Notes for talk/article on Messiaen

Disclaim expertise. Brought my consulting expert. Begin with early work, Preludes.

Purpose of talk: Looking at the music in new ways: Apply pc set analysis (acknowledging Pople and Rosemary) to examples of harmony, show linear aspects of the music (M. gives clues in TRCO), display genera matrices to suggest general features of his vocabulary beyond the "modal" constructs and the sonorities formed by "added dissonance" that may shed light on "influences," "intervallic preferences," etc.. Examples only from earlier works. No birds, no colors, no rhythms. Some notes on historical connections--esp. with Second Viennese School. Madeleine on Bartok.

Examples in reverse order? Beginning with L'abime?

L'Abime, bar 20: 7-20 and 6-16. 6-16 is one of seven hexes of 7-20. Eb completes it. 7-20 is an example of "added dissonance" in TMLM.

Messiaen's analysis of L'Abime in TRCO III p. 187 ff. includes parsing of the two chord pairs.

p. 188 TROC
Parsing of opening two chord-pairs
N.B. M. ties low D and E of first chord to second, creating 7-z12, the z-corresp. of 7-z36
His explanation of the chords derives from his "appoggiatura" idea, which derives from French fig. bass (?), via Rameau. It also relates to Schoenberg's 1911 Harmonielehre--probably not known in France.

Messiaen's explanations of the two chord pairs, which present the Cry of the Abyss:

The first: [The] Real chord [is] at the + (it is a 9th without leading tone [G], fundamental is Eb) It is preceded by a quintuple appoggiatura [G,Eb,A,Db,Gb]. D natural and E natural: inferior and contracted resonance. In the text the appoggiatura [chord] is so long and the resolution so brief that we only hear the appoggiatura [chord].

The second:

First chord: chord on the dominant (with two notes added: D natural, A natural, of which the implied resolution would be : C, G).

Second chord: The same, first inversion, transposed upon the same bass note: Eb (with two added notes: C natural, G natural, of which the implied resolution would be Bb, F).

N.B. M. consciously replicates the first chord by the second. He does not seem to realize the intervallic equivalence of the first two septads, however.

Messiaen, "Les mains de l'abime," from *Livre d'Orgue*
Twelve-Tone Row Transformations as Order number mappings

Main	Involution
0	0
1	2
2	4
3	6
4	8
5	10
6	11
7	9
8	7
9	5
10	3
11	1

Disjunct hexes of Involution: 6-z38/6

Main	Counter-Involution
0	10
1	8
2	6
3	4
4	2
5	0
6	1
7	3
8	5
9	7
10	9
11	11

Disjunct hexes of Counter-Involution: 6-z6/38

Main	Retrogression
0	11
1	10
2	9
3	8
4	7
5	6
6	5
7	4
8	3
9	2
10	1
11	0

Disjunct hexes of Retrogression: 6-z24/46

Main	SdG-2
0	0
1	6
2	1
3	7
4	2
5	8
6	3
7	9
8	4
9	10
10	5
11	11

Disjunct hexes of SdG-2: 6-z4/37

Invl	SdG-3 (6 x)
0	0
1	4
2	8
3	1
4	5
5	9
6	2
7	6
8	10
9	3
10	7
11	11

Disjunct hexes of SdG-3: 6-z24/46

Comparison of hexachordal content:

Main:	6-z46:[6,7,8,10,0,3][1]	6-z24:[9,11,1,2,4,5][2]
SdG-3:	6-z24:[11,1,3,4,6,7]	6-z46:[8,9,10,0,2,5]
Retro:	6-z24:[9,11,1,2,4,5]	6-z46:[6,7,8,10,0,3]

[1] 5-32:[6,7,10,0,3] CIII

[2] 5-10:[11,1,2,4,5] CI

His notes on p. 8 of the published score deal first with organ registration, then with the second system and the rest of the page: "Ici commence la supplication de la profondeur." This refers to the bass line, which represents "la lente et longue supplication de l'homme . . . " Above this is "la réponse Divine."

p. 191 bottom. On the "guirlandes mélodiques" (bars 19 and 20) "Il y a onze guirlandes différents.

The extraordinary combination of religious mysticism, various exoticisms and cosmological ruminations with theorizing and very explicit technical descriptions of his music. *Technique* (TMLM) as unique for composer. Publication of his writings in progress: Traité de ryhthme, de couleur, et d'ornithologie (TRCO: 4 Tomes published, 7 are projected!). These provide a great deal of information, some of which is in sketch form in TMLM. Preface to TRCO is by none other than Pierre Boulez, who, typically, attempts to put Messiaen in his place as essentially an organist. The use of "Traité" is perhaps not without significance, in view of that other great French Traité, from 1922.

The publication of this expansive work, which derives from his years of teaching his Analyse musicale course between 1948 and 1992, may have somewhat negative impact in some quarters, however. Confronted with TRCO, which includes analytical material on Messiaen's own music, the student may experience diffidence as he or she considers analyzing his music. I will return to this in connection with the opening music of Les Mains de L'Abime.

Messiaen's compulsive theorizing and philosophizing, although they are fascinating and provide insights and guideposts to his music, may actually be obstacles to a deeper understanding of it. In my talk I will explore some of its structural/technical aspects, in the hope of illuminating some general features. There are gaps. Sherlaw Johnson and Pople. Ouija board quip.

Messiaen is the only major 20th-c. composer to have written a textbook based in large part on his own musical practice. Except for the essay(s) on 12-tone music, Schoenberg confined his pedagogical writings to the explication of music by the venerable masters.

Interactions: Scriabin (Pople on Quatuor). The Webern connection. End of century perspectives. Messiaen's "chord of resonance" is 8-24, Berg's Wozzeck chord. Schoenberg and especially Pierrot.

In "Les Mains de L'Abime, the connection with the Second Viennese School is not apparent so much in the serialism, which is uniquely Messiaen's, but in the structuring of melodic lines, such as the parsing shown in Ex. XXX, the first 12-tone melodic aggregate--the every-other note parsing found in early atonal Schoenberg, which I have documents in my linear analysis article in JMT.

Serialism: "Isle de feu 2" Quatre Etudes -- "interversion" as in Les mains de l'abime. Check dates.

See Pople p. 22 on the 29 chords. Also Messiaen in Technique.
Matrix, etc. in Warsaw lecture material. The Miles Davis connection.

In addition, some have assumed that the modes provide a referential framework for the pitch structure of all of M.'s music. The 1951 organ piece, "Les Mains de l'abime" provides a counter example, and there are many others. M.'s predilection for certain sonorities that do not fit the modal schemata: notably, 7-20, which is not a subset of any of the 8 or 9 note modes, nor a superset of the two six-note modes. It is, however, a subset of Mode 7 (10-6), represented by 4 occurrences.

But even a recurrent harmonic "detail" defies explanation in terms of the modes: septad 7-20 . . .

Incidentally, Messiaen did not include two modes of limited transposition in his system: 6-20 and 6-30. Almost no one is perfect. See TMLM p. 61 for his reasoning in this regard. Ex. 341 displays 6-30, which is a "truncated" mode 2. But 6-7 is a truncated mode 6, although it cannot be read as a linear ordering of that mode, but neither can 6-30 be a linear ordering of 8-28 (which has only two such hexachords, 6-z13 and 6-z23). Ex. 342 is also 6-30. Ex. 343 is 4-9, which is only redundant by inversion. And so on. Is this worth pursuing?

Restricted to pitch structure and staying remote from the birdcalls (Sherlaw Johnson's fine article)

The literature: Of excellent quality. Hill's Companion. But analyses of complete pieces are scarce.

Opening par. of Pople's "Musical Language" article.
Linear features: Pople's example of triads from Technique (TMLM)
Mode 2 (octa) may be symmetrical, but many of its subsets are not.

Debussy's use of the octatonic apparently unknown to M., perhaps because there are not many scalar instances.

M.'s "theological rainbow" (p. 21) (arc-en-ciel théologique)
Elsewhere the arc-en-ciel is the Accord de Résonance (8-24), exx. 208-210 in TMLM2. 8-24, it will be recalled, is the sonority with which Berg ends each act of Wozzeck. Mode 3 (9-12) is the reference: it contains 3 forms of 8-24 and 6 of 8-19.

Preludes:

Griffiths p. 35: "In the Preludes the third mode shares the arena quite evenly with the second: No. 1, 2,3, and 7 are largely occupied with mode 2 and Nos. 4 and 8 with mode 3, while in Nos. 5 and 6, the two pieces the mature Messiaen finds most attractive, both modes are important.

Examples: see separate file

Theoretical issues:

Composite harmonies in the "polymodal" works.

Linear features (disregarded in the literature?)

The separation of the several explicit parameters: mode, rhythm, instrumentation, and form.

How many "modes of limited transposition" are there?
Griffiths counts 12 (his ex. 5). If you extend to inversional symmetry, the result is a much larger number (102 out of 220 pc sets). Why did M. not do this?

5 trichords (and nonads): 1,6,9,10,z12

15 tetrachords (and octads):1,3,6,7,8,20,9,10,17,21,23,24,
25,26,28

10 pentads (and septads): 1,8,z12,15,z17,22,33,34,35,z37

21 hexachords: 1,z4,z6,7,8,z13,20,z23,z26,z28,z29,
30,32,35,z37,z38,z42,z45,z48,z49,z50

5-z12 is inversionally symmetric, but 5-z36, its z-corresp., is not. Both 5-z17 and 5-z37, however, are symmetric.

In this count, I do consider the set as independent of any subset relation(s) it may have with Messiaen's numbered modes.

[The fixation many writers have on triadic subsets--Pople and Griffiths]

The issue of "key"--e.g., in the key signatures of the Preludes.

Analytical issues: (one only) Music that does not conform to the modal system: Griffiths p. 125, Ex. 38 beginning of Harawi. T1 of Mode 3 (9-12), with dissonant passing tone d1 in second chord.

Pc Set Genera Matrices

The Messiaen modes shown in the context of a complete "universe," represented by the genera construct.

Refer to MusA issue

Incidentally, the preferred plural of genus is genera, not genuses. Genuses are people like Albert Einstein and Cole Porter.

Griffiths p. 242: "One prime feature stands out in every work and on every level: a conception of music in terms of individual events, distinct from any context." ". . . a use of chords as single things at instants, to impart a particular funtion or colour, but without establishing the sort of integrated relationship among chords essential to dynamic tonality . . ."
BUT, on the other hand, Griffiths often refers to, especially, dominant-tonic relations in the pieces, but mainly in the early works.

Note on the Karnatic modes (see file).

See Griffiths pp. 92-93 on the 29 chords. Cites TMLM:

Messiaen on Ex. 60 full score of Liturgie de cristal bars 1-16:

> Let us look anew at the chords of the piano: from the first to the second cross, they are "chords on the dominant" with appoggiaturas, according to the effect of the stained glass window of Chapter XIV (article 1)--from the third to the fourth cross, they use the third mode of limited transpositions (see Chapter XVI)--from the fifth to the sixth cross, the second of these modes.

First to second cross = Chords 1-8
Third to fourth cross = Chords 16-21
Fifth to sixth cross = Chords 23-28

? The omitted chords

Griffiths p. 93 is on the mark w/r Technique. But he constantly refers to tonal analogues, such as the dominant seventh (chromatically modified).

Johnson

p. 62: The Liturgie de cristal: two independent rhythmic pedals (cello and piano) against two independent birdsongs (violin and clarinet). "The piano's rhythmic pedal consists of a repetition of the seventeen durations of Tala 1 (Chap. 4, p. 37), coloured by the repetition of twenty-nine different (sic) chords.

Johnson writes nothing about the "different" chords.

Cf. my tables of the Karnatic modes (for pc sets).

Johnson on harmony p. 13 and esp. 14 (added notes). p. 15: Cites and quotes from Chap. XIV of Technique: the chord succession is 7-20/7-35 as at the beginning of Liturgie de cristal, with 4-23 in the lower stationary parts and in the upper as "voice-leading."

Messiaen, Les Mains de l'Abime

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
4-3						●						
4-23											●	
5-4	o	o	o		o	●	o	o				
5-20	●	o								o		
5-35											●	o
6-z4	o	o			o	●		o				
6-z6	o	o										
6-z13	o	o	●			●	o		o			
6-16	o	o		o	o	●		o	o	o	o	o
6-z23	o	o	●			●	o					o
6-z24	o	o	o			●	o	o	o	o	o	o
Counts:	8	8	4	1	3	7	4	4	3	3	4	4
	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
	[SI		]		[SII]			[SIII		]	[SIV	]

Squo Indices in Descending Order with Genera

.141: G6 (semichroma)
.125: G11 (dia)
.115: G1 (atonal)
.111: G2 (whole-tone)
.094: G5 (chroma)
.088: G8 (atonal)
.080: G3 (diminished), G7 (chroma-dia), G12 (dia-tonal)
.066: G9 (atonal-tonal), G10 (atonal-tonal)
.043: G4 (augmented)

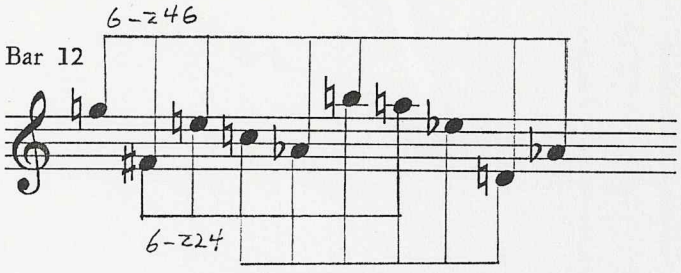
Stockhausen, Klavierstueck II

	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
3-1					o							
3-2					o	o	o					
3-5	o											
3-7							o				o	o
4-6	o											
4-9	o											
4-12		o	o			o						
4-13	o		o				o					
4-z15	o	o										
4-17									o			
4-18	o		o						o			
4-21		o										
4-25		o										
5-4	o	o	o		o	o	o	o				
5-7	o	o										
5-15	o	o										
5-20	o	o								o		
5-25	o	o	o				o					o
5-28	o	o	o			o						o
5-31	o	o	o			o	o		o			o
6-z3	o	o	o		o	o	o	o				
6-z6	o	o										
6-16	o	o		o	o	o		o	o	o	o	o
6-z29	o	o	o				o		o			o
6-z47	o	o	o				o			o	o	o
Counts:	18	16	10	1	5	7	9	3	5	3	3	7
	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	G12
	[SI		]		[SII	]		[SIII		]	[SIV	]

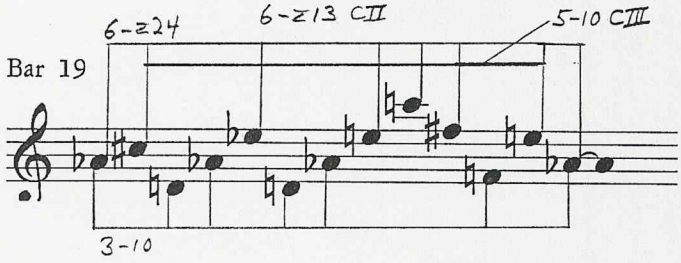
Squo Indices in Descending Order with Genera

.114: G1 (atonal)
.098: G2 (whole-tone)
.088: G3 (diminished)
.080: G7 (chroma-dia)
.068: G5 (chroma)
.062: G6 (semichroma), G12 (dia-tonal)
.048: G9 (atonal-tonal)
.041: G11 (dia)
.029: G8 (atonal), G10 (atonal-tonal)
.019: G4 (augmented)

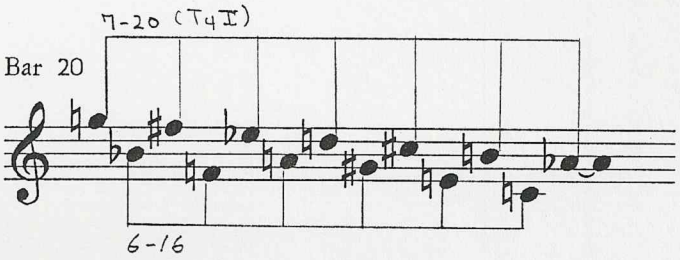
Bar 12



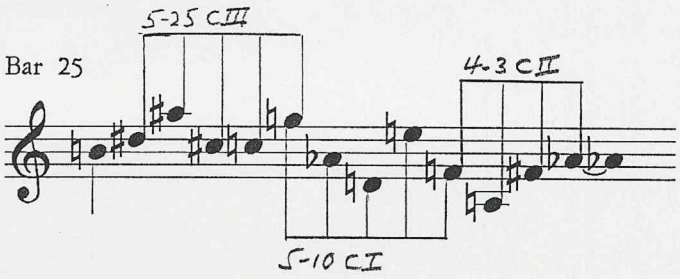
Bar 19



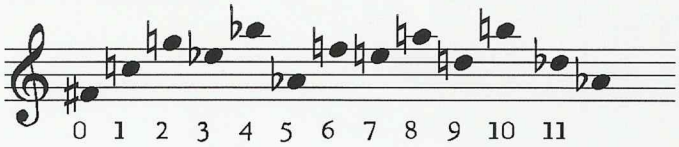
Bar 20



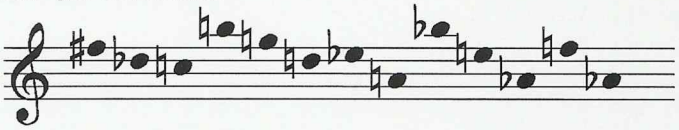
Bar 25



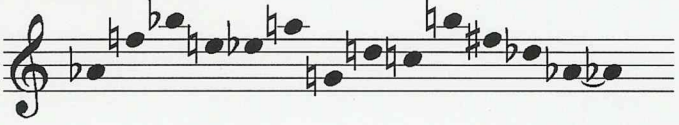
Bar 29: Main row



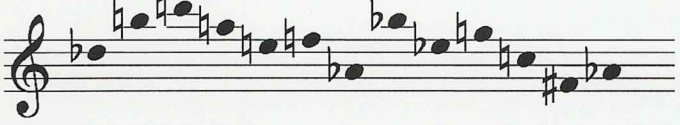
Bar 30: Involution



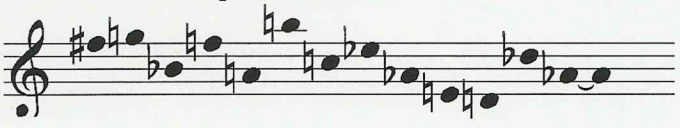
Counter-Involution (Retrograde of Involution with dyads reversed)



Bar 31: Retrogression



Bar 31: Saute de grenouille-2



Bar 31, end: Saute de grenouille-3 (from Involution)