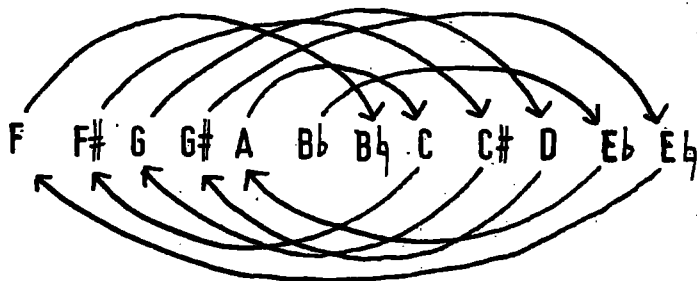
p8, bar 11

EXAMPLE 133

chromatic scale on F:

F F# G G# A Bb Bb C C# D Eb Eb

apply Permutation:



notes of example 133 - lower staff

EXAMPLE 133a

is formed by two-bar units, which are written in a form of note palindrome. In the music of Example 133, the centre of this palindrome, the note B-natural, is indicated by a cross. The notes which comprise the lower part of the example derive from the chromatic scale starting on F-natural by the employment of Permutation 3. (Example 133a) One final point of interest which emerges from this toccata is that this lower part is framed in one large non-retrograde plan which affects both rhythmic grouping and interval construction. Thus, within the two-bar non-retrograde cells of example 133

p.8, bars 3-4 (opening of section)

Musical notation for the opening of a section, spanning two staves (treble and bass clefs). The notation includes a series of chords and melodic lines. A dashed line with a cross symbol indicates a specific point of interest. Below the staves, a horizontal arrow points to the right, indicating the direction of the section's progression.

p.11, bars 4-5 (closing of section)

Musical notation for the closing of a section, spanning two staves (treble and bass clefs). The notation includes a series of chords and melodic lines. A dashed line with a cross symbol indicates a specific point of interest. Below the staves, a horizontal arrow points to the left, indicating the direction of the section's progression.

EXAMPLE 134

we have the nucleus of the formal content of the complete section, and a glance at Example 134 will help to clarify this.

The linear symmetry afforded by this employment of palindrome lines is mirrored in a vertical sense by the concern for block chords disposed in parallel movement and an excellent example of this occurs in the music of page 4 of the score, 'un peu moins vif', where the theme, in the bass, is decorated by continuous semiquaver movement. This movement forms

Ile de feu 2, bar 1

8-----

chord no: 1 2 (3 as 1)

EXAMPLE 135

p4

EXAMPLE 135a

a varied 'ostinato' pattern and a consideration of the opening bar of the music of 'Ile de feu 2' will provide a clue to the harmonic structure of the section as a whole. . . . (Example 135)

In the music of page 4, part of which is shown opposite in Example 135a, prominence is given to the augmented fourth, the perfect fourth, and the intervals of semitone and major third. The theme (in example 135a) is harmonized in a parallel, chordal way as at the outset of the composition.

(Example 135) Notice especially that the thematic presentation in Example 135a makes use of three intervals which comprise augmented fourth, perfect fourth (fifth in inversion) and semitone. These three intervals are also found in chord number 1 shown in Example 135.

In addition to Messiaen's persistence with the tritone, the

theme: semitone/augmented fourth

ostinato: augmented fourths

semitones

major thirds and perfect fourths

predominant use of the semitone may be explained terms of the nature of the chromatic scale upon which so much of the writing is founded. In Example 136, opposite, various musical components of the section under review are set out to enable the reader to observe this procedure more clearly.

One final example of these 'symmetrical' processes is quoted

score p.2

A musical score for piano, page 2. The top staff is in bass clef with a key signature of one flat (B-flat). It contains a sequence of notes with accents (>) and slurs. The bottom staff is in bass clef with a key signature of two sharps (F# and C#). It contains a sequence of notes with accents (>) and slurs. A dashed line with the number '8' is positioned below the bottom staff.

semitones

A musical staff in bass clef with a key signature of one flat (B-flat). It shows a sequence of notes with slurs between them, representing semitone intervals. Below the staff, the letter 'S' is written under each pair of notes, indicating the interval type.

augmented fourths / semitones

A musical staff in bass clef with a key signature of one flat (B-flat). It shows a sequence of notes with slurs between them, representing augmented fourth intervals and semitones. Below the staff, the labels 'A4' and 'S' are written under the notes, indicating the interval type. The sequence ends with 'etc'.

opposite, again revealing thematic decoration based principally on the intervals of augmented fourth and semitone. (Example 137) Thus, a comparison of the extracts set out in examples 136 and 137 clearly reveals that Messiaen's thematic 'development' is merely a variation of textures which reflect intervallically his harmonic treatment of the theme. However, there is no use looking for development in the Wagnerian sense here : an effective 'disguise' of the thematic

p.1 bars 1-2

8

mf

ff

Detailed description: This musical score is for the first two bars of a piece. It is written for piano on a grand staff. The key signature has two sharps (F# and C#). The first staff (treble clef) contains chords in the first two bars, with dynamic markings 'mf' and accents (>). The second staff (bass clef) contains a melodic line with eighth notes and accents (>). The piece ends at the end of the second bar.

p.8 bar 1

8

più f staccato

fff

8

Detailed description: This musical score is for the first bar of a piece on page 8. It is written for piano on a grand staff. The key signature has two sharps (F# and C#). The first staff (treble clef) contains a series of chords, with dynamic marking 'più f staccato'. The second staff (bass clef) contains a series of chords, with dynamic marking 'fff'. The piece ends at the end of the first bar.

EXAMPLE 138

material can be witnessed in the music of page 8 of the score where the notes of the theme are telescoped rhythmically with a variation of register in the lower part. (Example 138)

As a conclusion to our survey of 'Ile de feu 2' a comparison of the music of page 5, bars 2-3, with the penultimate bar of 'Cantéyodjaya^â' helps to demonstrate yet another instance of

Ile de feu 2 p5 bars 2-3

Musical notation for 'Ile de feu 2 p5 bars 2-3'. The notation is on a single staff with a treble clef. It consists of two measures. The first measure contains a triplet of eighth notes, followed by a quarter note, and then another triplet of eighth notes. The second measure contains a quarter note, followed by a triplet of eighth notes, and then another quarter note. Below the staff, there are rhythmic markings: '3 3 3 3 3 3' under the first measure and 'S S S S S S S S' under the second measure. The notes are mostly quarter and eighth notes with various accidentals (sharps and flats).

Cantéyodjayâ p27

Musical notation for 'Cantéyodjayâ p27'. The notation is on a grand staff with a treble clef on the top staff and a bass clef on the bottom staff. It consists of two measures. The first measure contains a triplet of eighth notes in the treble staff, followed by a quarter note, and then another triplet of eighth notes. The second measure contains a quarter note, followed by a triplet of eighth notes, and then another quarter note. Below the staff, there are rhythmic markings: '3 3 3 3 3 3 3 3' under the first measure and 'S S S S S S S S' under the second measure. The notes are mostly quarter and eighth notes with various accidentals (sharps and flats). There are two arrows pointing to the right, one above the treble staff and one below the bass staff, indicating the continuation of the piece.

the interval-building technique so much an integral characteristic of Messiaen's pianoforte style. (Example 139)

The first of the four rhythmic studies has the title, 'Neumes rythmiques' which can be literally translated as 'Rhythmic Neumes' or simply 'Rhythmic Note-Groups'. As a composition, it is an excellent example of what David Drew refers to as the technique of 'overlapping variation' (77). He describes this process briefly as follows:-

'The material upon which a given piece is founded - whether harmonic, melodic or rhythmic - is stated at the outset, in the form of juxtaposed cellules, each of which then undergoes a process of variation peculiar to itself. These processes must be described as overlapping because they are not completed in one stage : there is constant alternation between the cellules so that the exposition is continuously reproducing itself in varied form.' (78)

Basically, the music of 'Neumes rythmiques' comprises a

variable 'personnage'

[B]

[A]

Presentation 1

EXAMPLE 140

mf 6 durations in semiquavers

fixed 'personnage'

*

Presentation 5

EXAMPLE 140a

mf 10

Ped.

*

juxtaposition of three variable sections which are each headed in the score as follows : -

- 1 Triple line rhythm
- 2 Rhythmic Neumes
- 3 Prime Number groups

In Example 140, the first of these sections of music, the 'triple line rhythm', is given complete and can be observed to be disposed in three rhythmic 'personnages', the first and third of which will later become variable while the central one remains constant. These three 'personnages' are labelled 'A', 'B', and 'C' in the example, the letter 'B' referring to the fixed, constant unit. The numbers refer to the duration in semiquaver values of each of the three chords played by the left hand. This particular section of music recurs as a form of varied refrain during the course of the piece, and its fifth and last presentation is shown for comparison as Example 140a. Thus it will become evident that with each successive appearance a semiquaver value is added to the components of group 'A' and 'C' whilst unit 'B' remains unaltered. This practice of Messiaen's is totally in accord with his theories of fixed and variable 'personnages' as set out in Claude Samuel's 'Entretiens avec Olivier Messiaen'.

A similar principle governs the 'prime-number group' which, occurring four times in the composition, comprises a

16-1 8 - - - - - 16-1 8 - - - - - 16-1 8 - - - - - 16-1 8 - - - - - 16-1 8 - - - - -

f ppp (~ b) f ppp (~ b) f ppp f ppp etc

16-1 8 - - - - - 16-1 8 - - - - - 16-1 8 - - - - - 16-1 8 - - - - -

total duration of complete section - 43 semiquavers (prime no.)

EXAMPLE 141

16-1 8 - - - - - 16-1 8 - - - - - 16-1 8 - - - - - 16-1 8 - - - - - 16-1 8 - - - - -

second presentation p5 - non-retrograde rhythmic plan

sectional entity, the total numerical durations of which are as follows :

<u>Presentation no.</u>	<u>Durations in semiquavers</u>
1	41
2	43
3	47
4	53

A part of the second presentation of the music of this section, shown as Example 141, immediately reveals a strong contrast of musical texture, sonority and dynamics to the music which constitutes the 'triple line rhythm'. This clear-cut distinction between the various 'blocks' of musical material enables the listener to 'locate' himself in the score, so to speak, as he had done in 'Cantéyodjayâ'. Unlike 'Cantéyodjayâ', however, 'Neumes rythmiques' is relatively economical in material, and focuses his attention on an interplay of but three components. There is thus an opportunity for the composer to introduce various subtleties in the writing as we shall later observe.

Included with Example 141 is the overall rhythmic 'groundplan' of this second presentation of the prime number section. It

comprises a palindrome, the centre of which is indicated by a cross.

Finally, the 'rhythmic neumes' music appears seven times during the course of the work. Although varied on each appearance it follows the plan of the other two sections incorporating elements common to each with successive presentations.

A glance at the first section of these 'neumes' on page 2 of

FIXED INTENSITY GROUPS

eg.

A musical score for piano with three staves. The top staff is in treble clef and contains a single note with a sharp sign (#) and an accent (>) above it. The middle staff is in treble clef and contains a melodic fragment with a dynamic marking of *ff*. The bottom staff is in bass clef and contains a melodic fragment. A bracket on the left side groups all three staves under the label "eg."

VARIABLE INTENSITY GROUPS

eg.

A musical score for piano with three staves. The top staff is in treble clef and contains a melodic fragment with a dynamic marking of *p*. The middle staff is in treble clef and contains a melodic fragment with dynamic markings of *mf* and *f*. The bottom staff is in bass clef and contains a melodic fragment with a dynamic marking of *p*. A bracket on the left side groups all three staves under the label "eg.". To the right of the middle staff, the text "melodic fragment" is written.

EXAMPLE 142

the score will show that they divide into two groups named 'fixed intensity' or 'variable intensity'. The fixed intensity group embodies uniform dynamic and pitch levels whereas the variable intensity one allows varied dynamics which can be best observed in Example 142, opposite. It is this dynamic distinction within the variable intensity groups which affords a clue to their overall structure. In fact they incorporate a melodic line, the prominence of which is due to a higher dynamic marking than that of the surrounding music. The continuity of this melodic line, however, is often broken by the juxtaposition of the fixed intensity groups, although the whole psychological gestalt may be followed aurally without great difficulty.

Out of the nine bars of music which make up the first 'neumes' section, four bars contain mixed intensity groups and

Neumes rythmiques - variable intensity groups

A
p bar 3 (of section)

B
p bar 7

C
pp
più f bar 8

D
ppp
mf
pp
pp #
8...
bar 9

A B C D
mf — f f — sf — f più f mf p

EXAMPLE 148

Example 143, opposite, demonstrates the 're-construction' of the melodic line present in each. Notice especially the 'tonal centre' of the melody which is fixed on the note E-natural, and Messiaen's 'full-close' outlined by the tritone (B-flat-E-natural) in the last bar. Also observe the 'arch-shaped' melodic contour so produced and the fact that the line is constructed from ten notes, omitting C-natural and C-sharp. For future reference, each melodic component is prefixed 'A', 'B', 'C' and 'D' respectively.

The next presentation of this section occurs on page 3 of the score and provides us, by a similar process to that set out in Example 143, with a second melody, again built on

melodic fragments from variable intensity groups - 2nd presentation

score: p 3-4

mf \leftarrow f mf \rightarrow p \leftarrow f \leftarrow f \leftarrow sf \leftarrow f \leftarrow sf \leftarrow f \leftarrow sf \leftarrow f \leftarrow sf \leftarrow f \leftarrow mf

A1 B B1 B2 D1

X Y

EXAMPLE 144

mf \leftarrow f \leftarrow sf \leftarrow ff

X Y

8

fixed intensity groups - 1st presentation

EXAMPLE 144a

ten notes and avoiding C-natural and C-sharp. Notice in Example 144 a rhythmic development by repetition ('B', 'B1' and 'B2') and how the melodic contour of 'A' (Example 143) is expanded to form the variant 'A 1'. Furthermore, there is a degree of integration between the fixed intensity groups on the one hand and the variable intensity ones on the other. The contour of two fixed intensity groups is derived in Example 144a and have been labelled 'X' and 'Y' respectively in order to demonstrate their incorporation in the melodic line of Example 144.

On page 6 of the score, the fifth presentation of 'neumes' opens with a two-part passage in demisemiquavers, the top part of

4 ♭ 4 ♭

mf

8

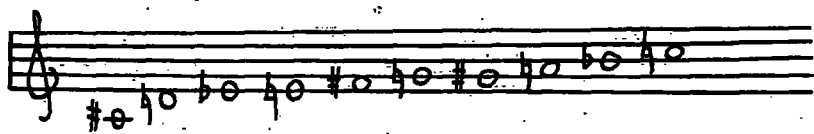
pp

EXAMPLE 145

which is constructed from the ten notes which made up the melodic lines of our previous examples. This is illustrated opposite in Example 145, where the left hand provides a stepwise, rising chromatic scale in accompaniment.

Harmonically, a certain amount of the writing in 'Neumes rythmiques' derives from, or is at least conditioned by, Messiaen's penchant for the modes of limited transposition. Whilst it would be a mistake to imagine that Messiaen makes frequent resource to these modes in the studies of rhythm, it is nevertheless true that many of the sounds which he writes in these four compositions have distinct and recognizable overtones in the scales of his own devising. One example from 'Neumes rythmiques' will suffice to show that his break with this system

EXAMPLE 146



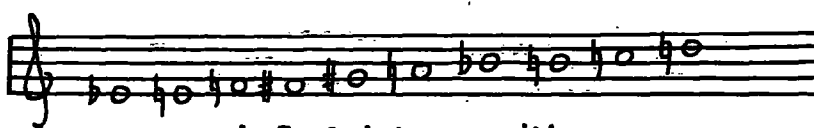
mode 7, 1st transposition

p 11, bar 4

A musical score for piano, consisting of three staves (treble, middle, and bass clefs). The score is for bar 4 of piece p 11. It features various dynamics: *p* (piano), *mf* (mezzo-forte), and *f* (forte). The notes are mostly quarter and eighth notes, with some rests and slurs. The key signature has one sharp (F#).

p 7, bar 3

A musical score for piano, consisting of two staves (treble and bass clefs). The score is for bar 3 of piece p 7. It features dynamics *f* (forte) and *p* (piano). The notes are mostly quarter and eighth notes, with some rests and slurs. The key signature has one sharp (F#).



mode 7, 3rd transposition

p 1, bars 3,4

A musical score for piano, consisting of two staves (treble and bass clefs). The score is for bars 3 and 4 of piece p 1. It features dynamics *ff* (fortissimo) and *p* (piano). The notes are mostly quarter and eighth notes, with some rests and slurs. The key signature has one sharp (F#). There is a fermata over the final note of bar 4 and a dashed line with the number 8 below it.

of transposable modes is not yet complete. While the chords in Example 146 may not be consciously drawn from mode 7, the fact that the notes coincide with those of this mode suggest that Messiaen was still thinking in similar harmonic terms.

As a final point of interest, and to show to what extent his harmonic thinking tends in other respects to follow more and more a 'catalogue' principle, I quote an interesting comparison of part of the music of page 10 of the score with two extracts from

p 10, bar 2

pp f p più f p pp p

Canteyod jayâ

p.15

p

p.5

p pp

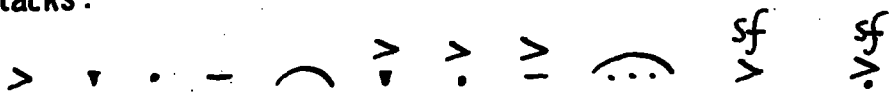
EXAMPLE 167

'Cantéyodjayâ'. (Example 147) The coloured annotations will help to clarify the striking similarity between the two passages and it is only unfortunate that other equally fascinating comparisons which exist be too numerous to quote here.

The final work which we shall consider in this chapter is perhaps one of Messiaen's most important compositions, enjoying the considerable historical significance as the first major European work to employ a strictly serial approach to all its component parameters. As we observed in our study of 'Cantéyodjayâ' in the section of music illustrated in Example 101 there is a textural affinity with the 'mode de durées, de hauteurs et d'intensités' of that work and the opening music of 'Mode de valeurs et d'intensités'. To some extent, therefore, 'Cantéyodjayâ' provides a structural origin for this composition.

The musical material which comprises the 'Mode de valeurs' is constructed from a scale of thirty-six sounds, twenty-four durations, twelve attacks and seven dynamic levels. These components are further organised into three divisions, each of which comprises a melodic presentation of the twelve notes of the chromatic scale. Notes of the same name differ from one another with respect to pitch, duration and dynamic level.

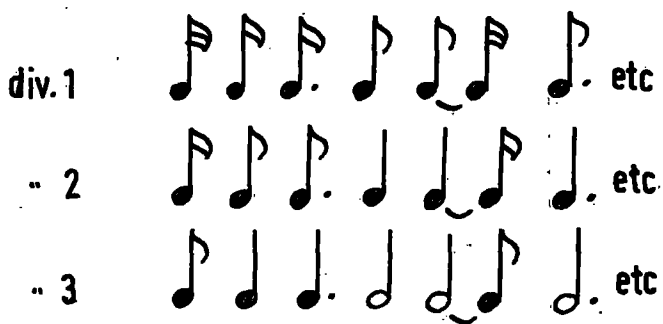
attacks:



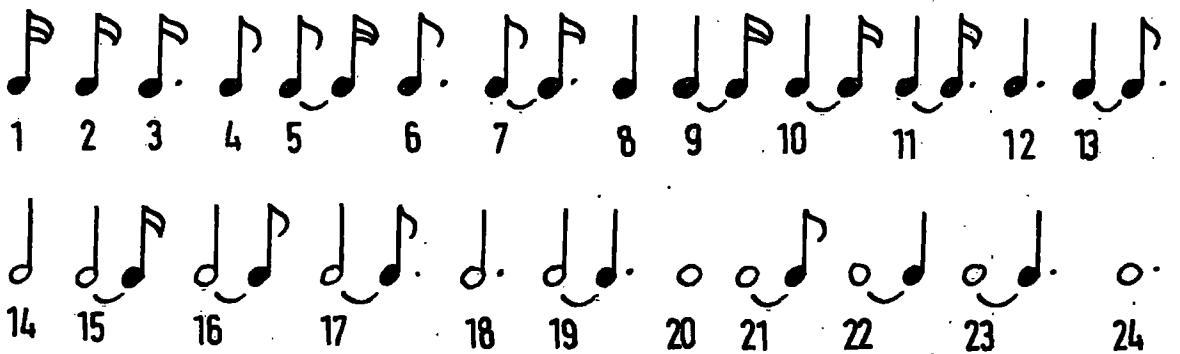
dynamics:

PPP PP P mf f ff fff

durations:



24 durations:



8

division 1

PPP PPP ff f mf ff f mf ff PP ff p

division 2

sf> ff mf mf P PP P P P f f f f

division 3

ff ff mf PP P f ff mf ff ff fff sf

EXAMPLE 148

The extreme range of pianoforte compass is used to exploit a maximum variety of sonorities and the organisation of the tables of duration is such that each of the three divisions makes use of note values which are either predominately of short, medium or long duration. Hence the first division comprises note - values based on multiples of demisemiquavers, the second division, semiquavers and the third division, quavers. These three divisions are shown opposite in Example 148 each commences with the basic unit of duration applicable, for example the semiquaver in division two, with successive durations increasing by the addition of the basic unit in each case. The range of attacks and dynamics are shown separately and also in their musical context for greater clarity.

Each reference to 'Mode de valeurs et d'intensités' which I have encountered has been content to state this obvious information which is readily available in the score, and leaving the matter at that, makes no attempt to relate it to the actual structure of the work as a whole. Thus, while certain structural elements are clear enough and may be easily followed on any page of the score, what is by no means evident is the linear assembly of these components in each of the three divisions. It is only when one realizes that

the linear disposition directly affects the harmonic tensions of the work that the singular importance of this factor becomes fully apparent, the more so on account of the remarkable overall consistency of texture which 'Mode de valeurs' achieves in live performance.

The basis of much of Messiaen's organisation in the score is directly concerned with the very procedures which we might expect most to find at this time : in essence these include permutation principles applied to the serial parameters which we outlined in Example 148. Thus the composer may generate his material mathematically from the given series and exploit the wealth of note patterns which so result in various juxtapositions of texture. The majority of permutation techniques which we studied initially in 'Vingt Regards sur l'Enfant-Jésus' and latterly in the two 'Ile de feu' pieces are employed in 'Mode de valeurs et d'intensités' although I will postulate that their application is a good deal more obscure in this last 'study of rhythm'.

In Example 149, a section of music from the first division of music (top stave) on page 4 of the score is illustrated

division 1 p.4/5

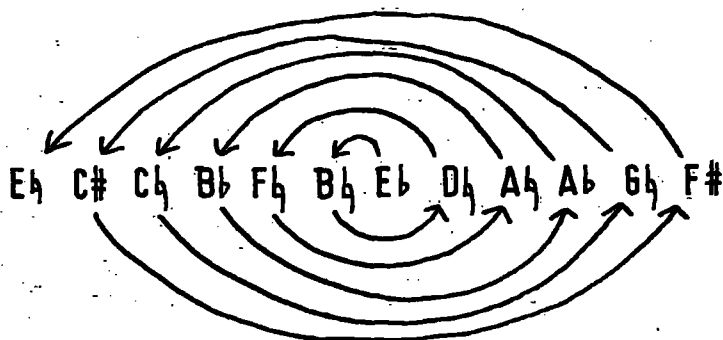
PPP P PPP ff ff PP f ff

mf mf ff f

notes of division 1

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

re-arrange in two segments, 7-12: 1-6 and apply Permutation



E_b B_b D_b F_b A_b B_b A_b C_b G_b C[#] F[#] E_b

together with its 'generation' from the twelve-tone mode of division 1, using a 'spiral' permutation. It will be seen that the notes of division 1 have been re-arranged as 7-12 and 1-6 in two segments before the process is applied.

In a similar way, the top stave of the music of page 9 (at bar 5 onwards) derives by the same method from two

p.7

ff f p PPP mf mf ff

PPP f ff PP ff

re-group notes of division 1 (in example 149) in two groups:

B \flat	F \flat	B \flat	E \flat	C \sharp	C \flat	A \flat	D \flat	E \flat	F \sharp	G \flat	A \flat
10	11	12	7	8	9	3	2	1	6	5	4

apply Permutation :

B \flat F \flat B \flat E \flat C \sharp C \flat A \flat D \flat E \flat F \sharp G \flat A \flat

A \flat C \flat D \flat C \sharp E \flat E \flat F \sharp B \flat G \flat F \flat A \flat B \flat

F \sharp E \flat B \flat E \flat G \flat C \sharp F \flat D \flat A \flat C \flat B \flat A \flat

segments of the note-row of division 1. (Example 150)

Certain of the note patterns which comprise the second and third divisions can be similarly demonstrated as permutations of their respective tone-rows, but it is of interest to notice that the full twelve possible notes of the chromatic scale are not always used. This accounts for many of the shorter

division 2 centre stave

p.7 bar 8

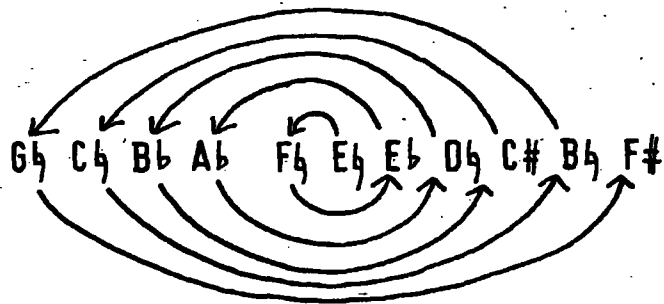
A musical staff in treble clef with a 4/4 time signature. It contains a sequence of notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4, B3, A3, G3. Dynamics are indicated below the notes: P, PP, P, P, P, mf, f. A slur covers the first seven notes.

A musical staff in treble clef with a 4/4 time signature. It contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4, B3, A3, G3. Dynamics are indicated below the notes: mf, f, sff, f. A slur covers the first four notes.

2nd division

A musical staff in treble clef with a 4/4 time signature. It contains notes: G4, A4, B4, C5, B4, A4, G4, F4, E4, D4, C4, B3, A3, G3. A slur covers the first eleven notes.

apply Permutation to first eleven notes:

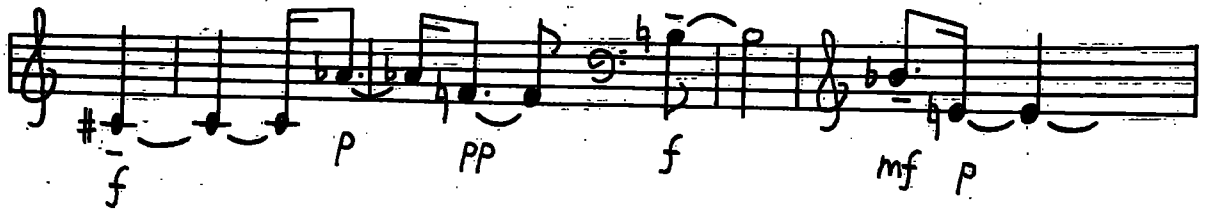


E₄ F₄ E_b A_b D₄ B_b C_# C₄ B₄ G₄ F_#

row-fragments in the score. As an instance of this, a section of music from page 7-8 of the work reveals how the permutation process is applied to an eleven note pattern. (Example 151)

One further example from the music of the second division

centre stave p9, bar 10 -



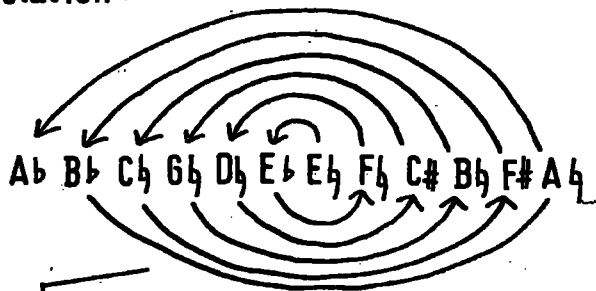
row of division 2 -

G₄ C₄ B₃ A₃ F₃ E₃ E₃ D₃ C₃ B₂ F₂ A₂

re-group :

A₃ B₃ C₄ G₄ D₃ E₃ E₃ F₃ C₃ B₂ F₂ A₂

apply Permutation :



E₃ E₃ F₃ D₃ C₃ G₄ B₃ C₄ F₂ B₂ A₂ A₃

1st Time

C₃ A₃ F₃ B₃ B₂ E₃ F₂ C₄ E₃ A₂ G₄ D₄

7th Time

EXAMPLE 152

will be sufficient to demonstrate a fairly conclusive adoption of the permutation principle. In example 152, opposite, the note-row of division two is regrouped in three segments which at first glance may appear to be highly arbitrary. Closer examination, however, reveals that the first two segments are little 'retrogrades' of two of the three four-note 'components' of the row. The third group remains unaltered. An application of Permutation 2, will, at the seventh time, evolve the notes of the quoted passage as shown.

One extract from the music of the lower stave, or third division, demonstrates Messiaen's form of what I shall

third division p.7, bar 11-

Musical staff 1: Treble clef, 11 notes. Dynamics: ff, ff, ff, mf, mf, ff.

Musical staff 2: Bass clef, 11 notes. Dynamics: pp, ff, p, sff.

Musical staff 3: Bass clef, 11 notes. Dynamics: f, sfff.

Musical staff 4: Treble clef, 11 notes. Dynamics: f, sfff.

notes of division three.

apply 'corkscrew' spiral permutation:



Eb Ab Db Fb Ab Bb Gb Eb F# Bb Cb C#

call for convenience, a 'corkscrew' spiral permutation.

The process, illustrated in Example 153, is fairly self-evident, the red line tracing the note sequence of the particular extract.

p6, bar 3 division 2



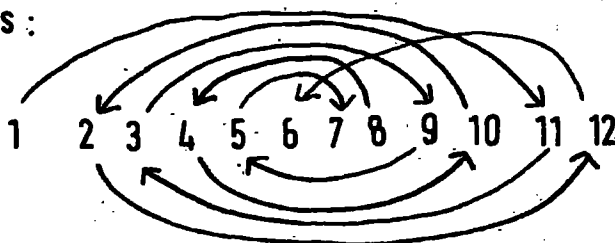
row of division 2

G ₄	C ₄	B _b	A _b	F ₄	E ₄	E _b	D ₄	C _#	B _b	F _#	A ₄
1	2	3	4	5	6	7	8	9	10	11	12

double spiral on odd - even/ numbers :

G ₄	F _#	B _b	C _#	F ₄	E _b	D ₄	A _b	B ₄	C ₄	A ₄	E ₄
1	11	3	9	5	7	8	4	10	2	12	6

obtained thus :



Notice in Example 154, opposite, how a 'two-way' spiral is applied to the note row of division three. The particular interest here lies in Messiaen's predilection for what we described as 'number mysticism', in the chapter on 'Cantéyodjayâ'. The blue line traces the odd-number progression whereas the red one describes the even number sequence. This form of permutation is evidently more of a re-arrangement of notes into two simple segments comprising odd and even numbers respectively, but it makes an interesting comparison with the other forms of numerical permutation already witnessed. An indication that the process outlined opposite is not merely confined to a sole example may be observed in Example 155, quoted

p5/6 bar 12 1st division :

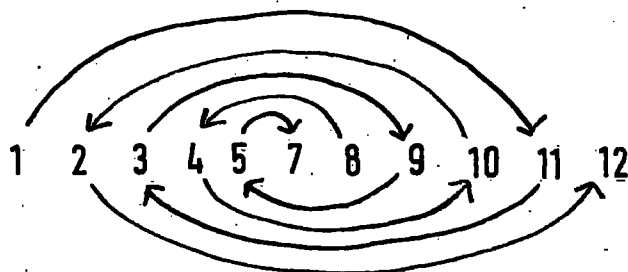
row of 1st division :

E_b D_b A_b A_b G_b F[#] E_b C[#] C_b B_b F_b B_b
 1 2 3 4 5 6 7 8 9 10 11 12

omit sixth note and apply double spiral :

E_b F_b A_b C_b G_b E_b C[#] A_b B_b D_b B_b
 1 11 3 9 5 7 8 4 10 2 12

obtained thus :



opposite, where a section of the music of division one is quoted. As in Example 154 the blue and red lines trace out odd and even number movement as before, but in this instance, the sixth note is omitted.

These several examples will, I hope, be reasonably adequate to demonstrate some of the techniques which Messiaen employs in the 'Four Studies of Rhythm.' Although they do not in themselves claim to be in any way exhaustive, they will, I feel, provide the reader with a starting point on the road of insight into Messiaen's processes of thought.

CHAPTER 6

'CATALOGUE D'OISEAUX' : CAMOUFLAGE AND
STRUCTURE IN SELECTED MOVEMENTS.

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'CATALOGUE D'OISEAUX' : CAMOUFLAGE AND
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Messiaen's 'Catalogue d'oiseaux', written between 1956 and 1958, is perhaps one of the most remarkable contributions which any composer has so far made to the pianoforte literature. Like 'Vingt Regards', it is very large-scale in its conception (running to seven volumes) and the composer has expressed his intention of providing a second, additional series at a later stage. (80) Its composition marks the summit of a growing preoccupation with le style oiseau (81), which, first observed in the 'Quatuor pour la fin du temps' * (1941), was to afford a structural basis of similar importance in another two works of the post 1950 period ; namely, 'Reveil des oiseaux' (1953) and 'Oiseaux exotiques' (1956).

'In my 'Catalogue d'oiseaux', I have tried to reflect with accuracy the birdsong of a particular area together with its variation at different times of the day and night. This birdsong is accompanied by the harmonic and rhythmic material which can best reflect

* the third movement, 'Abîme des oiseaux'.

the atmosphere and colours of the surrounding countryside. I am very proud of the accuracy of this work although I admit that people who really know these birdsongs may have difficulty in recognising them in my music. This is because without realising it, I may have introduced something of my own which only I hear. A bird, being much smaller than we are, sings in extremely fast tempi, absolutely impossible to our instruments : I must therefore transcribe the song in a much slower tempo. Besides, birds sing in very high registers which are impossible on our instruments. I write, therefore, one, two, three or even four octaves lower. For the same reasons I am obliged to omit those very tiny intervals which our instruments cannot play. These I replace by semitones, but I do respect the scale of values between the different intervals. I have adopted two attitudes : I have written 'exact' pieces and pieces which 'resemble' the line of songs and the silences during the hours of the day and night. But I also utilise birdsong as raw material in some of my pieces such as 'Couleurs de la Cité Céleste' and in several passages in 'Chronochromie'. There, the birdsong undergoes all sorts of manipulations in the manner of concrete or electronic music. It is not so honest, vis-a-vis nature, but perhaps more truthful to the work of the composer. I would say that both

attitudes are admissible.' (82)

Although some 77 birds contribute to the 'Catalogue' there are passages which 'set the scene' also. Hence formal considerations tend to be governed by a fidelity to nature and thus, for example, the seventh piece, 'La Rousserolle Effarvate' (the Reed Warbler), is a descriptive essay based on twenty-seven hours in the life of a Reed Warbler, from midnight to three o'clock in the morning a day later. Such a formal innovation affirms Messiaen's commitment to nature : a commitment further underlined by his recourse to 'programme notes', essential to the full understanding of each movement and which appear in preface form in the individual scores. Indeed, so integral is this 'programmatic' backcloth to the musical scene that if one is to adopt Stravinsky's viewpoint that 'music is, by its very nature, essentially powerless to express anything at all, whether a feeling, an attitude of mind, a psychological mood, a phenomenon of nature, etc.....' (83) and then attempt to apply this criteria here, the dimension of one's experience of a performance of 'Catalogue' must necessarily be correspondingly reduced. Thus critics who promote sweeping generalisations based upon the Stravinskian premise do the composer more than a disservice. They are simply prepared to discount the essential dimension

of the whole creative circumstance.

'We are all now accustomed to the literary paraphernalia with which Messiaen prefaces his music. They are part of his art, a necessary pendant to the music. But we do not need to be aware of his analogies between colours and sounds or appreciate the 'catholickry' of his titles and commentaries to appreciate the music. These things can sometimes be helpful in 'placing' a work, but often, in my own experience, they are quite irrelevant. The music says what it has to say in its own terms. In a way these trappings are more important to the composer than they are to us, in the same way that serial permutations and manipulations are to other composers. Similarly, the 'ornithography' of such works as 'Reveil des oiseaux' and 'Catalogue d'oiseaux' has little bearing on the end product : this is Messiaen's pigeon, not ours.' (84) Hold goes on (84) further to criticise Messiaen's chosen medium, the piano, as totally inappropriate to the expression of authentic birdsong. Norman Demuth's approach, on the other hand, whilst specifically relating to 'Reveil des oiseaux' (85) is, I feel, admissible comment to this argument, his somewhat keener perception of the composer's intentions being focused upon a work which poses

similar problems for the listener :

' I would say that there must be a unique approach to listening in this case. I see no reason why one should disturb oneself by trying to sort out the material by name and, in any case, only experts can hope to succeed. It must be taken for what it is, an orgy of beautiful sound. The players must not be listened-to as if they were making ' a noise like ' a Carrion Crow (Corneille Noire) or a Wood Lark (Alouette Lulu), for example, but must be regarded as reproducing an impression of a vocal chorus of a common but comparatively unnoticed character. Their lines provide the impressionism, the genuineness of those lines, the verism. '

In Chapter 1, I stated that I wished to approach Messiaen's achievement in the pianoforte music from an essentially objective and analytical angle, and this I have attempted to do in the works discussed up to this point. Faced with the sheer magnitude of 'Catalogue d'oiseaux' and the many problems which even cursory analysis poses, I have considered it best to limit a discussion of my findings to certain random areas of the composition which will best reflect a logical extension of Messiaen's structural processes observed to date. This decision, I feel, will not only preserve the scale and scope of the

thesis as a whole but also will perhaps tend to reveal a wider picture of the composition than would emerge from the study of a given single movement. There is thus an opportunity to discuss a variety of interesting topics which include Messiaen's association of colour and sound (the visual-audio synaesthesia mentioned in Chapter 1) and the re-affirmation of the importance of the modes of limited transposition which, as we have seen, appeared to be finally overthrown with the composition of 'Mode de valeurs et d'intensités' in 1949.

In the second chapter of this thesis, I referred to Messiaen's description of what he calls the 'effects of resonance' * (47) associated, it will be remembered, with the third mode of limited transpositions. The analogy between these aural 'effects' and what Messiaen describes as the 'effect of a stained-glass window' is further made in 'Technique de mon langage musical'. (86) We thus have an early association between the sound of a specific mode and its visual projection in terms of the multicolour of stained-glass. In 'Catalogue d'oiseaux' there are many examples of a specific mode, or transposition

* page 38

'La Bouscarle' p1 bar 10

Vif ♩ = 200

The image shows a musical score for two staves. The top staff is in treble clef and contains a series of chords and notes, with a dynamic marking of *f* (brilliant) below it. The bottom staff is also in treble clef and contains a series of chords and notes, with a dynamic marking of *f* (brilliant) below it. The music is in a key with one sharp (F#) and a time signature of 2/4. The tempo is marked 'Vif' with a quarter note equal to 200. The score is for the first part, page 1, bar 10. The music consists of two staves of music. The top staff has a treble clef and contains a series of chords and notes, with a dynamic marking of *f* (brilliant) below it. The bottom staff has a treble clef and contains a series of chords and notes, with a dynamic marking of *f* (brilliant) below it. The music is in a key with one sharp (F#) and a time signature of 2/4. The tempo is marked 'Vif' with a quarter note equal to 200. The score is for the first part, page 1, bar 10.

'blue green feathers of the kingfisher'

Mode 3, 2nd transposition

EXAMPLE 156

of a mode, being linked with the exposition of well-defined colours, the particular relationship being carefully notated in the score. Thus we find in the 9th movement, 'La Bouscarle', (Cetti's Warbler) the composer denotes the 'blue-green feathers of the Kingfisher' by recourse to the 2nd transposition of his 3rd mode. In example 156 opposite, this is shown as an upward, scalar chord progression perhaps suggestive of the bird's flight. In a similar way,

VISUAL-AUDIO SYNAESTHESIA

'La Rousserolle Effarvate' p38 bar1

Lent (♩=50)

etc.

orangé

Ped Ped Ped

Mode 2 prime

Mode 3 prime

'Coucher du soleil rouge et violet sur l'étang des iris'

EXAMPLE 157

a section of the music of 'La Rousserolle Effarvate' (the Reed Warbler) reveals an association between a particular colour and its musico-modal representation. Here, the prime form of mode 2 is used to express in Messiaen's terms 'the setting sun, red and violet over the pond of iris'. Notice in example 157 opposite, how the carefully inserted pedal markings allow the chords of two modes to blur into one another, so to speak, and that the artist's complimentary dash of orange is provided by the prime form of mode 3.

These last two examples reveal a more obvious employment of the modes in Messiaen's arbitrary colour/sound relationships and other similar passages may be easily discerned in the score - for example on page 39 of 'La Rousserolle Effarvate' (at bar 1), a juxtaposition of the 4th transposition of mode 4 and the prime form of mode 6 is used by the composer to express the colours of violet and gold.

Of perhaps greater interest in our observation of Messiaen's visual-audio synaesthesia is a passage

'Le Traquet Strapazin' p 8

bar 9

Lent $\text{♩} = 72$

NB. no 64

(Le disque rouge et or du soleil)

Ped 8

'Cantéyodjayâ'

fff

8

p 17 bar 3

8

p 17 bar 11

p 12 bar 7

which occurs in the fourth movement of 'Catalogue', entitled 'Le Traquet Strapazin' (Black-eared Wheatear). The particular musical extract comes from page 8 of the score (at bar 9) and is illustrated opposite in example 158. Here, unlike the music of examples 156 and 157, the quoted chords cannot be so easily defined in terms of a specific mode, but their particular sequence in comparison with a previous usage in 'Cantéyodjayâ' once again demonstrates beautifully the superimposition technique - Messiaen's juxtaposition of old sounds in a new way. It can further be seen that whereas the chord group framed by an orange circle remains unaltered in register, the remaining two groups, framed by blue and brown circled respectively, are either transposed up or down by an octave in their new role. Certainly, it is undeniable that this passage in 'Le Traquet Strapazin' constitutes a totally different musical experience when compared with 'Cantéyodjayâ' : what, however, remains of considerable interest is the fact that these chords, common to both works, now assume, in the composer's mind, a collective quality which is capable of projecting a specific colour and sound association. The particular juxtaposition of these chords, to Messiaen, may well serve as the predominant criteria for this special quality. An

analyst, however, may postulate quite reasonably that the 'red and gold disc of the sun' notated beside the passage in the score, constitutes no more than a superimposed ideology, not specifically musical, but rather literary and programmatic in essence. Both theories are, I feel, admissible and it would not be possible to make further comment on this issue without recourse to the composer himself. However, it may be of interest to note that my own further analysis of these sound-colour relationships in Messiaen's scores has failed to reveal any form of consistency. That is to say one cannot find evidence to support the theory that the quality of a given sound will always evoke a definite colour analogy. It is rather as if the literary concept and its musical amplification remain 'in vacuo' when divorced from their immediate poetic function. To these latent elements Messiaen brings the catalyst of inspiration, the resulting fusion of ideas creating a 'once for all' phenomenon, which is stated emphatically.

I should now like to examine in some detail two selected movements from the 'Catalogue' in order to demonstrate some of the diverse structural techniques which Messiaen employs. However, before so doing it should be borne in mind that these structural processes are not intended to be representative of those found in the other movements.

In this and many other respects all the pieces which make up 'Catalogue d'Oiseaux' are different.

The tenth piece, 'Le Merle de roche' (Rock Thrush) seemed a good choice as the first of the two movements to be considered both on account of 'programmatic' content and the fact that it reflects so well a logical continuity of the writing found in Messiaen's earlier works. Thus, its sectional appearance is reminiscent of that of 'Cantéyodjayâ' and musically the language embraces passages of a strongly modal quality with those which are evidently conceived on a twelve-tone basis and in many ways echo the writing of 'Mode de valeurs et d'intensités'. This latter parallel is most strongly manifest in the writing headed 'Stegosaure de pierre' where a similar concern for parameters of pitch, duration, attack and dynamic level is clearly evident.

With the opening music of 'Le Merle de roche', Messiaen's

'Le Merle de roche' p1 bar 1

Musical score for 'Le Merle de roche' p1 bar 1. The score is written for two staves (treble and bass clefs). The key signature is one sharp (F#) and the time signature is 4/4. The first staff has a dynamic marking of *p*. The second staff has a dynamic marking of *p*. A dashed line with the number 8 is drawn below the second staff, indicating an octave pedal point.

'La Bouscarle' p2 bar 2

Musical score for 'La Bouscarle' p2 bar 2. The score is written for two staves (treble and bass clefs). The key signature is one sharp (F#) and the time signature is 4/4. The first staff has a dynamic marking of *p*. The second staff has a dynamic marking of *p*. Pedal markings 'Ped' are present under the second and fourth notes of the second staff.

'Neumes rythmiques' p1 bar 5

Musical score for 'Neumes rythmiques' p1 bar 5. The score is written for three staves (treble, middle, and bass clefs). The key signature is one sharp (F#) and the time signature is 4/4. The first staff has a dynamic marking of *p*. The second staff has dynamic markings of *mf* and *f*. The third staff has a dynamic marking of *p*. Dotted lines and boxes highlight specific rhythmic patterns and chordal structures across the staves.

narrative sets the scene :

'nuit, clair de lune - immense main de pierre,
levée en signe magique'

The first two chords of the piece, expressive of the 'black depths of night' according to a note in the score, are shown opposite in example 159. These chords have a structural precedent in 'Neumes rythmiques' and are further employed in 'La Bouscarle', the ninth movement of the 'Catalogue' as shown. Each illustration provides an excellent instance of how the listener's musical experience may be effectively transformed by a simple change of register.

The chords subtitled 'le main de pierre' (at bar 11)

melodic outline
from above →

'Messe de la Pentecôte' IV - Communion p21

melodic outline
from above →

'Turangalila' p 324

are stated by way of recapitulation at the close of the movement (page 28, bar 5) and close analysis of their particular progression in each instance reveals a melodic outline, stated in octaves, and which the passages on first sight, conceal. The principal feature of this melody is that it comprises two descending intervals of minor third followed by tone which are then re-stated as a form of transposition to extend the melody. Messiaen has made considerable use of this melodic contour and two notable examples are included opposite, one from the organ composition, 'Messe de la Pentecôte' and the other from the 'Turangalîla-Symphonie'. (Example 160).

In the example, the red brackets are inserted to outline the intervals of minor third and tone respectively.

As a further point of interest, Messiaen has also used this particular and rather lovely line to considerable effect in 'Cinq Rechants'. *

Within the melodic experience of this line then,

* p 29 of full score : 'tous les philtres

Le Merle de roche p 28 bar 4

Très lent

mf

8 Ped Ped Ped Ped

p 14 bar 11

mf

8 Ped Ped *

Vingt Regards p 129 Regard du silence

p

8

[thème d'accords]

Messiaen returns in 'Le Merle de roche' to the world of his earlier works which are dominated by the 'theme of love'. In this respect he has come, so to speak, 'full circle'. This allusion to 'love themes' is further enhanced by a passing reference in 'Le Merle de roche' to the 'thème d'accords' of 'Vingt regards sur l'Enfant - Jésus'. This 'thème d'accords' first appears in a chordal form on page 3 of the score (at bar 10) and further occurs both on page 14 of the score (bar 11) and in the closing bars of the piece on page 28 where the progression symbolises 'nightfall'. The latter two extracts from 'Le Merle de roche' are given opposite in example 161 together with a similar usage of the 'thème d'accords' in the 'Regard du Silence', the 17th movement of 'Vingt Regards'. The chords which are outlined by dotted circles are in fact transpositions.

The first allusion to Messiaen's visual-audio synaesthesia in the composition occurs on page 9 of the score, the passage in question (bar 1) being headed as follows :

'Merle de roche- 10 hrs du matin, soleil, chaleur et lumière'

A footnote in the score indicates to the pianist that the

'Le Merle de roche' p9 bar1

8

f 1 2 3

Ped Ped Ped

APPOGGIATURA TECHNIQUE hypothetical resolutions

1

5 notes of B major

2

5 notes of G major

3

5 notes of D \flat major

chords are to be played so as to project the impression of a stained-glass window which is composed of a predominantly blue-orange coloured glass. The particular chord progression is shown opposite as example 162 and on this occasion the sound-colour association is not determined by recourse to specific modality so much as to the employment of a 'listed' technique of Messiaen's which he outlines in the 'Technique' 'de mon langage musical'. This device is known as the 'appoggiatura technique'. (87) The hypothetical resolutions of these unresolved appoggiaturas, shown in red in the example, helps to clarify this terminology. Thus the 'resolutions' can be related to the notes of the various major tonalities as shown. The same is true of the reprise of this music page 12 of the score (bar 9) where, owing to the transposition involved, the tonalities which emerge are, in order of sequence, C-major, E-major and G-major respectively.

'Le Merle de roche' p14

Musical score for 'Le Merle de roche' p14. The score is written for piano and consists of two staves. The key signature is one sharp (F#) and the time signature is 6/8. The first staff has a treble clef and the second staff has a bass clef. The music is marked with a forte 'f' dynamic. There are several slurs and accents. A bracket above the first two measures is labeled '8'. Pedal markings 'Ped' are present under the first, third, and fifth measures. An asterisk '*' is placed between the second and third measures.

EXAMPLE 163

'La Bouscarle' p9 bar 1

Musical score for 'La Bouscarle' p9 bar 1. The score is written for piano and consists of two staves. The key signature is one sharp (F#) and the time signature is 6/8. The first staff has a treble clef and the second staff has a bass clef. The music is marked with a mezzo-forte 'mf' dynamic. There are several slurs and accents. Pedal markings 'Ped' are present under the first, third, and fifth measures. An asterisk '*' is placed between the second and third measures.

EXAMPLE 164

An allusion to a further listed 'technique' in the 'Technique de mon langage musical' occurs in 'Le Merle de roche' in the form of an 'advanced' usage of the structural device known as 'harmonic litanies', which we already noted as a compositional feature in the survey of aspects of the 'Préludes'. The employment of 'harmonic litanies' can also be found elsewhere in 'Catalogue', certain usages being more immediately evident than others. As this device seems peculiarly integral to Messiaen's compositional thought, I include the example from 'Le Merle de roche' opposite, together with one other occurrence in the music of 'La Bouscarle' which will amplify the above statement. (Examples 163 and 164). In each of these examples, the coloured brackets define the respective litany groups.

Having examined these various isolated musical details in 'Le Merle de roche', I would now like by way of contrast to consider the fifth piece from the 'Catalogue', 'La Chouette Hulotte' (Tawny Owl), from an overall structural point of view and this will form the second of the two movements to be discussed in detail in this chapter.

If we have already observed in 'Vingt Regards sur l'Enfant-Jésus', Messiaen's superb integration of poetic ideas and musical processes, it is undoubtedly in 'Catalogue d'Oiseaux' that this fusion achieves an ultimate maturity. 'La Chouette Hulotte' is certainly no exception to this, a fine performance amply illuminating the short 'programme note' which forms Messiaen's preface to the actual score. Musically, the composition can be divided into distinctive sections and these have the advantage of being easily recognisable aurally. Prior to a consideration of how these sections function in terms of an organic entity, appearing as they do, at first, to be apparently unrelated to one another, it is necessary to enumerate the musical events with specific reference to Messiaen's descriptive note which in turn provides the blueprint for his creative structural processes.

'Plumage tacheté de brun et de roux, énormes, disques faciaux, regard solennel, empreint de mystère, de

sagesse et de surnaturel. Plus encore que son aspect, la voix de cet oiseau nocturne provoque la terreur. Je l'ai souvent entendie, en pleine nuit, vers 2 heures du matin, dans les bois d'Orgeval, de Saint Germain en Laye, sur la route de Petichet à Cholonge (Isere). - Ténèbres, peur, coeur qui bat trop vite, miaulements et jappements de la Chouette Chevêche, cris du Hibou moyen-Duc : et voici l'appel de la Hulotte : tantôt lugubre et douloureux, tantôt vague et inquietant (avec un tremblement étrange), tantôt vociféré dans l'épouvante comme un cri d'enfant assassiné'. Silence. Ululement plus lointain, semblant une cloche de l'autre monde.' *

Briefly, 'La Chouette Hulotte' can be considered as comprising the following musical events which are summarised thus :-

'night-music'	(section headed 'la nuit')
'fear motive'	(section headed 'la peur')
<u>the nightowls</u>	
i long-eared owl	(Hibou moyen-Duc)
ii little owl	(Chouette Chevêche)
iii tawny owl	(Chouette Hulotte)

Each of the above sections are subject to varied juxtaposition and extension or reduction on reprise. This can

* Messiaen's own notes in the score

Musical notation for measures 1-18. Dynamics: *fff*, *ff*, *mf*, *p*, *ppp*, *pp*, *f*, *fff*, *ff*, *f*, *mf*, *f*, *ff*, *ff*, *f*, *mf*, *p*, *pp*. Measure numbers: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18.

Musical notation for measures 19-28. Dynamics: *ppp*, *p*, *mf*, *pp*, *f*, *ff*, *fff*, *ff*, *f*, *mf*. Measure numbers: 19, 20, 21, 22, 23, 24, 25, 26, 27, 28.

Musical notation for measures 29-38. Dynamics: *p*, *pp*, *ppp*, *ppp*, *mf*, *pp*, *pp*, *mf*, *f*, *ff*, *fff*, *ff*, *ff*, *mf*. Measure numbers: 29, 30, 31, 32, 33, 34, 35, 36, 37, 38.

Musical notation for measures 39-46. Dynamics: *f*, *mf*, *p*, *ppp*, *pp*, *pp*, *f*, *ff*, *ff*, *f*, *mf*. Measure numbers: 39, 40, 41, 42, 43, 44, 45, 46.

Musical notation for measures 47-49. Dynamics: *f*, *ff*, *fff*. Measure numbers: 47, 48, 49.

EXAMPLE 165

be said to reflect, perhaps ideally, the similar situation which occurs in nature.

The 'night-music' in 'La Chouette Hulotte' sets the scene and Messiaen's choice of timbre, register and dynamics endow the opening bars with a sense of hushed mystery punctuated noticeably by the impact of selected sounds of high dynamic marking and extreme register. These sounds are disposed in three distinct horizontal strands which move forward together in their own individual rates of time-flow. The music, which is set out on two staves, employs sonorities chosen from the lower half of the pianoforte keyboard. The duration and dynamic marking of any given pitch within this 'night-music' section can be clearly understood by a glance at Example 165, opposite. It will be observed that the note 'A' natural functions as the extreme limits of a chromatic scale of durations, the smallest unit of which is one demisemiquaver and the largest of which is a duration of forty-nine demisemiquavers. Furthermore, it can be readily perceived that each duration increases by the addition of one demisemiquaver value for each descending semitone step and that the dynamic markings form a 'non-retrograde' plan whose centre, established by the note 'A' natural, has a dynamic marking of 'fff', (at the blue star). From this plan then, Messiaen

♩ = 126

(la nuit)

The first system of the musical score consists of two staves. The upper staff begins with a forte (f) dynamic, followed by a fortissimo (fff) dynamic. The lower staff starts with a pianissimo (ppp) dynamic, then moves to piano (p), and ends with a fortissimo (ff) dynamic. A dashed line at the bottom of the system is labeled with the number 8 and the instruction "(avec un peu de pédale)".

The second system of the musical score continues with two staves. The upper staff features a fortissimo (fff) dynamic, followed by piano (p), mezzo-forte (mf), and piano (p) dynamics. The lower staff starts with a fortissimo (fff) dynamic, then piano (p), mezzo-forte (mf), piano (p), and fortissimo (ff) dynamics. The system concludes with a fortissimo (fff) dynamic in the upper staff and a fortissimo (ff) dynamic in the lower staff.

Chouette Hulotte p4 bar 6 →

EXAMPLE 166

chooses pitches, dynamics and durations to construct the 'night-music'.

The music shown opposite in Example 166 is taken from the second appearance of the 'night-music' section on page 4 of the score, to demonstrate the particular prominence of the note 'A' natural when viewed in respect of the surrounding texture. The special reason for this will become clearer when viewed in context of the other sections.

Immediately the first section of 'night-music' ends, we

♩ = 152

(la peur)

Musical score for Example 167, consisting of two staves. The first staff begins with a treble clef, a key signature of one sharp (F#), and a 6/8 time signature. The music starts with a piano (p) dynamic and includes accents (>) over several notes. The second staff begins with a bass clef and a key signature of one flat (Bb). It features a piano (pp) dynamic, accents (>) over notes, and a *Poco cresc.* marking. The piece concludes with a mezzo-forte (mf) dynamic. A bracket at the bottom of the staves is labeled with the number 16.

EXAMPLE 167

♩ = 66

Musical score for Example 168, consisting of two staves. The first staff has a treble clef and a key signature of one sharp (F#). It begins with a piano (p) dynamic, followed by a piano-piano (pp) dynamic, and includes a slur over two notes. The second staff has a bass clef and a key signature of one flat (Bb). It starts with a forte (f) dynamic, followed by a mezzo-forte (mf) dynamic, and includes a slur over two notes. The piece ends with a piano (p) dynamic and a piano-piano (pp) dynamic. A bracket at the bottom of the staves is labeled with the number 16.

[Chouette Hulotte].

EXAMPLE 168

have a statement of what I have called the 'fear motive', shown opposite in Example 167. Notice particularly the rhythmic hesitancy, perhaps symptomatic of a quickened heartbeat which characterises the emotion, and the fact that the note 'C' natural is chosen for this rhythmic exposition. It can be said, therefore, that we observe a shift of emphasis from the note 'A' natural ('night-music') to the note 'C' natural ('fear motive'). The cries of the long-eared owl (Hibou moyen-Duc) and the little owl (Chouette Chevêche) now follow, and after a significant and magical pause (indicated by quaver rests) the cry of the tawny owl (Chouette Hulotte), which is marked 'Lent', conceals the melodic minor third falling, spanned by the significant notes 'C' natural and 'A' natural. (Example 168)

Part of the relationship between these musical sections can now be discerned. If we consider the 'night-music' as a huge upbeat on the note 'A' natural, through a fresh upbeat on the note 'C' natural ('fear motive'), the accent (the focal point of the movement to date) is reached with the arrival on the scene of the strange and terrible tawny owl with his dolorous falling cry. In the example the accent clearly falls on the note 'C' natural with the afterbeat on the 'A'. This is confirmed by the dynamic marking and the relative duration of the two chords.

In the chapter on 'Cantéyodjayâ', I pointed out in the

'râgarhanakî' music how the principle of 'upbeat-accent-termination' is employed by Messiaen as a structural device for maintaining momentum between successive musical events. In the passage which we examined in example 103 it will be recalled how the nature of an accent could be transformed into an upbeat as the particular passage unfolded. The effect of this procedure is to concentrate a cumulative upbeat towards a cumulative accent, the force of which is thereby greatly enhanced on arrival. A corresponding release of momentum is engineered by the afterbeat or termination.

In Example 169, opposite, the music of the 'tawny owl' is quoted from bars 9 - 14 on page 3 of the score. Each bar can be seen to contain an upbeat, an accent, and a termination these events being clearly marked in black above the respective chords. Sensitive performance of this music reveals that Messiaen's cumulative accent occurs in bar 13, and this is confirmed both on account of the duration of the accented chord and its dynamic marking and register. The arrival of this overriding accent in turn makes sense of the cumulative upbeat which Messiaen engineers in bars 9 - 12. The afterbeat occurs in bar 14. Observe also that this exposition of 'upbeat-accent-afterbeat' is in the nature of a melodic insistence on

♩ = 76

Musical score for measures 76-86. The score consists of two staves. The upper staff contains a vocal line with notes and rests, and the lower staff contains a piano accompaniment with chords and moving lines. Dynamics include *ff*, *mf*, *f*, and *p*. Performance instructions include *Ped.* and asterisks. A bracket groups measures 76-80, and another bracket groups measures 81-86. A tempo marking of ♩ = 76 is at the top left.

♩ = 66

Musical score for measures 87-96. The score consists of two staves. The upper staff contains a vocal line with notes and rests, and the lower staff contains a piano accompaniment with chords and moving lines. Dynamics include *mf*, *ff*, *f*, and *p*. Performance instructions include *Ped.* and asterisks. A bracket groups measures 87-90, and another bracket groups measures 91-96. A tempo marking of ♩ = 66 is at the top left.

♩ = 48

Musical score for measures 97-106. The score consists of two staves. The upper staff contains a vocal line with notes and rests, and the lower staff contains a piano accompaniment with chords and moving lines. Dynamics include *pp*, *mf*, and *p*. Performance instructions include *long*, *Ped.*, and asterisks. A bracket groups measures 97-100, and another bracket groups measures 101-106. A tempo marking of ♩ = 48 is at the top left.

EXAMPLE 170

the falling minor third, spanned by the notes 'A' natural and 'C' natural.

In the final bars of the composition which again concern the 'tawny owl' music, the falling minor third is clearly exposed once more within a structural framework of 'upbeat-accent-termination'. (Example 170). The last three bars progressively convert this melancholy cry into the stillness of night, and the small asterisk indicated in the opposite example under the notes 'C' natural and 'A' natural in the final bar refers to a note which Messiaen has inserted in the score to the effect that they should be specially brought out in performance.

From a structural point of view then, 'La Chouette Hulotte' has a great deal to offer, but what remains of paramount importance is the fact that one need not necessarily be aware of Messiaen's chosen procedures in order to enjoy the music. It is this fact, I feel, which manifests Messiaen's true artistry - in 'La Chouette Hulotte', poetic and structural inspiration have together attained a unique fusion.

Although I have only been able to deal with two of the movements of 'Catalogue d'Oiseaux' at any length, it is non the less important to point out that the experience of this

composition, either as a whole or in terms of its component movements, is unique - even in the face of the whole of Messiaen's output. What structural processes I have illustrated, however, show that the work is composed, in the last analysis, by a musician with a strong, clearly defined language at his command. Although we may criticise his employment of it, the fact remains that the consistency and originality of this vocabulary, coupled with the composer's wholehearted devotion to it as his supremely personal expression, must afford Olivier Messiaen a unique place in the musical development of the 20th century.

CONCLUSION

CONCLUSION

Perhaps one of the most dangerous assumptions that could be made at this stage in an analytical thesis on Messiaen is that most of the questions relating to the pianoforte music studied have now been answered. Nothing could be further from the case. It is one thing to reveal in part the working of a composer's musical language, but quite another to penetrate the hidden workings of his mind, more especially when we are dealing with a genius whose profound sensibility is the hallmark and 'raison d'être' for each and every creative act. For this reason alone it would appear a bootless task at this juncture painstakingly to re enumerate each and every technical device employed in the music unless the corresponding visionary or symbolic allusion could be equally adduced. In any event, I have attempted to draw parallels of this nature at opportune moments throughout the dissertation.

In the introductory chapter, I introduced those aspects of Messiaen's personality and musical language which I believe remain fundamental to the full understanding of the various implications which ensuing chapters have revealed. At a technical level, it has been possible to demonstrate that the

musical language of the 'Préludes' forms the embryo of much of Messiaen's later writing one would cite as fundamental the modes of limited transposition, melodic tritone, ostinato, polymodality, harmonic litany and so on - even accepting the rhythmic researches that were to come later. What is, however, of considerable interest is that these same 'Préludes' demonstrate no allusion towards a mystical or other specifically religious outlook whatever. And surely, it is this one thing, a profoundly spiritual outlook, that one can most readily associate with Olivier Messiaen. The later projection of Christian Faith on the one hand, and the big emotions of human experience on the other, upon the highly original language demonstrated in the 'Préludes' is entirely characteristic of our experience of Messiaen. Superimposition, after all, could be said to justify a wide area of his whole diverse technique.

Perhaps the most satisfactory conclusive remarks belong to David Drew whose brilliant insight into Messiaen's contribution to the music of our time has in no small way kindled the fire of enthusiasm with which I undertook this study :

'Messiaen's analytical discoveries and creative acts in the field of form, rhythm, and timbre, qualify him for a place amongst music's pioneers - a place that is not affected by the possibility that those who follow him may abuse his discoveries. But there is another and more fundamental reason why this musicien medieval et doux * should be considered the most important French composer since Debussy. One has only to look at the quartets and symphonies of Milhaud, the instrumental music of Poulenc and the pretty bubbles of Jean Francaix to discover what the reason is. Whether a work of Messiaen's succeeds or fails, it is evident from the very start that the composer feels, in the depths of his heart and soul, the burning urgency of what he has to say. For that one can forgive much.' (89)

* 'He is, I feel, the rightful heir of a title which Debussy conferred on Satie.'

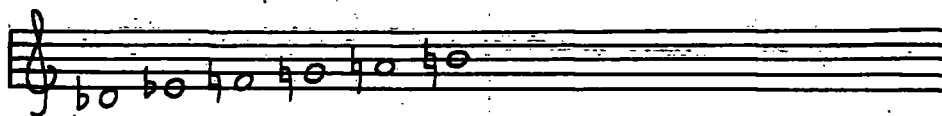
APPENDIX 1

MODES OF LIMITED TRANSPOSITION

MODE 1

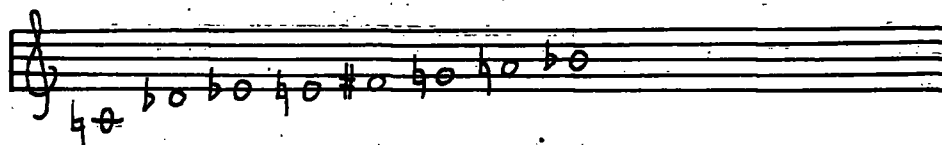


prime

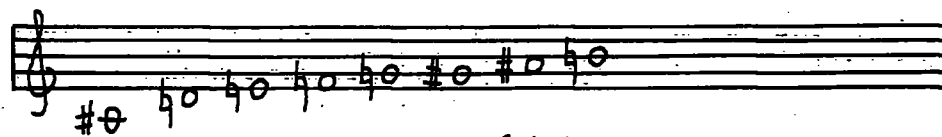


1st trsp.

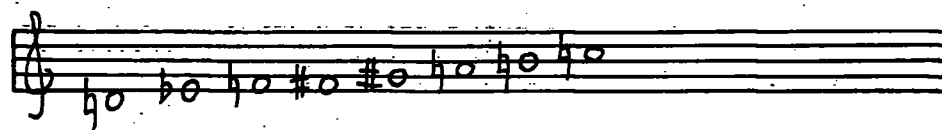
MODE 2



prime

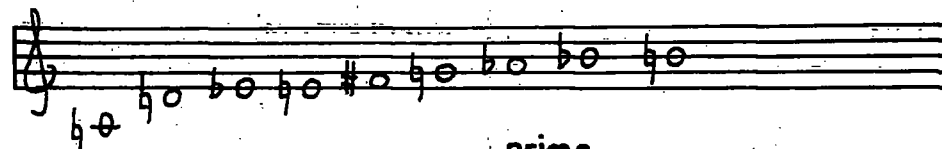


1st trsp.



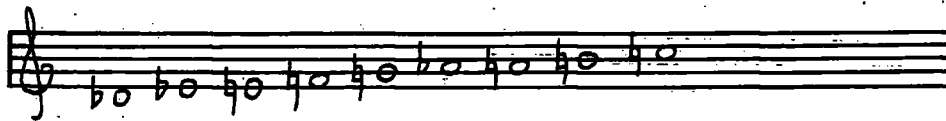
2nd trsp.

MODE 3

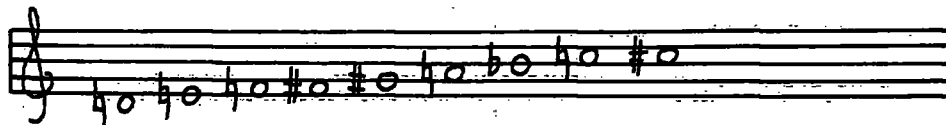


prime

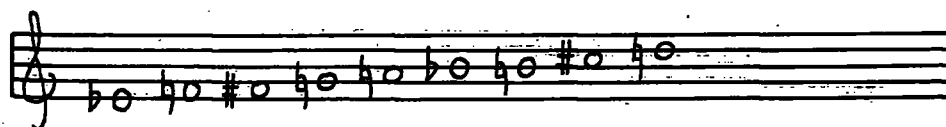
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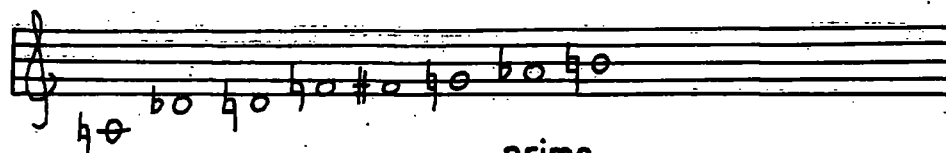


2nd trsp.

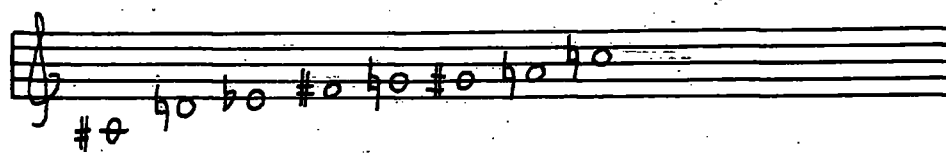


3rd trsp.

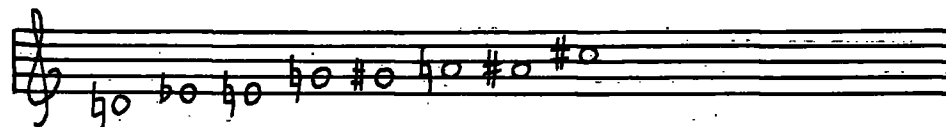
MODE 4



prime



1st trsp.

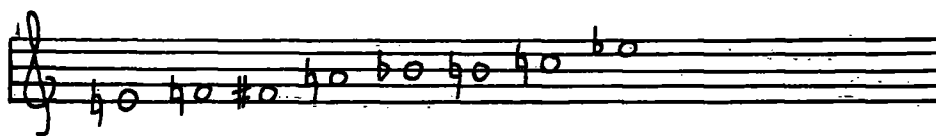


2nd trsp.

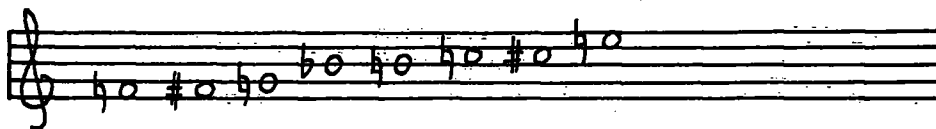


3rd trsp.

(mode 4, cont.)

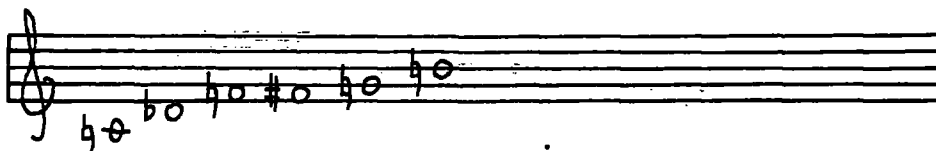


4th trsp.

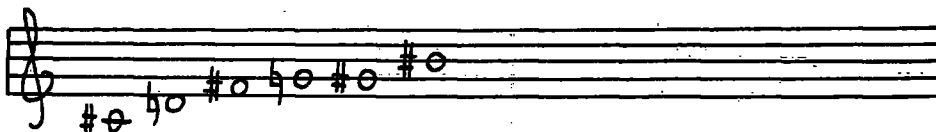


5th trsp.

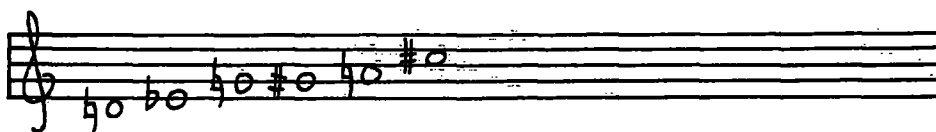
MODE 5



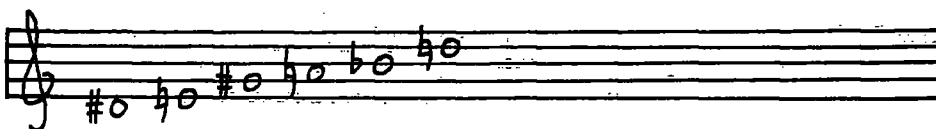
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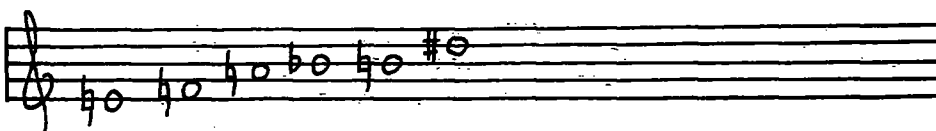
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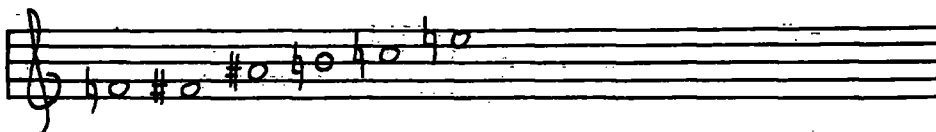
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3rd trsp.

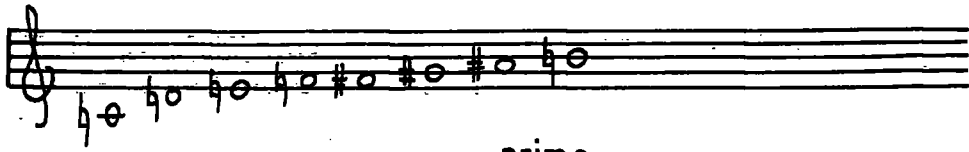


4th trsp.

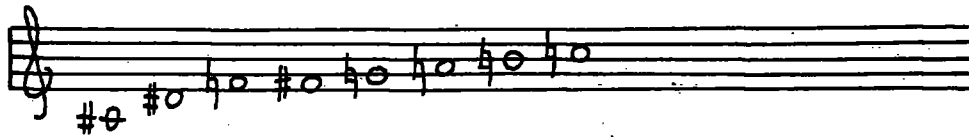


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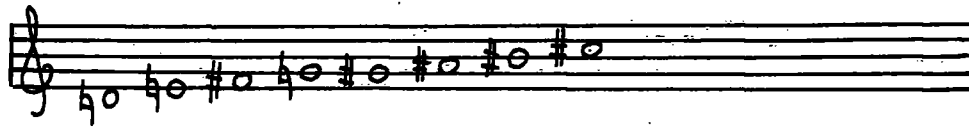
MODE 6



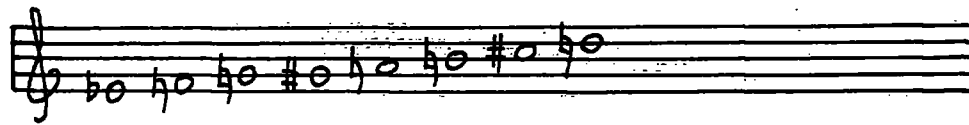
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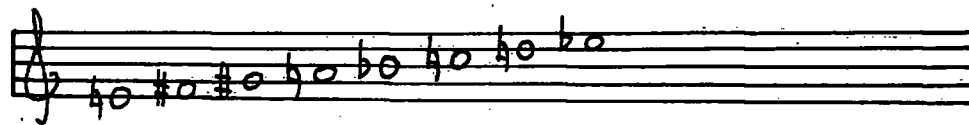
1st trsp.



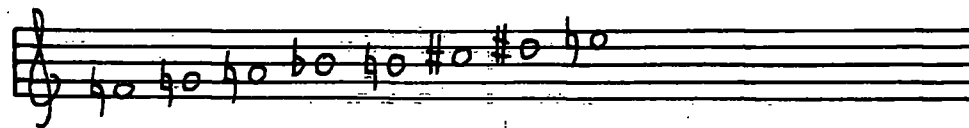
2nd trsp.



3rd trsp.



4th trsp.



5th trsp.

APPENDIX 2

CARNGADEVA'S 'DECI-TALAS'

(Quoted from Lavignac's "Encyclopedie de la musique et
dictionnaire du conservatoire.")

See Alphabetical Bibliography - Number 23).

N ^o D'ORDRE	NOMS DES TĀLAS	NOMBRE DES MĀTRĀS	NOTATION
33	turangalīla	2 1/2	0°0°00 (musical notation)
34	ṣarabhāllā	8	11000011 (musical notation)
35	simhanandana	30	1555̄1500555̄15̄15̄15̄X (musical notation)
36	tribhāngī	6	1515 (musical notation)
37	rangābharana	9	5515̄ (musical notation)
38	manthā (1 ^o)	8	1158X (musical notation)
	— (2 ^o)	8	512X (musical notation)
	— mudrita (3 ^o)	8	518X (musical notation)
	— (4 ^o)	8	11151 (musical notation)
	[6 autres formes de manthā, en tout 10.]		
39	kokilāpriya	6	55̄ (musical notation)
40	nihsāruka	3	11̄ (musical notation)
41	rājavidyādhara	4	1500 (musical notation)
42	jayamangala	8	11515 (musical notation)
43	mallikāmōda	4	110000 (musical notation)
44	vijayānanda	8	11555 (musical notation)
45	kriḍā [et] candanihsāruka.	1 1/2	0°0° (musical notation)
46	jayaṣṛī	8	5515 (musical notation)
47	makaranda	4	00111 (musical notation)
48	kirtī	10	15̄15̄ (musical notation)
49	ṣṛīkirtī	6	1155̄ (musical notation)
50	pratītālā	2	100 (musical notation)
51	vijaya	8	5̄5̄ (musical notation)
52	bindumālī	6	500005 (musical notation)
53	sama	3 1/2	110°0° (musical notation)
54	nandana	5	1005̄ (musical notation)
55	manthikā	5 1/2	505̄ (musical notation)
	— [ou]	1 1/4	0°0° (musical notation)
56	dīpaka	7	001155 (musical notation)
57	udikshana	4	115 (musical notation)
58	dhenki	5	55 (musical notation)
59	vishama	4 1/2	0000°0000° (musical notation)
60	varnamanthikā	5	1100100 (musical notation)
61	abhinanda	5	11005 (musical notation)
62	ananga	8	15̄15̄ (musical notation)
63	nāndī	8	100155 (musical notation)
64	mallatālā	5 1/4	111100° (musical notation)
65	kaṅkālā (1 ^o) pūrṇa	5	00005 (musical notation)
	— (2 ^o) khanda	5	0050 (musical notation)
	— (3 ^o) sama	5	55 (musical notation)
	— (4 ^o) vishama	5	155 (musical notation)

N ^o D'ORDRE	NOMS DES TĀLAS	NOMBRE DES MĀTRAS	NOTATION
66	kanduka	6	IIIS (musical notation)
67	ekatālī	1/2	o (musical notation)
68	kumuda	6	IOOIS (musical notation)
	— [ou]	5	IOOOO (musical notation)
69	caīustāla	3 1/2	SOOO (musical notation)
70	dombullī	3	īī (musical notation)
71	abhangā	4	īī (musical notation)
72	rāyavankola	6	ISOO (musical notation)
73	rasanta	9	IISSS (musical notation)
74	laghuṣekhara	1 1/2	ī (musical notation)
75	pratāpaṣekhara	4 1/4	SOO (musical notation)
76	jhampā	2 1/2	o'oī (musical notation)
77	gajajhampā	3 3/4	SOOO (musical notation)
78	caturmukha	7	ISIS (musical notation)
79	madana	3	OOO (musical notation)
80	pratīmanthaka ou kollaka	8	IISSII (musical notation)
81	pārvatilocana	15	SSSSSSOO (musical notation)
82	rati	3	IS (musical notation)
83	lilā	4 1/2	oīī (musical notation)
84	karanayati	2	OOOO (musical notation)
85	lalita	4	OOIS (musical notation)
86	gārugi	2 1/4	OOOO (musical notation)
87	rājanārāyana	7	OOISIS (musical notation)
88	lakṣmīṣa	4 1/4	OO'IS (musical notation)
89	lālītapriya	7	IISSS (musical notation)
90	ṣrinandana	7	ISIS (musical notation)
91	janaka	14	IIIISSIIIS (musical notation)
92	vardhana	5	OOIS (musical notation)
93	rāgavardhana	4 3/4	OO'oī (musical notation)
94	śhattāla	3	OOOOOO (musical notation)
95	antarakridā	1 3/4	OOO (musical notation)
96	hansa	2 1/2	īī (musical notation)
97	utsava	4	īī (musical notation)
98	vilokita	6	SOOī (musical notation)
99	gaja	4	IIII (musical notation)
100	varnayati	3	IIOO (musical notation)
101	śimha	4 1/2	IOIII (musical notation)
102	karuna	2	ī (musical notation)
103	sārasa	4 1/2	IOOOII (musical notation)
104	candatāla	3 1/2	OOOII (musical notation)
105	candrakalā	16	SSSSSSī (musical notation)

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