

PLAINCHANTS AS COLOURED TIME IN MESSIAEN'S 'COULEURS DE LA CITÉ CÉLESTE'

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When Messiaen finished *Trois petites liturgies de la présence divine* (1943–4), almost all the orchestral works he had composed up to that point had been religious in ethos.¹ There was no real sign that this would change: that he would stop devoting his orchestral works to the service of the Catholic faith. That some 20 years elapsed before he attempted another orchestral sacred work is intriguing. It was *Couleurs de la cité céleste* (1963) that broke the ice, and after it the orchestral and the sacred became once again closely united, as they had been in the pre-*Turangalîla* era. *Couleurs* also brought us his first obvious use of plainchant in an orchestral work,² thus heightening the religiosity of this score to approximate that enshrined in *Trois petites liturgies*. And as Messiaen's fame continued to grow, the religious elements in his music grew with it, both in ubiquity and intensity. Retrospectively, sacred orchestral works composed after *Couleurs* exceed those before *Trois petites liturgies* not only in number, but also in magnitude, profundity and grandeur.

Turangalîla-symphonie (1946–8), *Réveil des oiseaux* (1953), *Oiseaux exotiques* (1955–6), *Chronochromie* (1959–60) and *Sept haïkaï* (1962) – consecutive orchestral works that fill the gap between *Trois petites liturgies* and *Couleurs* – reveal no obvious link to Messiaen's faith, to the dedication of the composer-organist who was happy to serve for decades at the church of La Trinité. There is no simple answer to just what diverted Messiaen from explicitly programming his faith in orchestral works from *Turangalîla* onward. Apart from facing grave personal crises, most critically Claire Delbos's physical and mental deterioration, and the attraction of Yvonne Loriod (the 'charm of impossibilities' personified), he was also wrestling hard to master newly developed techniques – the elusive art of birdsongs, sophisticated permutation schemes, and what became in time a full range of sound-color resources.

Messiaen, who claimed to see colors inwardly when listening to music, also tells us that he composed with a set of sound-color materials developed over the years. It is only natural that a synaesthete-composer gifted with the faculty of color-hearing would be more inclined to compose with sound-color associations; we are familiar with the examples of Rimsky-Korsakov and Scriabin. Yet the high degree of thoroughness with which Messiaen documented his color-hearing experience, and especially the complex color effects of his sound-color materials, remains unequalled among composers bestowed with the same gift. Because Messiaen wrote more than any other about just how the

¹ *Les offrandes oubliées* (1930), *Hymne au Saint-Sacrement* (1932) and *L'Ascension* (1932–4). *Le tombeau resplendissant* (1931), though, is more autobiographical than religious in tone.

² Plainchants are used previously in *Les corps glorieux* (1939), *Vingt regards sur l'enfant-Jésus* (1944), *Messe de la Pentecôte* (1950) and *Verset pour la fête de la dédicace* (1960); all except *Vingt regards* are organ works. The adaptation of four plainchants in *Couleurs* far exceeds that of only one chant in these works.

synaesthetic experience of color-hearing can influence the composition of musical works, he left us with valuable testimonies that deserve close study by Messiaen and synaesthesia scholars alike.

Sound-color materials codified in *Traité VII*

The seventh and last volume of Messiaen's *Traité de rythme, de couleur, et d'ornithologie* contains the only comprehensive and systematic delineation of the structure and color of his sound-color materials in print.³ Messiaen codified only two categories of sound-color materials, i.e. the modes of limited transposition and a selection of distinct chord types – emphasizing that they are, for him, colors:

Ces modes [à transpositions limitées] ne sont ni mélodiques, ni harmoniques: **ce sont des couleurs**. Il en va de même pour les accords: « Accord[s] à renversements transposés sur la même note de basse », « 1^{er} Accord à résonance contractée » et « 2^e Accord à résonance contractée », « Accords tournants » (et les « Accords tournants » traités en « Accords à renversements transposés » dans les « Sept Haïkai »), et enfin « l'Accord du total chromatique »: tous ces accords ne sont pas vraiment des accords, ce ne sont même pas des complexes de sons: **ce sont des couleurs**.⁴

While the scope of this paper cannot accommodate a detailed explanation of these sound-color materials, a brief survey of them proves indispensable to the subsequent discussion of *Couleurs*:⁵

1. The modes of limited transposition already informed such early works as *Le banquet céleste* (1928) and the *Préludes* (1929), and they are featured prominently up to *Turangalila* before they receded from his orchestral works. Messiaen listed seven modes of limited transposition in *Technique de mon langage musical*,⁶ but decades later he retained only four of them (modes 2, 3, 4 and 6) in *Traité VII*, with superscripts added to indicate the different transpositions of each mode. For example, the three transpositions of mode 2 are denoted as 2¹, 2² and 2³.
2. Special chords with unlimited (i.e. 12) transpositions, henceforth referred to collectively as the color-chords,⁷ are mainly products of the late 1930s and early 1940s. Since different color effects emanate from different transpositions, they bring more colors than the modes. Initially, though, only selected transpositions were used, as in *Quatuor pour la fin du temps* (1940-1) and *Visions de l'Amen* (1943). Perhaps because of his intense preoccupation with birdsongs, there were little signs of the color-chords in *Réveil des oiseaux* and *Oiseaux exotiques*. Messiaen first started to engage more systematically with the 12 transpositions of the color-chords in *Chronochromie*. In the famed strophes I and II of this work the strings play exclusively the color-chords – the chord of transposed inversion, the 1st chord of contracting resonance and the revolving chord – exhausting most of the transpositions.

³ Messiaen, *Traité de rythme, de couleur, et d'ornithologie*, vol. VII (Paris: Leduc, 2002), pp. 95–190.

⁴ *Traité VII*, 107. The words were bold-typed in Messiaen's text, which reads in translation: 'The modes are neither melodies nor harmonies: **they are colors**. It is the same for the chords: the chords of transposed inversion on the same bass note, the 1st chord of contracting resonance, the 2nd chord of contracting resonance, the revolving chords (and revolving chords treated like the chords of transposed inversion in *Sept haïkai*), and finally the chord of total chromaticism. All of them are not really chords; they are not even sound complexes: **they are colors**.'

⁵ See chapter III of *Traité VII* for details.

⁶ *Technique de mon langage musical* (Paris: Leduc, 1944), 51–6.

⁷ In other words, 'color-chords' serves as a collective reference to the chord types specified here. Robert Sherlaw Johnson's use of such designations as "'colour" chords,' 'colour chords' or 'colour-chords,' however, refers more generally to just about any chords that add colors to the music. See his *Messiaen* (London: J. M. Dent & Sons, 1975), 19, 129 and 136–7.

Sound-colors and the ‘true temple’

There is no question that colors are central to the orchestral canvas of *Couleurs de la cité céleste*. The preface to *Couleurs* is most intensely about color (no other preface by Messiaen stresses its importance to the same extent), and color effects are marked in the score when slow block chords emerge to bath the music in shimmering colors. Only one other work, *Sept haïkai*,⁸ Messiaen’s honeymoon piece, contains similar color descriptions, being confined to the fifth piece of the set, ‘Miyajima et le torii dans la mer.’⁹ Although *Sept haïkai* and *Couleurs* deal with vastly different topics, there are strong evidences that the Shinto temple of Miyajima was pivotal in pointing Messiaen towards the celestial city of Jerusalem.

In his preface to *Sept haïkai*, Messiaen drew our attention to the uniqueness of the torii, a gateway to the Miyajima Shinto temple, which stands in the sea rather than on land.¹⁰ Although the torii is meant to lead us to the Shinto temple, Messiaen urged us to view from the opposite perspective the sea and sky, the vast expanse, which symbolizes for him the ‘true temple.’ This provocative note, which is repeated in more elaborate terms in his analytical note on the same piece,¹¹ echoes well Messiaen’s remark to Samuel that he tried to add a Christian dimension to *Sept haïkai*, even though he was then referring to the gagaku piece, the most quintessentially Japanese moment therein.¹² It is as if he suddenly turned evangelical, and could not resist the temptation to express his faith when painting the tonal picture of a Shinto shrine. His tangential reference to the ‘true temple’ and the incongruent use of what he referred to as a ‘chorale theme’ in the Miyajima piece are suggestive of a hidden Christian programme, a covert act of faith. Moreover, the intrusive use of a chorale theme in *Sept haïkai* raises tension that remains unresolved, at least until Messiaen pulled together his finest resources to paint the ‘true temple’ in *Couleurs*, in which an even larger number of sound-color materials – both the modes and the color-chords – are drawn in adoration of the heavenly Jerusalem. *Trois petites liturgies*, Messiaen’s orchestral offering to the Almighty composed back in the 1940s, was also rich in sound-colors emanated from the extensive use of pure modes. The color-chords, though, are barely in sight, and it eventually took Messiaen 20 years to get there.¹³

Sound-colors and *Couleurs*

Les *Couleurs de la Cité céleste* sont nées d’une étrange commande; le Docteur Heinrich Strobel m’avait demandé d’écrire un ouvrage pour trois trombones et trois xylophones. J’avais accepté mais j’étais très malheureux car je ne voyais pas comment employer ces instruments. Après de longues réflexions, j’ai finalement pensé que les trombones avaient une sonorité d’apocalypse, j’ai donc relu l’Apocalypse et j’y ai cherché des citations. Puis j’ai été frappé par la sonorité percutante des trois xylophones qui me permettait d’utiliser des chants d’oiseaux à condition d’y adjoindre un piano; toujours en songeant aux oiseaux, j’ai trouvé qu’il était peut-être nécessaire d’avoir quelques clarinettes pour diversifier les timbres et, toutes ces idées reprises, j’ai ajouté aux trois trombones une

⁸ Coincidentally, it shares the same title with John Cage’s solo piano work *7 Haiku* (1951-2).

⁹ The block chords of the Miyajima piece are less exposed, being heard against other layers of music.

¹⁰ Messiaen chose to show the same torii on the front cover of the score and also that of the Kyoto lecture.

¹¹ *Traité*, vol. V, part 2 (Paris: Leduc, 2000), 506.

¹² Samuel, *Musique et couleur: nouveaux entretiens avec Claude Samuel* (Paris: Belfond, 1986), 149.

¹³ Messiaen paired his analyses of *Trois petites liturgies* and *Couleurs* in chapter IV of *Traité VII*. The modes of limited transposition, but not the color-chords, are noted in Messiaen’s analysis of *Trois petites liturgies*.

petite trompette en ré, trois trompettes et deux cors en fa ainsi qu'un trombone basse, j'ai transformé les trois xylophones en un xylophone, un xylorimba et un marimba, j'ai ajouté le piano solo, les trois clarinettes et, enfin, des percussions métalliques: un jeu de cencerros, un jeu de cloches, quatre gongs et deux tam-tams.¹⁴

Almost all existing literature on *Couleurs* recounts Messiaen's frustration about Heinrich Strobel's commission prescription of three trombones and three xylophones. There is, however, evidence that Messiaen's comments relate to the facts only tangentially. The xylophone first plays birdsong in *Réveil des oiseaux* and *Oiseaux exotiques*, before Messiaen paired it with the marimba to create a heterophony of birdsong in *Chronochromie* and *Sept haïkai*. The three-xylo arrangement of *Couleurs*, in which xylorimba made its debut, may thus strike us (*pace* Messiaen) more as a logical development of earlier thoughts than as a concession to Strobel. The grouping of the xylophone, xylorimba and marimba in *Couleurs* is then repeated in *Saint François d'Assise* (1975–83), *Un vitrail et des oiseaux* (1986), *La ville d'en-haut* (1987) and *Éclairs sur l'au-delà* (1987–91), although Strobel is no longer there to prescribe them.

Similarly, the three trombones are by no means new to Messiaen's instrumentation. They already inhabit the sound world of *Turungalila* and *Chronochromie*, in lieu of the apocalyptic elements of *Couleurs*. Indeed the brass sections of *Turungalila*, *Chronochromie* and *Couleurs* overlap considerably. Apart from the three trombones, the trumpet in D, trumpets in C and horns are also held in common. The three trombones of *Couleurs* are often absorbed into the texture of a larger whole, frequently that of a brass chorus. Nevertheless, when heard for the first time in this work (RN 8),¹⁵ they are assigned a special role, playing in unison a strident descent to set in sharp relief the first statement of a plainchant, the Alleluia for the eighth Sunday after Pentecost (Example 1). This passage, inscribed 'les 7 Anges aux 7 trompettes' (*Revelation VIII: 6*), is an important landmark that appears only three times at strategic points of the work. All other settings of the Alleluia of the eighth Sunday after Pentecost, and there are many, differ from it.

Messiaen's varied settings of the Alleluia of the eighth Sunday after Pentecost, and indeed all the other plainchants of *Couleurs*, lie at the core of our understanding of the piece. As argued below, four plainchants are adapted to the historical models of gamelan, *Klangfarbenmelodie*, parallel organum and chorale, archetypes that are commonly thought of as distinct texture and timbre. Furthermore, I propose that Messiaen may have read into them different ways in which past composers colored melodies, and went on himself to enrich them further with his sound-color materials, the modes of limited transposition and the color-chords included. The archetypes are evocative of different historical time-points (in the case of gamelan, even different locales), and therefore

¹⁴ Claude Samuel, *Entretiens avec Olivier Messiaen* (Paris: Belfond, 1967), 164–5; translated by Felix Aprahamian as *Conversations with Olivier Messiaen* (London: Stainer & Bell, 1976), 94: 'The *Couleurs de la Cité céleste* was born of a strange commission; Dr Heinrich Strobel had asked me to write a work for three trombones and three xylophones. I'd accepted but was very unhappy, for I couldn't see how to use these instruments. After long reflection, I finally thought that the trombones had an apocalyptic sound, so I re-read the Book of Revelation and looked for quotations from it. Then I was struck by the percussive sound of the three xylophones, which allowed me to use birdsong provided that I could add a piano; still thinking of the birds, I thought it perhaps necessary to have a few clarinets to vary the timbres and, reviewing all these ideas, I added to the three trombones a little trumpet in D, three trumpets and two horns in F, as well as a bass trombone; I changed the three xylophones to one xylophone, one xylorimba and a marimba; I added the piano solo, the three clarinets and finally the metallic percussion: a set of cencerros, a set of bells, four gongs and two tam-tams.'

¹⁵ 'RN' abbreviates 'rehearsal number.'

Example 1:
The Pentecost chant and 'les 7
Ange aux 7 trompettes', RN 8.

Messiaen's setting of the four plainchants helps combine time and color in ways that differ from that which he had tried out in *Chronochromie*. The fusion of time and color, a notion first expounded in *Chronochromie*, is reinterpreted anew in *Couleurs*.

Pentecost chant, phrase 1

8 Modéré (♩ = 108)
Alleluia du 8e. dim. après Pentecôte

Cencerros
Trumpet in D
ff

les 7 Anges aux 7 trompettes

1st trumpet
f

2nd trumpet
f

3rd trumpet
f

1st horn
f

2nd horn
f

3rd trombone
bass trombone
(3 trb.) à 3
ff

(bass trb.)
fff

The Dedication chant and the Saint Sacrament chant – parallel organum and chorale

Perhaps because of the jubilant nature of *Couleurs*, the plainchants are exclusively Alleluias.¹⁶ The Alleluia of the eighth Sunday after Pentecost is in many ways the 'idée fixe'; the other three chants appear less often, and are also less varied in their settings (see Table 1).¹⁷

Both the Pentecost chant and the Easter chant are processed to deviate rather drastically from the models, but the Dedication chant and the Saint Sacrament chant of *Couleurs* are simply transposed. The melodies do not in the least deviate from the original chants, and the modal flavor is carefully preserved. Messiaen's setting of the chants as respectively a parallel organum and a chorale, though, definitively change our perception of them.

¹⁶ See Appendix 1 for the location of the four plainchants of *Couleurs* in *Liber Usualis*.

¹⁷ These four chants will henceforth be referred to as the Pentecost chant, the Saint Sacrament chant, the Easter chant and the Dedication chant. The rather symmetrical distribution of the plainchants goes hand in hand with the assignment of 32 rehearsal numbers to the outer parts of *Couleurs*.

Table 1:
The distribution and setting of
the four plainchants in *Couleurs*.

RN	Plainchant	Setting
1–32	Alleluia of the Eighth Sunday after Pentecost Alleluia of Saint Sacrament	gamelan chorale
33–66	Alleluia of the fourth Sunday after Easter	<i>Klangfarbenmelodie</i>
67–98	Alleluia of the Eighth Sunday after Pentecost Alleluia of Dedication Alleluia of Saint Sacrament	gamelan; chorale; parallel chord series; monophony parallel organum chorale

Example 2:
The Saint Sacrament chant as
chorale, RN 32.

Saint Sacrament chant, phrases 1 - 2

32 *Lent* (♩ = 50)

Trumpets
Horns
Trombones
Cencerros
Bells
Gongs

mode 3³ mode 3³ mode 3³ mode 3³

mode 3³ RC(11A) RC(11B) CTI(6B) CTI(7C) mode 5⁶

The solemnity and grandeur of the Saint Sacrament chant fits well with its mission to end the first and last sections of what impresses us as an expanded tripartite design. The whole brass chorus, edged by the metallic percussion, is called upon to play the Saint Sacrament chant in full strength, each note being harmonized by a block chord in the fashion of a chorale. As shown in Example 2, block chords related to the modes of limited transposition (3³ and 5⁶) and the color-chords (the revolving chord and the chord of transposed inversion) are involved.¹⁸ By comparison, the Dedication chant, more than doubled in speed, is scored for a lighter ensemble (the little trumpet in D backed by three clarinets and two horns).¹⁹ The superimposition of four literal trans-

¹⁸ Malcolm Troup's view that the Saint Sacrament chant is in mode 2 is at odds with the music, since neither the chant nor the supporting harmonies supports his reading. See 'Orchestral Music of the 1950s and 1960s' in *The Messiaen Companion*, ed. Peter Hill (London: Faber and Faber, 1994), 432.

¹⁹ This is Messiaen's most commonly used chant. Treated exclusively and extensively in *Verset*, it also reappears in *Méditations sur le Mystère de la Sainte Trinité* (1969) and *Livre du Saint Sacrament* (1984).

positions of the Dedication chant creates a parallel organum, rather than a chorale-like setting (Example 3).²⁰ The E-centered strand of the Dedication chant is articulated at three successive octaves to open up a tonal space that is duly filled by duplicating the same melody at other pitch levels: B, A_b and B_b. Since the centers E, A_b and B constitute a major triad, one corollary of the superimposition of these four strands is an uninterrupted series of chords – invariably a plain triad ‘contaminated’ by a tritone. The music is likely to have been conceived linearly rather than vertically, since all four strands are spelt diatonically, and yet the vertical triads are, without exception, mis-spelt. The parallel organum setting is a new venture, and it will be repeated in *Méditations sur le Mystère de la Sainte Trinité*.

Example 3:
The Dedication chant as parallel organum, RN 69.

a. The first group.

RN	Plainchant and slow block chords	Birdsong
8	Pentecost chant + ‘les 7 Anges aux 7 trompettes’	
9–10		Bell bird
11	Slow block chords	
12	Pentecost chant (phrase 1)	
13	Slow block chords in Hindu and Greek rhythms (Aristophanien and rāgavardhana)	
14–16		Bell bird
17	Pentecost chant (phrases 1–2)	
18	Slow block chords	
19–20	Pentecost chant (phrases 3–4)*	
21–23		Bell bird
24	Slow block chords in Hindu rhythms (rāgavardhana and tritīya)	
25	Pentecost chant (phrase 1)	
26	Slow block chords	

Table 2:
The first and second groups of Pentecost chant phrases.

* Phrases 2 and 3 are the same.

²⁰ In Sherlaw Johnson’s view, however, ‘both are treated homophonically.’ See *Messiaen*, 167.

b. The second group.

67	Pentecost chant + 'les 7 Anges aux 7 trompettes'
68	Pentecost chant in Hindu rhythms (pratâpaçekhara + vijaya)
69	Pentecost chant + Dedication chant (phrase 1)
70	Pentecost chant in Hindu rhythms (râgavardhana)
71	Pentecost chant + Dedication chant (phrase 2)
72	Pentecost chant in Greek rhythms (crétique)
73–76	Pentecost chant turned ecstatic
77	Pentecost chant in Greek rhythms (Phalécien)
78–79	Pentecost chant + 'les 7 Anges aux 7 trompettes'

The Easter chant as *Klangfarbenmelodie*

The Easter chant, stated thrice, is nested into the core of the tripartite whole. The arrangement of the chant – to follow directly a passage marked 'abyss' – is richly symbolic in meaning, inescapably evoking notions of death and resurrection. What comes after it, however, may strike us as even more mysterious in tone. Messiaen introduces an esoteric counterpoint of four rhythmic strands, pitting his own symmetrical permutation scheme (programmed orderings of 32 chromatic durations) in direct confrontation with the age-old Hindu and Greek rhythms. This is the most disjointed part of *Couleurs*; pointillism is intensely at work. The Easter chant is decomposed into individual notes, and the rhythmic strands are filled with rests; our perception of the underlying references is fragmented and partial.

Messiaen's treatment of the Easter chant is exceptional in that he thins out, rather than thickens, the chant (Example 4). It is arguably the most abstract and also the least recognizable of the four chants in *Couleurs*. Cast as a *Klangfarbenmelodie* (footnoted as 'mélodie de timbres' in the score), the Easter chant is divided into individual notes coming from different corners of the orchestra, creating a spatial effect that is heightened by the active involvement of the bells.²¹ Apart from the use of timbres as a major coloring device, whole tones also infiltrate its first appearance (RN 41). With just a few exceptions, the notes C, D, E, F and G of the original chant can be mapped to respectively D, E, F#, G# and A# of Messiaen's version, though without in the least altering the contour of the model. The next statement of the Easter chant (RN 58) still retains the contour of the original chant, but the whole-tone factor is no longer in place. The third and last statement of the Easter chant (RN 61), though, can only be related to the model by forcing the point.

²¹ Messiaen assigns a higher dynamic level to the bass note of each piano chord.

[41] Bien modéré (♩ = 184)

clarinets

horns

Piano

bells

Easter chant, phrase 1

Example 4:
The Easter chant as
Klangfarbenmelodie, RN 41.

The Pentecost chant as gamelan

If the Easter chant is the least identifiable among the four chants of *Couleurs*, the Pentecost chant is also clouded by its changing guises. Messiaen's camouflaged use of the Pentecost chant is, however, counteracted by its insistent recurrence, which helps assert a strong presence. Indeed, the Pentecost chant stands out as the most frequently used and also the most varied in setting of the four plainchants. As I remarked earlier, Messiaen inscribed 'les 7 Anges aux 7 trompettes' (*Revelation VIII: 6*) at three strategic points of *Couleurs*. The Pentecost chant, played by the trumpet in D and cencerros at a seventh apart, is in mode 1, and is pitted against the brilliance of six contrasted brass parts activated at this point (see Example 1). It initiates the first group of Pentecost chant phrases and literally frames the second. The three strategic points are widely separated in time, but the sequential order of the chant phrases involved is largely preserved (see Table 2).

The first group of Pentecost chant phrases

Just as the first statement of 'les 7 Anges aux 7 trompettes' brings in the first song of a New Zealand bell bird, the latter also set in motion an alternation between the slow-moving block chords and the quick-paced chant phrases. We are totally unprepared for the stasis imposed on us by the long-drawn-out chords, which bring the music to a virtual standstill. Messiaen marked in the score against the block chords the colors of the precious foundation stones, which duplicate the inscription of *Revelation XXI: 19–20* in the preface ('deuxième note de l'auteur'). At RN 13, 24 and 26 selected color-chords – the 1st chord of contracting resonance, the revolving chord and the chord of total chromaticism – are engaged (see Table 3).

The alternation between the colorful block chords and the chant phrases continues for some time, but it is twice interrupted by the

bell bird. Although the Hindu and Greek rhythms are called upon to regulate the block chords, Messiaen does not indicate them in the score until the Easter chant arrives on the scene. Meanwhile, a selection of pitched percussion plays the quick-paced chant phrases in a setting that is strongly evocative of the gamelan. The three xylos, cencerros and bells play different renditions of the chant, all of which remain unified in their rhythm and contour. The chant is thus 'inexactly' doubled (more accurately, multiplied) to create some kind of a heterophony. More specifically, renditions of the Pentecost chant that are related to mode 2², mode 3⁴, and the two transpositions of mode 1 are superimposed at RN 12, with colors enlivened further by Messiaen's gamelan-like scoring (Example 5). Messiaen's settings of the Pentecost chant at RN 17, 19 and 25 are also related to the same modes. RN 20, though, suggests a different reading of modes 2, 3, 4 and 6. All in all, the extent to which Messiaen's modes of limited transposition can be invoked to explain the choice of pitches is impressive (see Table 4).

Example 5:
The Pentecost chant in gamelan-like setting, RN 12.

[12] Un peu vif (♩ = 120)

Piano gongs

xylophone
xyloimba
marimba

cencerros
bells

mode 1¹
mode 2²
mode 3⁴

mode 1¹
mode 2²

Pentecost chant, phrase 1

The second group of Pentecost chant phrases

The schematic repetition of the chant, bell-bird and block chords that generates the first group of Pentecost chant phrases no longer controls a second group that comes after the intervention of the Easter chant (see Table 2). Slow-moving block chords have alternated with the Pentecost chant in the first group. In the second group, however, contrasted settings of the same chant alternate to constitute the most densely-packed use of the Pentecost chant in *Couleurs*. The Hindu and Greek rhythms have previously regulated the block chords. But now the chant wins over and is itself clothed in these complex rhythms. This particular setting of the Pentecost chant (shaded in Table 2b), treated as a refrain that alternates with other settings of the same chant within the second group, remains gamelan-like in appeal. But the three xylos are no longer there; only the cencerros and bells are retained to double the chant, this time 'exactly' at a ninth apart, and to accommodate it to mode 1.²² The con-

²² The top part of the piano chords traces a strict transposition of the cencerros and cloches parts.

Table 3:

Messiaen's color descriptions, modes and color-chords in *Couleurs*. (Words in italics are precious stones mentioned in *Revelation XXI*: 19–20).

trasted settings of the Pentecost chant are among the most fascinating in *Couleurs*. The Pentecost chant sings joyously against the Dedication chant (RN 69 and 71) before it turns 'ecstatic,' and indulges itself in the luxury of color-chords and pure modes (RN 73–76).

RN	Color description	Pitch reference*
11, 13 and 18	<i>topaze jaune, chrysoprase vert clair, et cristal</i>	8–4 + complement 8–9 + complement 8–20 + complement
	<i>émeraude verte, améthyste violette</i>	1st CCR (1A) + C + complement 1st CCR (1B) + F# + complement
	rouge, orangé, et or	RC (10A) + complement RC (10B) + complement RC (10C) + complement
24 and 26	<i>émeraude verte, améthyste violette</i>	1st CCR (1A) + C + complement 1st CCR (1B) + F# + complement
	<i>sardoine rouge</i>	8–21 + complement CTC (8) + complement
	<i>émeraude verte, bleu saphir, et or</i>	8–2 + complement 8–8 + complement
	rose, mauve, et gris	8–Z29 + complement 1st CCR (8A) + E _b + complement 1st CCR (8B) + D _b + complement
73	<i>sardoine rouge</i>	7–26 8–21 CTC (8) + complement
74	rouge, taché de bleu	RC (6A) RC (6B) RC (6C) + complement
75	bleu violet	mode 2 ¹
	orangé, or, blanc laiteux	mode 3 ¹
76	violet	mode 4 ⁵

* 1st CCR, RC and CTC abbreviate respectively the first chord of contracting resonance (*1^{er} accord à résonance contractée*), the revolving chords (*accords tournants*) and the chord of total chromaticism (*accord du total chromatique*). The twelve transpositions of each chord type and the constituent chords of each transposition are indicated in the chord tables of *Traité VII* by an integer followed by an alphabet. For instance, '1st CCR (10A)' refers to the first chord of the transposition that comes first in Messiaen's table.

Table 4:

The Pentecost chant and the modes of limited transposition.

a. The Pentecost chant accompanied by 'les 7 Anges aux 7 trompettes.'

Couleurs	RN 8	RN 67	RN 78–9
Pentecost chant	phrase 1 + head motive	phrases 2 + 3 + 4 (1st half)	phrases 1 + 2 + 4 + 1 + head motive
trumpet in D	mode 1 ¹	modes 1 ¹ + 3 ³	modes 1 ¹ + 3 ³ + 4 ² (?) + 1 ¹
cencerros	mode 1 ¹	modes 1 ¹ + 3 ¹	modes 1 ¹ + 3 ¹ + 4 ⁶ (?) + 1 ¹

b. The first group of Pentecost chant phrases.

Couleurs	RN 12, 17, 19 and 25	RN 20 (1st and 2nd halves)
Pentecost chant	phrases 1–3	phrase 4 (1st and 2nd halves)
Xylophone	mode 1 ¹	mode 3 ¹
Xylorimba	mode 2 ²	modes 6 ¹ and 4 ⁶
Marimba	mode 3 ⁴	modes 2 ¹ and 4 ⁵
Cencerros	mode 1 ¹	modes 3 ¹ and 4 ²
Bells	mode 1 ²	modes 3 ⁴ and 4 ¹

c. The second group of Pentecost chant phrases (refrain only).

Couleurs	RN 68, 70, 72	RN 77
Pentecost chant	phrases 1	phrases 1–2
cencerros	mode 1 ²	mode 1 ¹
bells	mode 1 ²	mode 1 ¹

d. The last statement of the Pentecost chant.

Couleurs	RN 81	RN 83	RN 84	RN 85
Pentecost chant	phrase 1	phrases 2 + 3	phrase 4	phrase 1
Bells	mode 1 ¹	mode 1 ²	modes 3 ³ + 4 ⁶	mode 1 ²

Ecstatic appearance, quiet retreat – chorale and monophony

The settings of the Pentecost chant in Hindu and Greek rhythms, and, at a later stage, in counterpoint with the overpowering Dedication chant, cloud the identity of the chant. It is surely no coincidence that such blurred statements of the Pentecost chant are succeeded by an exceptionally strong appearance, one that activates the whole orchestra to color the chant (RN 73–76; Example 6). Marked 'extatique' and 'infiniment lent,' this is *Couleurs* at its slowest. The sheer length of time devoted to such a generous use of lush orchestral sonorities has no parallel elsewhere in *Couleurs*. There is little doubt that we have arrived at the heart of the matter, reaching a point that has all along been prepared for. The Pentecost chant has been played previously by a battery of pitched percussion, with the more sustained sound of a wind brass ensemble set aside to play series of block chords inscribed with the colors of precious stones. With the advent of the climax, this is forever changed. The Pentecost chant is granted the luxury of the block chords, and also the full strength of the orchestra, wind and brass included. Potently, we are again offered a fusion of elements that have previously been kept distinct.

Stripping the Pentecost chant of its gamelan-like raiment, Messiaen crafted one of the most glorious moments of *Couleurs* by allowing it to assume a chorale-like splendor. At this point we hear repeatedly the head motive of the chant, magnificently colored. The color-chords (the chord of total chromaticism and the revolving chord)²³ lead the way, but they soon give way to the modes (2¹ and 3¹), the cleanest present-

²³ Importantly, the same revolving chords, though differently spaced, constitute an ostinato that was repeated throughout 'Miyajima et le torii dans la mer.'

tation of these in *Couleurs*, or indeed in any orchestral work since as far back as *Turangalila*.²⁴ It is not until the chorale-like setting recedes that a complete chant phrase takes shape (RN 76). Most unexpectedly, the music no longer mimics the sound effects of any existing historical models. Rather, Messiaen's mode 4⁵ steals in as a parallel chord series, and floods the chant with the composer's favourite color – violet rules (see Table 3).²⁵

The parallel chord series can easily be mistaken for some kind of heterophonic setting. Importantly, the constituent parts are not only unified in rhythm and contour, but they also move mostly in parallel motion. As shown in Example 6, a numbering of the eight notes of the referential mode 4⁵ helps us to figure out how they are deployed in an orderly fashion. The first hexachord, which reads 8–4–1–6–2–5 (top-down), is followed by hexachords that comprise the next succession of notes, i.e. 1–5–2–7–3–6, 2–6–3–8–4–7, and so on. Nevertheless, the hexachords are not strictly parallel in intervallic terms, since adjacent notes of the referential mode 4 span the interval of either one or three semitones. Recent research point out that Messiaen's parallel chord series, which serve well to compose-out a pure mode within a compressed area of time and space, predate *Technique de mon langage musical* and are prominently featured in such major works as *Trois petites liturgies*, *Vingt regards* and *Turangalila*.²⁶ I therefore find it hard to interpret Messiaen's deployment of the only setting of the Pentecost chant as a parallel chord series in *Couleurs* as anything other than intentional. It seems likely that the only parallel chord series of *Couleurs* is inserted at this point as a sign, a secret signature, to mark his personal presence in the midst of such recognizable historical models as gamelan, parallel organum, chorale and – closest of all to him – the 20th-century artefact of *Klangfarbenmelodie*. Messiaen's decision to set his own symmetrical permutation scheme in direct confrontation with the age-old Hindu and Greek rhythms was probably conceived along the same lines.

Example 6:
The Pentecost chant turned ecstatic,
RN 73–76 (rhythm not shown).

73 Infiniment lent (♩ = 40) Un peu lent (♩ = 60) 74 Infiniment lent (♩ = 40) Un peu lent (♩ = 60)

estatique *estatique*

clarinets
trumpets
horns
trombones
cencerros

7-26 8-21 CTC (8) complement of CTC (8) RC (6A) RC (6B) RC (6C) complement of RC (6C)

sardoine rouge piano xylo bells rouge, taché de bleu piano xylo bells

75 Extrêmement lent (♩ = 40) Lent (♩ = 60) Extrêmement lent (♩ = 40) Lent (♩ = 60)

clarinets
trumpets
horns
trombones

bleu violet orangé, or, blanc laiteux

mode 2¹ mode 3¹

²⁴ See, for instance, *Turangalila*, 87 and 129–31.

²⁵ The color effects of the modes recorded in the score (RN 75–76) are exactly the same as those in *Traité VII*. But this is not so in the case of the color-chords (RN 73–74). The change of spacing and the inclusion of complementary tetrachords might have affected the color effects of these chords.

²⁶ Cheong Wai Ling, 'Messiaen's Triadic Colouration: Modes as Interversion,' *Music Analysis*, Vol. 21, No. 1 (2002), 53–84.

Pentecost chant, phrase 2

clarinets
trumpets
horns
trombones

violet

mode 4⁵ (parallel chord series)

mode 4⁵

The last statement of the Pentecost chant (RN 81–85) is the smoothest, but also the barest, though the modes of limited transposition remain an important pitch reference (see Table 4). All materials that have hitherto interrupted the smooth flow of the four phrases are removed for good. No longer scored for a battery of pitched percussion, the chant is now played by the bells alone, and is laid bare as an unadorned line of equal durations. This is perhaps not meant to be heard, given its low dynamic level. Liberated, sublimated, the last appearance of the Pentecost chant fades to the background, against which Hindu and Greek rhythms and, even more symbolically, layers of birdsong prevail.²⁷ Birdsong is not superimposed on a plainchant anywhere else in *Couleurs*, nor in any preceding works. This is an important exception. Having cast the four plainchants in different formats throughout *Couleurs*, Messiaen's decision to reduce the last appearance of the 'idée fixe' to be a mere backdrop for birdsongs is rich in meaning. Reflecting on centuries of musical development, significantly, Messiaen ends on a similar note:

La musique sérielle a duré environ 30 ans. Nouveau sursaut: Xenakis brise les cadres avec la « musique stochastique » l'étude mathématique du hasard, les glissandi calculés, les complexes de sons superposés. En même temps, la musique concrète en France, la musique électronique en Allemagne influencent ou suscitent plusieurs petites écoles: musique aléatoire, improvisation collective, notations nouvelles, collages, cluster, et d'autres encore: chacune de ces écoles a duré seulement quelques mois ... Pendant tout ce temps-là les oiseaux ont continué à chanter ... Ce petit résumé de la musique humaine n'explique nullement ma passion ornithologique. On n'explique pas une passion ... Je voulais seulement montrer l'effrayant raccourcissement de durée des principaux styles musicaux de l'homme – et le comparer à la continuité rassurante du chant de l'oiseau.²⁸

²⁷ Plainchant and birdsong materials are kept strictly apart in *Verset*, but they become mingled, if only briefly, in *Couleurs*.

²⁸ *Traité V/1*, first introduction, 16–17: 'Serial music lasted about thirty years. New breakthrough: Xenakis breaks the mould with 'stochastic music,' the mathematical study of chance, calculated glissandi, superimposed sound complexes. At the same time, the *musique concrète* in France, electronic music in Germany influence, or give rise to, several small schools: aleatory music, collective improvisation, new notations, collage, cluster, and more. Each of these schools lasted only a few months ... All the while, the birds went on singing ... This short résumé of our music can in no way explain my passion for ornithology. One cannot explain a passion ... I only wanted to show the dreadful brevity of our principal musical styles – and to compare it against the reassuring durability of the birdsong.'

²⁹ Plainchants also inform the following orchestral works, *Et exspecto resurrectionem mortuorum* (1964) and *La Transfiguration de Notre-Seigneur Jésus-Christ* (1965–9).

Plainchants as colored time

Couleurs quotes exclusively from *Revelation* to invoke the imagery of the apocalypse. This is paralleled by only one other work, *Quatuor pour la fin du temps*. They are the only two works of Messiaen to engage *Revelation* as the sole source for the inscriptions. The wartime piece reflects rather narrowly on *Revelation* X, and the multiple meanings of the end of time, while *Couleurs* moves to *Revelation* IV, VIII, IX and especially XXI, which tells of the splendor of the heavenly Jerusalem. If Messiaen hankered for eternity from the dark world that engendered *Quatuor*, we may perhaps argue that he attained it in *Couleurs*, coming face-to-face with the dazzling temple.

Having fixed his mind on the 'true temple' depicted in the most colorful part of *Revelation* and indeed the whole Bible, Messiaen continued to explore the topic of heavenly Jerusalem in 'Zion park et la cité céleste,' the last movement of *Des canyons aux étoiles* (1971–4), *La ville d'en-haut* (1987), and his last completed work *Éclairs sur l'au-delà* (1987–91). He tried relentlessly to convey through very slow chorales the dazzling colors of the celestial city. Much to his disappointment, critics tended to hear in them a retrogressive move, in which most of the technical advances accumulated over the years were eliminated in pursuit of sound-colors, the richness of which is denied to all except those privileged with the rare gift of color-hearing. Our inaccessibility to color-hearing, though, cannot really explain why we have overlooked the importance of *Couleurs de la cité céleste*, which marked a significant departure from Messiaen's practice in his preceding works by once again expressing openly his religious belief in an orchestral work. It further marked his return to plainchants, and his first deployment of them in an orchestral work.²⁹ In addition, his mapping of the chants onto such diverse models as gamelan, *Klangfarbenmelodie*, parallel organum, chorale and – perhaps as a token of self-gratification – his own parallel chord series, suggests very different time frames.

Couleurs is also the first work to employ the two categories of sound-color materials codified in *Traité* VII on an equal footing. The modes of limited transposition loom large when the Pentecost chant assumes gamelan-like settings, before they appear in close succession with the color-chords (the chord of transposed inversion and the revolving chord) to stage the most extended display of colors at RN 73–76. While the modes of limited transposition were marginalized in *Chronochromie* and *Sept haïkai*, they regained importance in *Couleurs* and joined force with the color-chords. Indeed, *Couleurs* contains the first important re-use of the modes in an orchestral setting after *Turangalila*, suggesting that Messiaen finally arrived at his full set of sound-color materials, which he continued to celebrate in *Et exspecto*,³⁰ *La Transfiguration*,³¹ and virtually all ensuing works.

Just as the modes of limited transposition regained importance in *Couleurs*, so the significance of the color-chords was also elevated to new heights within this work. In strophes I and II of *Chronochromie*, the color-chords, tied to the symmetrical permutation series to fabricate colored time, serve mainly as a veiled backdrop to birdsongs. The color-chords continue to play shadowy roles in *Sept haïkai*, though the Miyajima piece also contains a rare case in which the chorale theme is harmonized by

³⁰ In *Et exspecto* modal block chords, pitted against their 12-note complements, fill the slow ending (RN 5) of the first movement, while the color-chords fill the last movement.

³¹ See *Traité* VII, 309–15 for a discussion of the modes and color-chords used in the 'Choral de la Sainte Montagne' of *La Transfiguration*.

the chords of transposed inversion. In *Couleurs* Messiaen then took the decisive step to bring to the fore many more different color-chords in the format of a chorale. In this connexion, it is important to note that antistrophes I and II of *Chronochromie* give us a brief but nonetheless important glimpse of color-chords shaped as slow chorales. Unlike strophes I and II, the rhythms of the color-chords are kept simple, and birdsongs are eliminated. The chorale settings of the color-chords in antistrophes I and II, however, are left out from Messiaen's extended discussion of *Chronochromie* in *Traité* III, and, probably because of that, also from the existing literature on the work.

The notion of colored time, first explored manifestly in *Chronochromie*, is revisited in *Couleurs* from a different perspective. Color remains a crucial factor, but the concept of time is no longer realized in the abstract format of symmetrical permutation series. Rather, it is realized in more concrete terms by drawing on a wide range of models. Of the different models appropriated in *Couleurs* – gamelan, *Klangfarben-melodie*, parallel organum and chorale – the latter is the most suited to the display of harmonic colors. Its slow tempo, unsurpassed rhythmic simplicity, and espousal of block chords help push the sound-color materials to the forefront of our consciousness. The setting of a slow-moving melody against languorous harmonies, with such tempo markings as 'lent,' 'très lent' or 'extrêmement lent,' is also featured in Messiaen's early orchestral works, most notably in the endings of *Les offrandes oubliées*, *Le tombeau resplendissant* and *L'Ascension*. Together with the exceptionally slow and chordal ending of *Trois petites liturgies*, they already prefigured Messiaen's mature chorale style, but the line of development was disrupted by *Réveil des oiseaux* and *Oiseaux exotiques*. Some signs of chorales resurged in *Chronochromie* and *Sept haïkai*, but the elevation of chorales to assume central rather than peripheral roles is not enacted until *Couleurs*. Here, Messiaen resurrected the modes of limited transposition and foregrounded the color-chords. From *Couleurs* onward, chorales that draw freely on his modes and color-chords became integral to his orchestral works.

Undoubtedly, Messiaen reached a critical point of his artistic development in *Couleurs*, having blended for the first time the largest number of plainchants used in any published work up to that point with all the important techniques he had at his disposal in praise of God – the modes of limited transposition, color-chords, birdsongs, symmetrical permutation series, Hindu and Greek rhythms.³² Nevertheless, since the heavenly Jerusalem signifies the end of time, all the artefacts carved into *Couleurs* in search of colored time are destined to fail. Messiaen's perplexing remark rings true: 'l'oeuvre ne termine pas – n'ayant jamais commence vraiment.'³³

Music examples from *Couleurs de la Cité Céleste* © copyright 1966 by A. Leduc & Cie.

³² Hill and Simeone read the next work, *Et exspecto resurrectionem mortuorum* (1964), as inaugurating a decade of 'resplendent achievement,' while Christopher Dingle argues that 'the divergent styles found in Messiaen's music before and after 1949 are brought together in *La Transfiguration [de Notre-Seigneur Jésus-Christ (1965–9)]* to form an omnifarious whole, thus initiating the stylistic inclusivity of his later years.' See Hill and Simeone, *Messiaen* (New Haven and London: Yale University Press, 2005), 257, and Dingle, *The Life of Messiaen* (Cambridge: Cambridge University Press, 2007), 171.

³³ 'Première note d l'auteur': 'The work does not end, having never really commenced.'

Appendix 1:
The Location of the four plainchants
of *Couleurs* in *Liber Usualis*.

Alleluia of the eighth Sunday after Pentecost, *Liber Usualis*, 1014.

7.  **A** Lle-lú- ia. * *ij.*


 Ψ . Má- gnus Dó- mi- nus et laudá-bi-

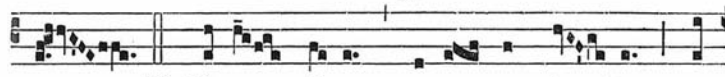
 lis val- de, in ci-vi-tá-te

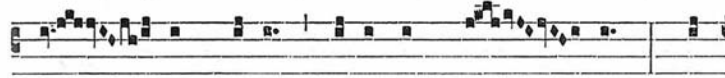
 Dé- i, * in mónte sáncto é-jus.

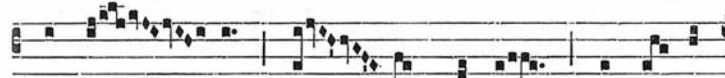


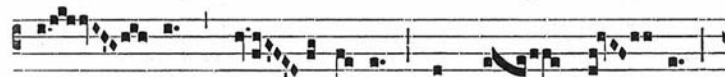
Alleluia of Saint Sacrament, *Liber Usualis*, 944–45.


7.  **A** Lle- lú- ia. * *ij.*

 Ψ . Cá-ro mé- a ve-re est cí- bus, et

 sán- guis mé- us ve-re est pó- tus : qui

 mandú- cat mé- am cárnem, et bí- bit

 mé- um sán- gui-nem, in me má- net,

 et é-go * in é-o.

Alleluia of the fourth Sunday after Easter, *Liber Usualis*, 827.

1. **A** L-le- lú- ia. *

∇. Chrístus re-súr- gens ex mór-
tu- is, jam non mó- ri- tur : mors
íl- li ultra * non do-
mi- ná- bi- tur.

Alleluia of Dedication, *Liber Usualis*, 1251–52.

7. **A** L-le- lú- ia. * ij. ∇. Ad-
o- rá- bo ad témp- lum sán- ctum tú-
um : et confité-
bor * nó- mi- ni tú- o.