

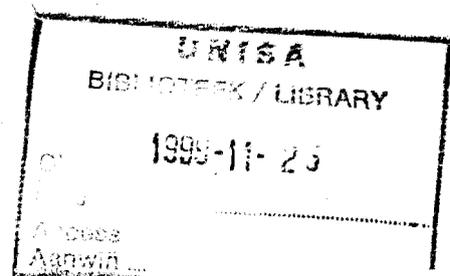
SUMMARY

The dissertation identifies three types of tonality: scalic/modal, melodic, and harmonic. Scalic/modal tonality and melodic tonality are known to have been existent in Antiquity. Messiaen adheres to these ancient types of tonality and also harmonic tonality. Messiaen uses these types of tonality in his own combinations -- his concept of tonality is revealed to be highly complex.

Key Terms

Messiaen, O.
Tonality
Modal tonality
Scalic tonality
Melodic tonality
Harmonic tonality
Expanded tonality

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OLIVIER MESSIAEN'S CONCEPT OF TONALITY

by

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"I declare that: Olivier Messiaen's Concept of Tonality
is my own work and that all the sources that I
have used or quoted have been indicated and
acknowledged by means of complete references".

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INTRODUCTION

TONALITYA) A Broad Definition of Tonality

Tonality in the broadest sense of the word means loyalty to a tonic. One tone or pitch is central to the overall symmetry of a piece, and musical functions are experienced in relation to this central point. A striking phenomenon of music is the fact that throughout its evolution a great many pieces give preference to one note (the tonic), which forms the tonal centre to which all other tones are related. Although nearly all music has some kind of tonical focus, the means of achieving tonality have varied considerably throughout history. (Apel 1970, 855-856, paraphrased).

Tonality has at least three forms. Among the forms of tonality described by Carl Dahlhaus (in Sadie 1980, vol.19, 51-55) are: scalic and modal tonality; harmonic tonality; and melodic tonality. To summarize the article, scalic and modal tonality are a mechanical, step-wise

arrangement of notes beginning on a tonic and ending on that same tonic. Harmonic tonality refers to the functional relationship of chords where the tonic chord is strengthened primarily by the dominant chord relationship, in the major-minor system. In the late nineteenth-century, increased chromaticism led to the decline of harmonic tonality, which was virtually abandoned with the introduction of the twelve-tone system in the twentieth-century. The musicologist Rudolph Reti postulates that with the decline of harmonic tonality, the ancient concept of melodic tonality should come into play with renewed force in the twentieth-century. Here follows Reti's explanation of melodic tonality. (Reti 1958, 15)

B) Melodic Tonality, With Reference to Messiaen

Example 1, cited by Reti, is according to him, representative of melodic tonality.

Example 1 Jewish Chant (according to Idelsohn).



A striking feature of example 1 is the prominence of the note E which represents a central melodic point, a "tonic", with the whole melody being understood mainly through its relationship to this basic note. It should be observed that one can interrupt the musical line at any point and still bring it to a reasonable close on E. Numerous returns are made to the tonic E. It is frequently repeated. The melody has no harmonic accompaniment. It actually resists classical harmonization. A change of certain notes, phrase lengths and rhythms would be necessary in order to harmonize this melody in the familiar classical way. The melodic shape is held together by one note which acts as a central point and is binding to the composition as a whole. The formation of this central point is horizontal rather than vertical as in classical tonality. (Reti 1958, 15, paraphrased)

Following are some further observations on the same chant, not mentioned by Reti. A number of different melodic formulae were relied on for the main types of Jewish chant. Each book has a particular mode usually based on a tetrachord scale (e.g., D - G, G - C), with its own tonic. Example 1 uses the tetrachord scale E - A, with the tonic being E. The similarity between Hebrew chant and Gregorian chant can be seen. In Gregorian chant each mode has two tones of importance: the final, which is usually the last note in the melody, and the reciting tone. (Summary of Stern 1978, 3-4)

In the following example, Messiaen's use of melodic tonality is obvious. The example represents a reference to Gregorian chant, which, of course, ties in with Messiaen's Catholicism.

Example 2 (Messiaen 1956, vol. 2, 31)
Messiaen: Action de Graces, chant for soprano

Très modéré
"p

Le ciel, Et l'eau qui suit les variations des nuages, Et la
terre, et les montagnes qui attendent toujours,
Et la lumière qui trans-
- for - - me.

Messiaen regards melody as paramount to his music.

In Messiaen's words (1956, vol. 1, 31):

Supremacy to melody! The noblest element of music, may melody be the principal aim of our investigations. Let us always work melodically; rhythm remains pliant and gives precedence to melodic development, the harmony chosen being the "true," that is to say, wanted by the melody and the outcome of it.

Example 2 makes the concept of melodic tonality blatant, but is a weak example of Messiaen's melodic ability. Messiaen's melodies achieve a probably unparalleled sophistication. In fact Messiaen's music may, at surface level, be regarded as just melody — the rest being an unobtrusive accompaniment.

C) Scalar Tonality, With Reference to Messiaen

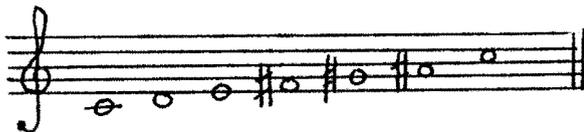
Since Antiquity the relationship between melody and scale has been of concern to theorists. In Ancient Greece, Aristoxenus appears to have been the first to describe the relationship between melody and scale, while the "Pythagoreans" were concerned solely with tuning systems. (Claude V. Palisca in Sadie 1986, vol.18, 742). Some of the thinking on the relationship between scale and melody in the twentieth-century is summed up by Alexander Ringer (Sadie 1980, vol. 12, 122).

Already Parry, at the beginning of the twentieth-century, had warned 'against the familiar misconception that scales are made first and music afterwards'...None would wish to deny, to be sure, that certain types of musical instruments, whether of the Indonesian gamelan or the Western keyboard variety, have had prescriptive effects on pitch selection. ... Scalar consideration can hardly be said to place more than very general constraints on melodic activity, if only because the scales themselves are derived from existing melodic practices. The image of the scalar tail wagging at the melodic dog would be grotesque, were it not for the implied reminder of the extent to which musical notation, with all its blessings, has narrowed Western man's understanding of a cultural phenomenon that is always aural in essence and rarely, if ever, graphic.

It is assumed here that scales in themselves possess their own kind of mechanical tonality, in that they start on a specific tone and end on the same tone (usually), and to this tone are all the other tones viewed by reference. The debate mentioned above is, however, important to perceiving the extent to which Messiaen's melodies are natural or contrived.

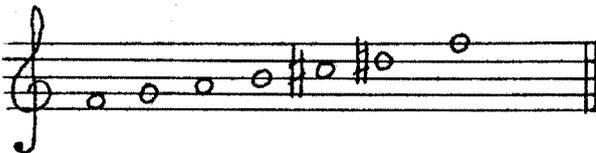
Messiaen turned to strictly structured arrangements of whole tones and half tones which he called "modes of limited transposition." The first of these modes, according to Messiaen, is the whole tone scale. Messiaen dismissed the whole tone scale for his own purposes, saying, "Claude Debussy, in Pelléas et Mélisande, and after him Paul Dukas, in Ariane et Barbe-Bleue, have made such remarkable use of it that there is nothing more to add. Then we shall carefully avoid making use of it, unless it is concealed in a superposition of modes which renders it unrecognizable " (Messiaen 1956, vol. 1, 59).

The First Mode of Limited Transposition



According to Messiaen, "the first mode is divided into six groups of two notes each; it is transposable twice." (Messiaen 1956, vol. 1, 59)

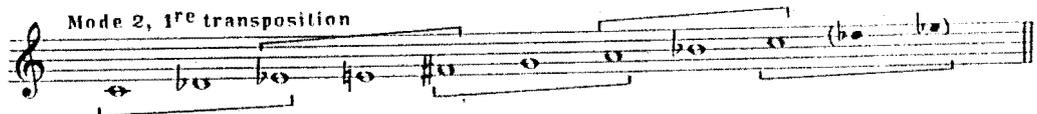
The other transposition is:



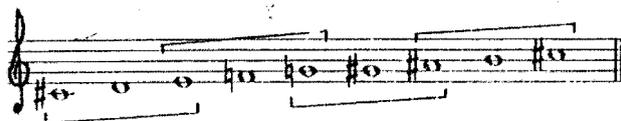
Messiaen explains the modes of limited transposition thus:

Based on our present system, a tempered system of twelve sounds, these modes are formed of several symmetrical groups, the last note of each group always being common with the first of the following group. At the end of a certain number of chromatic transpositions which varies with each mode, they are no longer transposable, the fourth transposition giving exactly the same notes as the first, for example, the fifth giving exactly the same notes as the second, etc. (When I say "the same notes," I speak enharmonically and always according to our tempered system, C-sharp being equal to D-flat.) There are three modes of this type. There are four other modes, transposable six times, and presenting less interest, for the very reason of their great number of transpositions. (Messiaen 1956, vol. 1, 58).

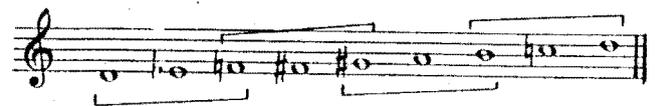
Here follows an outline of the different transpositions of the second mode. The mode can also begin on any degree. It can be seen that the fourth transposition yields the same notes as the first. The mode can also be used to create chords.



Second transposition



Third transposition



Mode 2, commençant au 2^e degré
 Mode 2, beginning on the 2nd degree
 Modus 2, auf der 2. Stufe beginnend.

Mode three is transposable four times, can begin on any degree, and can be used to create chords.

Mode 3, 1^{re} transposition

Here follow modes four to seven which can be transposed six times, begin on any degree, and be used to create chords.

Mode 4

Mode 5

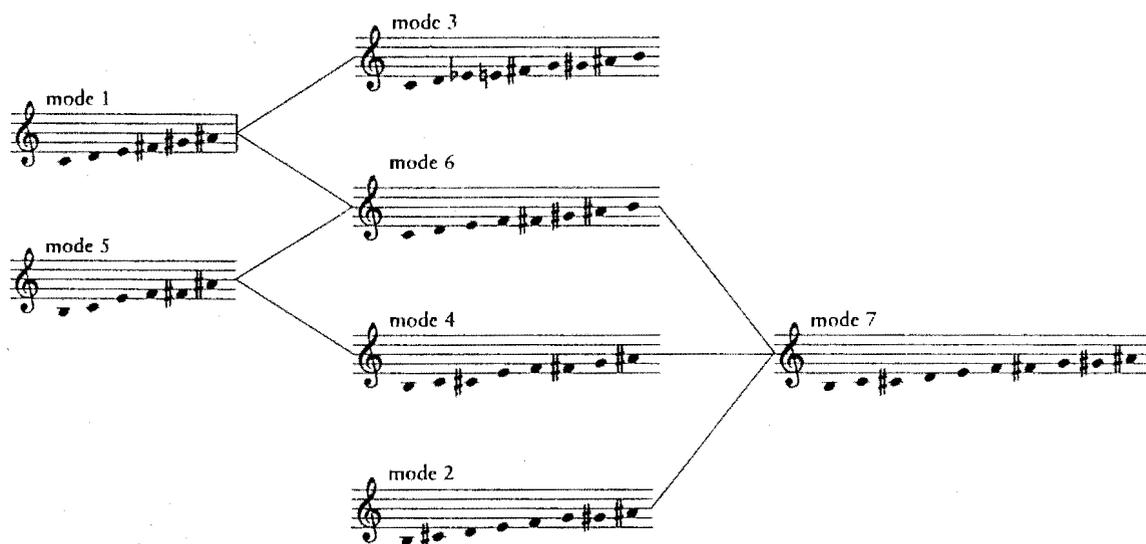
Mode 6

Mode 7

(Examples taken from Messiaen 1956, vol.2,50-54).

Anthony Pople (Hill 1995, 20-21) shows the relationship between the modes in the following diagram and explanation:

- i) all six notes of mode 1 are found in both mode 3 (nine notes) and mode 6 (eight notes)
- ii) all six notes of mode 5 are found in both mode 6 and mode 4 (eight notes)
- iii) mode 7 (ten notes) includes modes 6 and 4, and also includes all eight notes of mode 2



Messiaen writes: "All the modes of limited transposition can be used melodically, and especially harmonically, melody and harmony never leaving the notes of the mode." (Messiaen 1956, vol. 1, 58). The extent to which Messiaen adhered to his own modal descriptions remains to be investigated.

D) Harmonic Tonality, With Reference to Messiaen

In the common practice period, melody was much dominated by harmony. Melodic periods (divisions of melody into phrases of, usually, two, four, eight or sixteen bars) implied to a large extent, harmony. Periodization was introduced in the Middle Ages. In a discussion of the Estampie Valenda Maya and Moniot d' Arras' Le fut en mai, Alexander Ringer writes: "Both are clearly in the major mode, ... both favour the tonic major triad and generally betray harmonic tendencies that are strengthened by rhythmic periodization..." (Sadie 1980, vol. 12, 121).

Messiaen adheres to periodization, but for Messiaen periodization is flexible. In Messiaen's words, "one can find infinite forms of diverse sentences." (Messiaen 1956, 37). Messiaen's periodization goes hand in hand with harmonic thinking. In the following example, Messiaen refers to a cadence, a dominant key and a tonic key (initial key):

After a cadence in B major, key of the dominant, an ascent with crescendo leads to a final period over the six-four chord in E major, the initial key: (Messiaen 1956, Vol. 1, 37)

131
Louange à l'Eternité
de Jésus

The musical score is for the Cello part of 'Louange à l'Eternité de Jésus'. It begins with a cadence in B major, marked with a fermata and a 'V' above the staff. The tempo and dynamics are 'ppp subito (sans vibr.)'. The music then ascends with a crescendo, marked 'peu à peu p (sibr.)', leading to a final period over a six-four chord in E major, marked 'etc.'.

(Messiaen 1956, vol. 2, 21)

In common with traditional harmony, Messiaen uses traditional key-signatures and considers the dominant-seventh chord as being the most efficient in establishing key changes. Messiaen mixes his modes with traditional major tonality. (Messiaen 1956, vol. 1, 64, summarised)

Messiaen entitles Chapter XIII of his Technique (Messiaen 1956, vol. 1, 47), "Harmony, Debussy, Added Notes." In common with Debussy the added sixth is taken as a natural supplement to a chord. Messiaen uses other added notes, like Debussy, but Messiaen justifies the added augmented fourth. For Messiaen the added augmented fourth resolves naturally to the root — according to "a very fine ear." (Messiaen 1956, vol. 1, 47).

Messiaen goes as far as presenting a dominant chord containing all the notes of the major scale. The following three examples are from Messiaen 1956, vol. 1, 50 and vol. 2, 37:

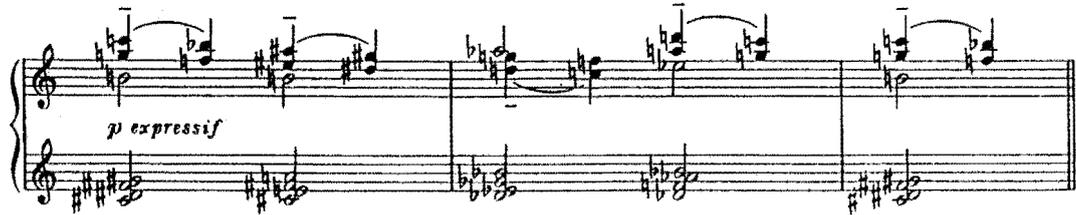
A dominant chord containing all the notes of the major scale:



This is its supposed resolution, according to Messiaen:



To complicate the chord further, he introduces appoggiaturas and other added notes:



As complicated as these chords appear, they remain for Messiaen chords on the dominant. Here the chord appears with double degrees, e.g., the notes C[#] and C^b, F[#] and F^b in the same chord. Messiaen's concept of tonality may be viewed as "expanded tonality," i.e., containing double degrees. This tonality is likened by Messiaen to a "stained glass window." (Messiaen 1956, vol.1, 50)

Messiaen moves away to describe other chords which are so complex that the term expanded tonality is now abandoned for use of another term: compound tonality.* These stained glass windows are kaleidoscopic.

* The term compound tonality has not been encountered by the author of this dissertation in any previous research.

CHAPTER 1

COMPOUND TONALITY

Compound tonality combines harmonic tonality, scalic/
modal tonality and melodic tonality simultaneously.

Here follows a direct quotation which makes the point
perfectly clear (quotation and examples from Messiaen
1956, vol. 1, 50 and 51, vol. 2, 37 -- parentheses mine):

Let us forget the classic chords of superposed
thirds to use a chord of augmented and perfect
fourths. [A reference to harmonic tonality]



It contains all the notes of the fifth mode
of limited transpositions. [A reference to
scalic/modal tonality]



To this chord and this mode belongs the melodic
formula: [A reference to melodic tonality.]



If one had to decide on the tonal centre of this
chord, according to Messiaen, the note is C. In
Messiaen's thinking the augmented fourth F# resolves
to the root C. The fifth mode of limited transpositions

starts and ends on the note C. The melodic formula ends on the note C; here again F# resolves to the note C.

The diatonic system cannot use complete diatonic scales in a vertical arrangement, as this would lead to a collapse of harmonic progression in that system. Messiaen preserves the concept of progression by special links in chords. So fastidious is his concept of harmony that he can label some notes as foreign (a parallel to the traditional concept of non-harmonic tones).

CHAPTER 2

CONNECTIONS OF CHORDS

Messiaen does not discuss his connections of chords in terms of tonality. He resorts to vague analogies to the phenomenon of natural resonance (Messiaen 1956, vol. 1, 51). More reliable is Messiaen's "very fine ear" (Messiaen 1956, vol. 1, 50), which though it hears definite tonality, his ear does not explain its theory. It should be remembered that composers perceived the fundamental bass before it was theorised by Rameau. This sweeping statement will be discussed fully during the duration of the dissertation. Messiaen's progressions occur by voice leading, melody and scales. It is in all these methods that tonality is preserved. It was through these methods that counterpoint created functional tonality in the seventeenth-century.

Voice Leading

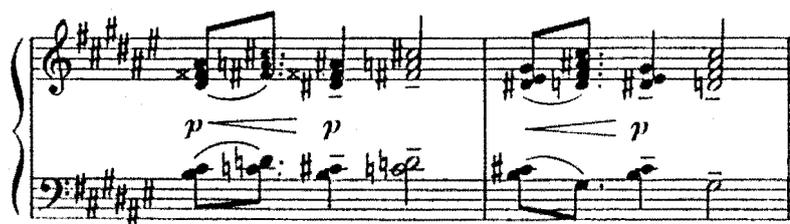
"Examples 230 and 231 retrograde the second term of the progression" (Messiaen 1956, vol. 1, 53).

The image contains two musical examples, labeled as Examples 230 and 231, illustrating voice leading. Each example consists of two staves: a treble clef staff (right hand) and a bass clef staff (left hand). The music is written in a key with one sharp (F#) and a common time signature. The first example (left) shows a progression of chords in the right hand and left hand, with voice leading indicated by brackets. The second example (right) shows a similar progression, but with the second term of the progression retrograded.

(Messiaen 1956, vol. 2, 40)

Melody

Here Messiaen uses the description "harmonic litany;" he means "a melodic fragment of two or several notes repeated with different harmonizations." (Messiaen 1956, vol. 1, 53)



(Messiaen 1956, vol.2, 42)

Scales

"Example 253 is written in the seventh mode of limited transpositions." (Messiaen 1956, vol.1, 53)



(Messiaen 1956, vol.2, 42)

In regard to the overall tonality in Messiaen's work, each chord is not an entity in itself; a momentary indulgence. Each chord has a root, each is linked in chains which are deliniated by traditional key signatures and stated by dominant-seventh chords.

CHAPTER 3

FOREIGN NOTES

Instead of one note being foreign in a chord, as in traditional non-harmonic tones, Messiaen uses groups of notes. These he calls: the pedal group; the passing group; the embellishment group; and upbeat-accent-termination (1956, vol. 1, 55-57).

The Pedal Group

What Messiaen calls a pedal group is really no more than an ostinato. The following example superposes two modes of limited transposition, the third mode for the upper staff and the second for the lower staff:

Les sons impalpables du rêve.

Modéré

Piano

pp

mf

8

8

mf

Cédez

a Tempo

f

ff

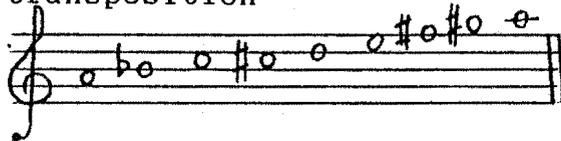
(Messiaen 1956, vol. 2, 47)

Messiaen's description of the pedal group is necessary to understand the concept:

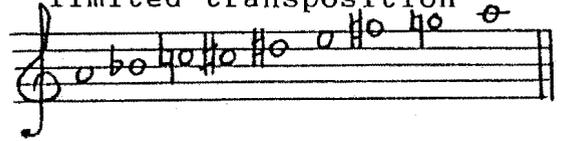
Instead of one sustained note, foreign to the chords which surround it, we shall have a repeated music (repetition and sustaining are equivalent), foreign to another music situated above or below it; each of these musics will have its own rhythm, melody, harmonies. In this example, the music of the upper staff repeats itself from measure to measure, independent of the music of the lower staff; it is a pedal group (Messiaen 1956, vol. 1.,55).

The second and third mode combined form almost a chromatic scale, except that a whole tone occurs between the second and third interval.

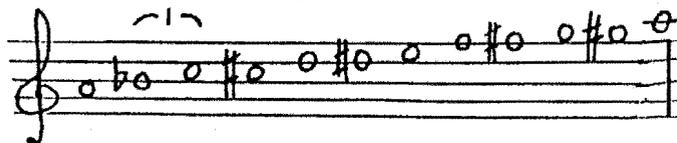
The second mode of limited transposition



The third mode of limited transposition



These modes combined



The note B^b above is a Neapolitan second to A major.* Historically, the Neapolitan second has always had a downward pull to the tonic. It should be noted that Messiaen adheres strictly to the note B^b; he never uses B[♯] in the piece just cited. This gives the piece an unrivaled tonality of A — Messiaen calls it A major (1956, vol. 1, 55). It appears that Messiaen carefully chooses his modes so that each have strong

* Neapolitan second refers to the flattened second as it appears in the Neapolitan sixth chord.

individual features and when combined manifest fascinating idiosyncrasies (such as the Neapolitan second above). Messiaen relies, of course, on his ear.

The Passing Group

The passing group amounts to no more than a traditional real sequence. The definition of a real sequence by The Penguin Dictionary of Music is: "Sequence -- The repetition of a phrase at a higher or lower pitch than the original: if the intervals within it are slightly altered in the repetition so as to avoid moving out of a key, it is a tonal sequence, if they are unaltered, it is a real sequence."

(Jacobs 1991, 360)

Messiaen's description follows:

On the spot repetition is the equivalent of sustaining, we said apropos of pedal groups. Likewise, the reproduction of the terms of a progression is the equivalent of the symmetrical movement, ascending or descending, degree by degree, of passing notes.

Modéré

In the middle voice, in B, a pedal group. In the outer voices, at A, groups of foreign notes, reproduced symmetrically, in ascending progression for the upper part, descending for the bass; they are passing groups (1956, vol. 1, 56, and vol. 2, 48).

The types of tonality in Messiaen's passing group are melodic, harmonic and scalic. Exact repetition in each of these parameters occur at different pitch levels.

The Embellishment Group

The embellishment group is an ornamental passage and functions much like traditional ornaments (trills, turns, mordents etc.). Here it is a scalic passage embellishing and emphasizing the note D.

La Vierge et l'Enfant

Orgue

pp legato

Lent A

Modéré B

Rall. - - - - - Lent C

(Messiaen 1956, vol.2,48)

Upbeats and Terminations

Messiaen's upbeat-accent-termination refers to an extended anacrusis (containing foreign notes). Messiaen holds that "Mozart is a distant herald of them, Schönberg and Alban Berg used them with rare emotional intensity." The upbeat-accent-termination is represented in the following examples; A,B,C respectively:

307
Les Offrandes oubliées, le Péché
 Vif, haletant
 Violons et Altos
 Bois et Cors
 Violoncelles et C.B.

308*
Amen de l'agonie de Jésus
 Piano
 Lent *lourd et déchirant* Presque lent Pressez Presque lent
 A f cresc. sff dim. mf
 A B C
 Ped. *

A. L. 20,227

* Dans l'exemple 308, chaque triolet vaut une noire.

* In example 308, each triplet has the value of a quarter-note.

* In Beispiel 308 hat jede Triole den Wert einer Viertelnote.

Messiaen explains: "The embellishment group, like the pedal group and the passing group, could possess their own harmonies; the combination upbeat-accent-termination is, on the contrary, exclusively melodic." (underlining mine, Messiaen 1956, vol.1, 56 and vol. 2, 48 represent the citations on this page)

All the foreign notes should be identified by skilled performers and should be swept through as real impressionists blur true colour. True colour for Messiaen lies in his modes of limited transposition.*

* Jonathan W. Bernard writes (in Hill, ed. 1995, 206):

It has been known for some time that Messiaen's employment of the modes of limited transposition is closely associated with his deliberate presentation of combinations of colours. Working from available evidence -- found in interviews that Messiaen has given, in the prefaces to published scores, and in the scores themselves -- the definitive attributions of specific colours to specific modal passages can be tabulated.

CHAPTER 4.

MESSIAEN: TONALITY OR ATONALITY?

Although Messiaen suggests that the modes be used prescriptively his use of the modes of limited transposition is not strict. Messiaen modulates from one mode of limited transposition to another. He often uses only fragments of a mode and then moves to another transposition of the same mode. Messiaen discusses these uses of the modes under the headings: Modulation of a Mode to Itself, and Modulation of a Mode to Another Mode (Messiaen 1956, vol. 1, 65-66).

On a superficial level it seems that Messiaen uses the modes simply as a guide, but regards his own personal choice as superceding the modes. On a deeper level it can be seen that Messiaen changes the modes for one main reason: to stress diatonic tonality. Messiaen writes regarding the modes: "They are at once in the atmosphere of several tonalities, without polytonality, the composer being free to give predominance to one of the tonalities or leave the tonal impression unsettled" (Messiaen 1956, vol. 1, 58). In Le Banquet Céleste, for example, Messiaen moves from the second transposition of Mode 2 to the first, but retains an E sharp. E sharp, foreign to the first transposition, strengthens the tonality of F sharp (discussed in Messiaen 1956, vol. 1, 65).

Parker (1966, 22) summarizes Messiaen's adherence to diatonic tonality:

To suggest tonalities, Messiaen emphasizes certain pitches and chords by placing them at the climax of melodic or chordal lines, or by frequently returning to them. Points of rest in his rhythm help to establish tonics. He uses traditional dominant-to-tonic relationships both melodically and chordally, and considers nothing worth as much as the dominant seventh chord for establishing tonality. He affirms tonalities with dominant and tonic pedals.

Parker (1966, 22) continues by saying that even Messiaen's "atonal style" would seem to be subordinated to tonality:

Messiaen says that in Mystère de la Sainte Trinité (F,7), he "blends" his modes with atonality (she refers to Messiaen 1956, vol. 1, 60). He does not stress atonality latent within a mode, but, rather, writes a melody in Mode II as the middle voice between two lines written "in atonal style." Yet he says that the general sensation is in the tonality of D (reference to Messiaen 1956, vol. 1, 60). His "atonal style" would seem to be subordinated to tonality.

Some composers, e.g., Boulez felt that Messiaen's music was so free in its use of the modes of limited transposition that it was tantamount to serialism.

The following quotation stresses that Messiaen never followed the route of serialism (Collins and Morton 1992, 651-652):

"Mode de valeurs et d'intensités", was to be a catalyst for the "total serialism" of Boulez and the other composers of the Darmstadt circle, many of whom were Messiaen's pupils. But Messiaen himself did not follow this path, nor did he attempt to use serial technique in a post-Schoenbergian manner, as Stravinsky would later do: on the contrary, his own major technical development of the 1950s was an obsessive use of birdsong as a compositional resource. Transcribed within the parameters of his established musical language, birdsong had already played a minor role in Turangalîla, and indeed in some earlier works such as the Quartet for the End of Time, but this explicit celebration of nature now provided Messiaen with a means to resolve, in renewed accord with his faith, the gap between technique and expression that had been opened up by the new constructive methods of the Quatre Etudes and the Livre d'orgue.

Whether to resort to "total serialism" as did Boulez, or to continue to find new ways to manifest diatonic tonality as did Messiaen remains to be discussed. A detailed analysis of the pivotal work, "Mode de valeurs et d'intensités", may decide on the most viable route to follow.

CONCLUSION

A surface glance at the first page of "Mode de valeurs et d'intensités" may be enough to convince one that Boulez and his circle chose the correct response — total serialism. One may even credit Messiaen as the inventor of total serialism! Here follows the first page (Messiaen 1950, 3):

Modéré

8

PIANO

The musical score is for piano and consists of three systems of three staves each. The tempo is "Modéré". The first system is marked with a "8" and a dashed line above it. The score features complex rhythmic patterns and dynamic markings such as *ppp*, *ff*, *f*, *mf*, *pp*, and *p*. The key signature has two flats (B-flat and E-flat).

Peter Hill writes that in "La colombe" (The first of Messiaen's Préludes -1929):

The shape is binary, with an unbroken melodic line which curves down, then up to a point of balance (a complex dominant chord); from here (bar 11) the music restarts, with the complementary second circuit swinging to the tonic. The discretion with which Messiaen confirms this arrival (touched in by soft bass octaves) is typically sensitive, as is the way the chromatic slip F[#] to F⁴ at the mid-point is balanced by the push from minor to major, from C⁴ to C[#], at the broadening of the final cadence (another complex harmony which combines dominant and subdominant into a cadence which is both plagal and perfect). (Hill 1995, 73)

From Messiaen's point of view, the tritone root movement is not a compromise between a plagal and perfect cadence. Messiaen considers the tritone root movement as a perfect cadence. Here follow just two citations (Messiaen 1956, 31 and 47): "Let us encroach a little upon the domain of chapter XIII and recall that a very fine ear perceives an F-sharp in the natural resonance of a low C." "In the resonance of a low C, a very fine ear perceives an F-sharp ... and there will be an attraction between the F-sharp and the C, the former tending to resolve itself upon the latter."

When the preface to the score of "Mode de valeurs et d'intensités" is examined the tritone appears between the melodic lines.

Voici le mode:

I
 (la Division I est utilisée dans la portée supérieure du Piano)

II
 (la Division II est utilisée dans la portée médiane du Piano)

III
 (la Division III est utilisée dans la portée inférieure du Piano)

Between stave one and stave two, one may consider the tritone B^4 to F^\sharp as a "secondary-dominant" to "dominant" progression. Between stave two and stave three, one may consider the interval F^4 to C^\sharp as a "subdominant" to "tonic" progression: a plagal cadence.* The last page of "Mode de valeurs et d'intensités" ends on a C^\sharp . C^\sharp must be considered as the key of this piece; C^\sharp is assigned the greatest mode of attack (fff and as the last note of the piece occurs as sfff). C^\sharp is also assigned the longest duration, and, as the lowest note, it has the most powerful resonance. Here follows the example (Messiaen 1950, 11):

* In practice Messiaen actually creates a traditional perfect cadence. "Mode de valeurs et d'intensités" ends with this cadence, which leaves the key of C^\sharp in no doubt at all. I have marked this on the score.

First system of musical notation. Treble clef staff contains a melodic line with dynamics *mf*, *f*, *ff*, *ppp*, *mf*, *ff*. Bass clef staff contains accompaniment with dynamics *mf*, *mf*, *f*, *f*, *mf*. A dashed line with the number '8' above it spans the first two measures of the treble staff.

Second system of musical notation. Treble clef staff contains a melodic line with dynamics *ff*, *f*, *mf*, *ff*, *pp*, *p*. Bass clef staff contains accompaniment with dynamics *f*, *mf*, *ff*, *mf*, *pp*, *fff*. A dashed line with the number '8' above it spans the first two measures of the treble staff.

Third system of musical notation. Treble clef staff contains a melodic line with dynamics *ff*, *p*, *ppp*, *mf*, *pp*, *p*, *ff*. Bass clef staff contains accompaniment with dynamics *mf*, *mf*, *fff*, *mf*, *p*, *fff*, *mf*, *fff*, *mf*, *fff*, *p*, *p*, *ff*, *ff*, *ff*, *mf*. A dashed line with the number '8' above it spans the first two measures of the treble staff.

Fourth system of musical notation. Treble clef staff contains a melodic line with dynamics *mf*, *ppp*, *ff*, *ff*. Bass clef staff contains accompaniment with dynamics *p*, *fff*, *p*. A dashed line with the number '8' above it spans the first two measures of the treble staff. A thick black arrow points from the end of the treble staff down to the bass clef staff.

8^a bassa
fff A \flat TO D \flat (C#) IS A PERFECT
 CADENCE.

When Messiaen speaks of a very fine ear, what he means is one so advanced/evolved that it hears the tritone as a perfect cadence or expected resolution. In this light, Messiaen adheres to harmonic tonality. Messiaen also adheres to the tonalities of scales and melodies; such tonalities have been existent in the thinking of theorists since antiquity.

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