

Olivier Messiaen, Spectralist

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Introduction: The Spectralist turn

To write about Messiaen as a spectralist is to listen to his music with 20/20 hindsight; it is also to listen from the past into the future. Both operations involve a form of calculated hearing, searching for echoes and resonances. This chapter will provide a perspective on how a somewhat orthodox understanding of spectralism can be heard in and inflected from Messiaen's music and aesthetics.

In his essay *La violence de l'art* (2013), the spectralist composer and music philosopher Hugues Dufourt defines spectralism as a "change in our modes of thinking about music," and he provides the following description of it:

The study of transitional regimes has become a cardinal aspect of spectral music: the comings and goings, the fluctuations between harmony and timbre, between complexity of sound and noise, between register and noise, between harmonicity and inharmonicity, between timbre and saturation, have procured a sort of idiom at the base of this music (Dufourt 2014a, 27).

It is not founded, he states, on "traditionally separated categories like melody, counterpoint, harmony, rhythm and timbre" (Dufourt 2014a, 27), but on the "interaction of unstable elements" (Dufourt 2014a, 28), refusing any "assignable form, [but it is informed by] research into transitive forms and an internal mobility with a correlating transparency" (Dufourt 2014a, 30).¹ In another essay, he states that "spectral music has only one real subject, vibration – and only one operational category, the principal of interference that is the same phenomenon of two or more wave [*ondulatoires*] movements in given conditions," and he connects this principle with "spectral decomposition, which gives a distribution of energy in the spectrum" (Dufourt 2014c: 420 and 424). This correlates with Grisey's ideal of a "continual transformation of the energy of sound [that creates] a tissue of correlations that manage all of the [musical] parameters" (Grisey 2008a, 28).² Dufourt also affirms that spectralism is "irreducible to mechanical

¹ On timbre and its "role in creating and releasing musical tension" see McAdams and Giordano 2016, 119 and 120-1, and Risset and Wessel 1999, 113-69. All translations in this chapter are my own unless stated otherwise.

² On Messiaen as teacher of Grisey, see Grisey 2008g, 215-16. Grisey speaks of Messiaen's silences on observing students' work, of Messiaen holding a mirror up to him, and "inexorably returning me to myself, to my own music and to critiques that only I would be able to formulate" (p. 215), a comment that tallies with Messiaen's own ideal of his teaching as helping students "find their own voice." Stevens and Knussen 1988 cited in Dingle 2007, 175. Guy

laws” (Dufourt 2014c, 422), resistant to formalist forms of musical analysis, and that it should be understood as “a discipline of writing [*d’écriture*] and not of an applied logic” (Dufourt 2014d, 464). Dufourt’s ideals together outline the spectralist turn in the ontology and epistemology of music, where the properties of sound itself become a plastic form, and “the spectrum - that is to say a description of the frequency domain of the signal - [should be understood as] a “variable function of time” (Dufourt 2007, 366). Sound therefore is regarded as a source for the reintegration of musical features (acoustics and timbre, orchestration and form for examples, as the composer Michaël Levinas points out), and for its potential in the development and evolution of musical discourse (Cohen-Levinas 1999, 275).

The question then arises of how Messiaen’s music already constitutes a form of spectralism, and then of Messiaen’s agency in this turn. To examine Messiaen’s work as a spectralist is to understand his holistic concerns for timbre and sound; his concern for an internally-mobile continuity of his harmonic discourse, for example through a “conquest of inharmonicity” (Dufourt 2014a, 26); his exploration of “resultant” harmonies, and through his compositional thinking and aesthetic founded in the “management of all the parameters” of music especially timbre, duration, rhythm, pitch, intensity and density of information (see Dufourt 2014a, 27, cited above). It is also to understand that a proto-spectralist aesthetic is at the foundation of his religious-modernist discourse.

Messiaen’s music can be understood as Catholic and evangelical; his theoretical and musical processes are placed at the service of his faith. Crucially, through his soundworld, he attempts to place these into the perception of the listening subject, to infiltrate (one might even argue *in extremis*, to indoctrinate didactically) the listener in a manner that uniquely satisfies, but goes beyond the “research on perception” which Dufourt identifies with spectralism (Dufourt 2014a, 25).³ Understood in this way, Messiaen’s music not only engages the way the subject listens to themselves (Nancy 2007, Chua 2011), through the agency of

Lelong asked Grisey in an interview, whom amongst contemporary composers he has learned most; Grisey cites Messiaen as “God the Father” (Grisey 2008h: 235), and in another conversation (with Ivanka Stoianova), Grisey credits Messiaen with giving him the taste for color and harmony (Grisey 2008, 244). For a summary of Messiaen as teacher of Grisey and Murail, see Nonken 2014, 56-8 and 71-2. On Murail’s early works and Messiaen’s influence see Nonken 2007, 232-36.

³ Messiaen certainly shares with Murail a technical approach to the craft of composition, and his thinking about the effect of colour, timbre, and time on the listener (at the service of the sacred in Messiaen) can be understood as a progenitor of the psycho-acoustic compositional framework of Grisey.

timbre especially, but the way in which the subject constitutes themselves; the subject is encouraged to undergo a form of spiritual transformation through this listening. To listen to Messiaen therefore is to appreciate music as a site of external revelation and self-referential knowledge, but also to listen for what we might desire of God and also what God desires of us.

Messiaen's ideal of music as testament, agency and as a conduit for faith is present in the communication between the noumenal/spiritual and phenomenological domains implicit in Grisey's ideal of the term "liminal" (Grisey: 1997 and 2008d: 45, 48-52) as music "crossing the thresholds of perception" (Dufourt 2014a, 27). For Grisey, this is worked out through the aural fascination resulting from the ambiguities of the "interaction of psycho-acoustic parameters" (Grisey 2008d, 45).

"Liminal" for Grisey pertains to the psychoacoustic conditions of sound whereby one cannot strictly demarcate acoustic parameters (Grisey 2008e, 114), and distinctions (between harmony and timbre for example) become unrepresentable. This technical construction of the ineffable (even if it is not configured in these terms for Grisey), engages the listener through a form a "return and encounter" of sound as resonance and reverberation in the body of the listener (Nancy 2007, 16).

The liminal could also be understood in Messiaen's world as a mystical or theological asymptotic approach to that which is beyond death, conceived in a Christian vein as redemption or salvation. A liminal music therefore articulates a space of excess, but also enacts a tension with a withholding from the consequences of crossing this threshold. It denotes a place where the audible is stretched, tending the ear towards the inaudible and the seemingly impossible. These characteristics of the liminal articulate a desired sacred space that has the potential to liberate and reveal (*pace* Marion 2004, 47). Messiaen's concept of sound-color (Messiaen, 1978) occupies this space; it relies on a similar effect of calculated aural infusion (harmony – rhythm - timbre – color) to attempt to evoke an understanding of the sacred within the listener. Listening to the liminal is essential to the religious economy of Messiaen's music which implies both a deferral from and aspiration to the absolute, and, in a psychoanalytic vein, an implicit placement of desire and lack.

This focus on listening is an essential component of participating in Messiaen's ideal of mysticism or what Dufourt identifies as Messiaen's bequest to Grisey of a "mystic naturalism which reintegrates man into universal life" (Dufourt 2014e, 379). This somewhat-circular study therefore begins near the end of Messiaen's work and connects it with the beginning. Messiaen's *ordo* is explained initially through the thought of the French psychoanalyst and theorist Jacques Lacan (1901-81). I then explore four related areas of spectralist thought in

Messiaen's output. It will become clear through the examples given below that Messiaen's authentic fashioning of spectralism *avant la lettre* was seminal to the spectralist turn. In conclusion I briefly discuss how the classical (French) *école spectrale* of Grisey, Murail, Levinas and Dufourt especially (not to mention Florentz) can be conceived as a refinement, extension and critique of Messiaen's practice.

I Aesthetics – Technique – Discourse

"Finitude is an opening to the infinite: nothing but this is at stake" (Nancy 2013, 3)

In 1978, Messiaen made this well-known manifesto-like statement connecting theological, avant-garde and proto-spectral concerns:

Scientific research, mathematical proof, amassed biological experiments have not saved us from uncertainty. Quite the contrary, they have increased our ignorance by constantly revealing new realities within what was believed to be reality. In fact, the one sole reality is of a different order: it is to be found in the realm of Faith. Only by encountering another Being can we understand it.

But to do that we have to pass through death and resurrection, and that implies the leap out of temporal things. Strangely enough, music can prepare us for it, as a picture, as a reflection, as a symbol. In fact, music is a perpetual dialogue between space and time, between sound and color, a dialogue which leads into a unification: Time is a space, sound is a color, space is a complex of superimposed times, sound-complexes exist at the same time as complexes of colors. The musician who thinks, sees, hears, speaks, is able, by means of these fundamental ideas, to come closer to the next world to a certain extent. And, as St. Thomas Aquinas says: music brings us to God through 'default of truth', until the day when He Himself will dazzle us with 'an excess of truth'. That is perhaps the significant meaning – and also the directional meaning - of music...' (Rößler 1986, 10).⁴

This proclamation can be interpreted in terms of Jacques Lacan's psychoanalytic registers that I employ as a scaffold for understanding this music. These consist

⁴ This is Messiaen's adaptation of Aquinas, possibly from two sources. The first is from the *Commentary on the Sentences* (Super Sent., q. 1 a. 5 ad. 3): 'To the third objection, I say that the poetic science concerns things that cannot be grasped by reason because of a shortage of truth; hence the reason must be seduced by certain likenesses; theology, however, is about things that are above our reason; and so the symbolic mode is common to both, since neither is proportioned to our reason.' (<http://www.vaxxine.com/hyoomik/aquinas/sent1.html>) The second quotation is from the *Summa theologiae* (I-II, q. 101, a. 2 ad. 2): 'Just as human reason fails to grasp poetical expressions on account of their being lacking in truth, so does it fail to grasp Divine things perfectly, on account of the sublimity of the truth they contain: and therefore in both cases there is need of signs by means of sensible figures.' (<http://www.newadvent.org/summa/210102.htm>).

of the Symbolic (understood here as musical language and its conceptual categories), and the Imaginary (what this language is imagined to mean) that are constructed, I would argue, so that they fail to realize the Real, understood in Messiaen's declaration as "in default" and as the unassimilable, unknowable region of God.⁵ To reverse-engineer this is to note that the consistency of the Symbolic and Imaginary is a condition created or constituted by the Real.

What I wish to argue is that the consistency of Messiaen's Symbolic register entertained in this manifesto and elsewhere - the interrelation of time, color, space (register) through concepts such as stained-glass windows, birdsong and circular systems of harmony and rhythm - can be understood as a leaking system. The Lacanian theorist Alenka Zupančič describes this leak in Lacanian terms as a "partial object" (*objet petit a*) and she connects this to a "hole" in the human ideal of (failed) finitude that functions both as a "driving force" of religions and that is responded to in their "different narratives" (Zupančič 2008, 52-3). The Slovene critic Slavoj Žižek defines this *objet a* as "the pure lack, the void around which desire turns and which, as such, causes the desire, and the imaginary element which conceals the void, renders it visible by filling it in (Žižek 2005, 178)." Understood in this way, faith and theology are able to act as agents for this "driving force," concealing the non-rapport between theology and music for example while re-inventing it, and relying on a promise of wholeness that remains (necessarily) unfulfilled. For example, through the metaphor of color, Messiaen imparts a vision of what life after death might be like, provides a personal iconography and imagery of what he believes and yet relies primarily in fact on the human *inability* to actualize the endgame of salvation and the holistic belief that Christ will "make all things new (Rev. 21:5)" (Walls 2010, 4).

The illusion of holism and consistency essential to eschatology is also important to the utopian avant-gardist totalizing ideals of consistency inculcated into spectral thinking (the quasi-mystical blending of musical "parameters" into color and timbre), and it is axiomatic to both Messiaen's own discourse and also to much commentary on Messiaen (Messiaen 1978; Dingle 2007, 163-4; Sholl 2011, 167-74). This supposed consistency or rapport is part of what enables, validates, and exposes this leak. In 1968, Messiaen made the following observation on himself and his piano *Préludes* (1928):

But I was already a 'sound-color' musician. By means of the harmonic modes, transposable only a certain number of times, and taking [*tirant*] their own particular colors, I had come to oppose discs of color, to interlace rainbows, and to find a music of

⁵ On the Lacanian registers see Klein 2015, 13-17; Lacan: 2004, 53-64. and Lacan 2007, 75-81

complementary colors. The titles of the *Préludes* hide studies of colors [*études de couleurs*] (Messiaen 1968).⁶

Color here is understood in a spectralist sense: resultant tones that ‘colour’ frequencies, pitches, and timbres. But in Messiaen’s thought, color also becomes part of a tendentious holism as much as a leak into the Real from the Symbolic. It attempts to instantiate a libidinal desire for an eschatological connection to God (the infinite), but it acts as a human marker of finitude; it covers over the hole it creates with a soft-focus metaphor of appreciable vision, as in ex.6 below where the higher sounds (harmonics in the orchestral version of the song) become aurally progressively less individuated. Color, even in such early works, can therefore be identified with a mysticism (premised in eschatological desire) in which proto-spectralist thought and techniques act as a primary enabling agent and conduit between the three Lacanian registers: the Symbolic language of chords rising into a liminal space, the Imaginary Christian meaning of that space, and the desire for the Real, as the invisible that offers itself as a threshold for a “breakthrough,” and entrains but also withholds itself from the listener (Marion 2004, 2; van Maas 2014).

For the theorist Alain Besançon “the mystical sublime” is espoused by the “modern artist” for whom it is essential to their iconoclasm despite the “inadequacy” of art (Besançon 2000, 233). Messiaen’s proto-spectralist thought is essential to his identity and iconoclasm, His form of the mystical sublime, in his thinking, acts through “default.” This “inadequacy” is essential in his aesthetics to an eschatological or liminal fantasy of God’s presence or redemption that is constructed to be unfulfilled (it can only occur after death). Left in a contingent space of lack and desire, the fantasy of redemption for the listener is experienced (culturally, spiritually and phenomenologically) as what Lacan calls *jouissance* (Lacan 1992, 220-52). This term signifies surplus meaning or enjoyment, formed by but beyond language or ideology, but here it specifically registers the effect of eschatological fantasy in which both pleasure (the *promesse de bonheur* of fulfillment) and pain (in non-fulfillment) are registered in this colorist music.

⁶ Messiaen’s reference to “opposing discs of color” and “complementary colors” implies the presence/influence of Robert Delaunay’s paintings (see Rößler 1986: 77-9), while the “interlacing rainbows” of color, symbols of “peace, wisdom and all luminous and sonorous vibrations,” link these ideas by implication to the colors of the Apocalypse in Messiaen’s religious aesthetics (see Messiaen 1978, 7). Messiaen’s description of his music as “complementary colors” and the “natural resonance of sounding bodies” could be read with hindsight as a distancing of himself from the label of spectralism as much as any other labels or musical silos. See Messiaen 1978, 8-9.

Mysticism can therefore be understood as an intermedial, liminal space in which *jouissance* is formed by the gap between the symbolism of redemption and its actualization. Color is a mystical, phenomenological and psycho-visual aspects of his thought connecting the colors of the Apocalypse cited in many of Messiaen's works and Messiaen's own internal synaesthesia (seeing both specific and complexes of colors when he heard music internally). As a 'tangible intangible' that is always present but escaping both the composer and the listener, it functions as a sublime "*objet*," that is sensed but that overwhelms the imagination.⁷

The use of the harmonic spectrum in Messiaen's harmonic language differs from the category of harmony, with its traditional associations of function, groundedness and tonal mediation. Generic terms such as time, space and color are an attempt by the composer to change the appearance of the envelope of the Symbolic register of his music and to position it in proto-spectral terms. They promote *jouissance* by being merely an "image" or "symbol" of that which remains necessarily unattainable. The liminal in Messiaen's music and its later manifestation in the music of Grisey, Murail, Levinas, Dufourt and Florentz for example therefore mark out different forms of engagement (even as Messiaen might put it, by "default") with the noumenal and even sacred rather than the religious in music. The romantic aspiration and yearning for the infinite that E.T.A Hoffmann signposted in 1813 is refreighted in modernist packaging (Hoffmann 1989, 234-52).

Messiaen already identifies the intent and meaning of his early music with the mystical, a construction that arguably never leaves his music despite disingenuous protestations that his music was "theological" (Messiaen, 1946: 73; Röβler, 1986: 89-92 and in other places). The historian Stephen Schloesser has written of this change in Messiaen's life as linked to Catholic doctrine (Schloesser 2014, 206, 228-9). But what makes Messiaen's music theological *and* indeed mystical is that it provides its own type of intensely human knowledge of God. The mystical, I would argue, is reinvented in different guises: for example, in the fantasy of corporeal transformation after death in *Les Corps Glorieux* (1939); in the Surrealist ethnographic and eschatological fantasy of *Harawi* (1945); in the sacral reconfiguration of avant-garde thought in *Messe de la Pentecôte* (1950); in the liminal birdsong refrains of *Catalogue d'Oiseaux* (1956-8); in sublime images of

⁷ The pleasure and pain of *jouissance* is connected to the excess of the sublime. In the classical Kantian sublime, there is pleasure in the sensible perception of a phenomenon (a sunset for instance), but pain that its magnificence overwhelms the imagination. Reason then allows us to step back from this process and apprehend or rationalize what cannot be comprehended. The Sublime experience therefore is one of realising and enjoying the limits of an extreme experience (as Kant conceives it, either in nature or in mathematics). See Kant, 1952, 88.

mountains and light in *La Transfiguration de Notre-Seigneur Jésus-Christ* (1965-9) and *Des canyons aux étoiles* (1971-72); in the trajectory toward redemptive glory in *St François d'Assise* (1975-83), and in the apocalyptic imagery of *Eclairs sur l'au-delà* (1988-92).

Perhaps the simplest form of spectral integration is found in Messiaen's modes of limited transposition, which act as a technique that enables mysticism through the circular form of time. His harmonization of these modes articulates a cornerstone of his musical originality. In these modal harmonizations, triads are often used to regulate and dilate the degree of dissonance – the specific coloristic, spectral quality – which allows Messiaen to create a kind of interior musical narrative of color. Dissonance often amplifies foundational triadic colors (like the mixture stops on an organ). But perhaps what is remarkable about Messiaen's chords is that the traditional view of the separation between tonal and non-tonal elements or the extension of tonal elements by dissonance (chromaticism) is undermined: dissonance is integrated into chords in a similar way to the way it is with organ mixture stops (Fineburg 2000, 111).

For Messiaen, the organ and his own kinaesthetic approach to the instrument act together as catalysts for this process. Messiaen stated that he “progressively appropriated them [his modes of limited transposition] by improvising at the organ” (Marti 1992, 12). Given the structure of the organ and its acoustic, we can understand how Messiaen learned to control the use of dissonance in his chords and why natural resonance was so important to him.

On good quality instruments, such as Messiaen's altered Cavallé-Coll organ at the Église de la Trinité, the harmonic spectrum and voicing of organ pipes gets brighter as it evolves from the more fundamental bass keyboard registers.⁸ It is not just that the pipes get smaller as the pitch rises, but that, in a spectralist sense, different formants come into play in different registers, and this can be exploited by composers and players alike. This means that a player can hold a tonal chord in the left hand (hereafter l.h.), play dissonances above, and these will irradiate the tonal chord. This kinaesthetic approach to harmony can be seen in Messiaen's “chord of resonance,” which contains all the notes of his third mode of limited transposition, as presented in his *Technique de mon langage musical* (hereafter *TMLM*) (Messiaen 2001, 70).

Ex. 1 Messiaen's chord of resonance giving Mode 3 (first transposition)

⁸ The organ keyboard is a maximum of 6 octaves (C2 – c4).



The right hand (hereafter r.h.) of ex. 1 creates an effect of enrichment and what Messiaen calls “sound-color dazzlement” (Messiaen 1978). The sense of tonal grounding is transformed in resonant ecclesiastical acoustics and heightened by the addition of 4 ft, 2 ft and mixture stops giving sounds one and two octaves above the written note and also certain partials (typically the 12th, 15th, 19th and 22nd). Messiaen clearly uses this technique in the DVD improvisations on the plainchant *Puer natus est* recorded at la Trinité on 21 October 1985 (Messiaen 1992). From around 4.10 on track one, Messiaen employs chords of contracted resonance, and transposes them. The chords gradually become more tonal until he concludes on a triumphal G major chord. Throughout this passage, Messiaen’s l.h. remains in the middle of the keyboard, grounding and allowing greater dissonance in his r.h. This example tells us something profound about the way Messiaen hears his chords, and ultimately about the relationship between his kinaesthetic response to the instrument, his musical imagination, the timbres/registers of the organ (its spectral potential) becomes a means of invoking and controlling the transition between the immanent and the transcendent.

Messiaen’s harmonization of his modes of limited transposition also provides a way of deferring from tonality while allowing a triadic foundation to create new kinds of narrative circularity. Messiaen’s seven modes act in Joshua Fineberg’s term as “reservoirs” (Fineburg 2000, 99). Here is mode 2¹ with triads and seventh chords extracted below:⁹

Ex. 2 Mode 2¹ with triads and seventh chords:

⁹ This transposition gives the colors: “Blue-violet rocks, scattered little cubes of grey, cobalt blue, dark Prussian blue, flecks of mauvish crimson, gold, red, ruby, mauve stars, black and white. Dominant colour: Blue violet.” (Messiaen 2002, 118).



Added notes to these triads and seventh chords create acciaccaturas to the triads and sevenths. In a programme note to his second wife Yvonne Loriod's (1924-2010) recording of Albéniz's *Iberia* he writes: "What is the 'acciaccatura'? The 'acciaccatura' is a foreign note sounded [*frappé*] at the same time as the real note that it affects. Several simultaneous acciaccaturas and 'real' notes are possible" (Messiaen 1958).¹⁰ Messiaen goes on to cite Scarlatti, Gasparini, and Albéniz, but also Chopin, Debussy and Ravel should be added to this list of (pre-spectral) composers who use chords in which acciaccaturas that are not added notes, but notes that are not merely functional, but integrated (to different degrees) into their harmonic language.¹¹ With Messiaen's modes, roots can be conceived and sub-posed beneath the surface discourse, as in this example, which also demonstrates the residual tonal function of what Schoenberg calls the "liquidation" of the motive, marked A in ex. 3 (Schoenberg 1967, 58-9).

Ex.3 *Fouillis d'arcs-en-ciel, pour l'Ange qui annonce la fin du Temps (opening)*

¹⁰ See Goehr 1998, 40 fn.7, who comments that "... the acciaccatura technique had a colossal effect on Messiaen's harmony."

¹¹ See Dupré 1925, 22-7, a work that Messiaen cites in Messiaen 2001. Dupré's thought here evolves from a discussion of the spectrum (p. 21), but his concern is with practical fluency for the improviser rather than language.

Rêveur, presque lent
(Sva réelle)

Violoncelle

Accords

f expressif

mf

A

A

A'

A''

A'''

A''''

A''''

The degree to which roots can be perceived is arguably weaker or rather, more positively, multivalent with the other modes. Here for example is mode 3¹ (in bold) in Messiaen's harmonization with triads extracted below:

Ex. 4 Mode 3¹ with triads

The image shows a musical score for four staves. The top staff is a grand staff with a treble and bass clef. The bottom three staves are single-line staves with treble clefs. The music consists of complex chords and intervals, characteristic of Messiaen's style.

The sense in which sub-posed roots (what Messiaen's organ teacher Marcel Dupré calls "sous-entendre" (Dupré 1925, 27)¹² can be sensed in Messiaen's harmony from such triads and the concomitant way the discourse of the music floats over such allusions is a primary spectral quality of the music.¹³ Ascriptions of any kind of subposition are naturally extremely tendentious, as in ex. 11 below, but different 'solutions' are allusively suggested to the ear. That they are sensed more than heard allows Messiaen's harmonic language to be a model of the mystical sublime and the liminal, but crucially this effect of such resonance

¹² Dupré cites as an example the chords that are 6, and then 5 bars before the end of the *Forlane* in Ravel's *Le Tombeau de Couperin*. He could have used other examples from this piece, such as b.1-2, or b. 9-10, to show the way Ravel uses acciaccaturas in chords to imply the root of the chord. In his examples B "sous-entendre" is heard a beat after, but he does not discuss the resolutions of these chords at the end of the piece (E), that are also implicit in the upper parts. This discussion occurs is at the end of section of his treatise in which he deals with the resolution of acciaccaturas as a modulatory technique. Dupré does not use this term; the section is entitled "modulations through symmetrical chords." He then discusses the "resolution of polytonal aggregations" again through acciaccaturas, and draws some interesting and conjectural conclusions that differ from his approach to the Ravel in that he does entertain the prospect of the resolution of the chord. For example, the C9 chord (p. 25) he states has a "natural fundamental" of D because of its acciaccatura resolution, and therefore "belongs" to the tone of G in his hearing (presumably as the dominant - V). Dupré's thought illustrates his own hearing, but it also, I believe, provides an exemplar of how the improviser (such as his student Messiaen) should experiment with such chords, connecting chords with or without recourse to implied resolutions.

¹³ I use this term sub-posed to mean that which is heard underneath through by extension and through a form of imaginative listening that informs understanding. For more on this see Waltham-Smith 2017, 21-3.

within the listener (Nancy 2007) provides a musical and spiritual space of sensing, of searching and even desiring a form of resolution that is continually being deferred. But it is not merely harmony that allows us to understand Messiaen as a spectral composer, but the way in which it forms part of his more global Symbolic order or network of parameters.

Messiaen's first organ work, *Le Banquet celeste* (1928) is remarkable in this respect. It represents around seven minutes of sustained undulatory timbre where the hands do not leave the keyboard. There are no rests and the legato required from the player means that there is no breathing or phrasing but a temporal "continuum" of inner mobility, of stability and instability, and of timbral continuity that marks this work out as proto-spectral (Dufourt 2014f, 160).¹⁴ The extreme *lenteur* of the music enacts a neo-platonic ideal of staticism; the music of God's eternal time contrasted with human, clock-bound progressive time. Messiaen's work can be heard as a distant precursor of Grisey's fascination for "extended time and for continuity," and the implication of a musical language that creates a "type of time" (Grisey 1997); in Grisey's thinking on staticism (which derives from Stockhausen's thinking on time as much as Messiaen's) this provides a form of dilating "zoom" for the "directional" perception of time and the *Gestalt* of a work (Grisey 2008c, 42). Messiaen's mode 2² is encased within a tonal framework and the localized sense of tension and resolution is minimized. The architecture of the work is shaped partly by accretion of voices and timbres, by elision of phrases and by what Messiaen, following Vincent d'Indy, calls "*développement par élimination*." (Messiaen 200, 41)

The internal narrative development of mode 2² within this temporal framework, balancing apparent temporal staticism with registral and timbral evolution allows this work to be understood as spectral, but it is Messiaen's treatment of time (rather than rhythm) that is the spectral novelty. The essentially texturally-flat quality of the music is enriched from within. "Time" here, as Dufourt opines, "is more than a parameter, a variable, or a frame, but it is a constitutive structure" (Dufourt 2014c, 434). The second 'verse' (from b. 12) includes a piquant pedal quasi-doubling (sounding two octaves higher than written and with mutation stops that provide harmonics of fundamental tones)

¹⁴ It could be argued that something similar is found in the opening of Wagner's *Des Ring des Nibelungen* where an E flat major triad is extended for a similar length of time, It could be construed that Wagner's orchestral technique, here and in other places, created a "continuum" of polyphonic timbral/harmonic motivic developments is an ancestor of such spectral thought. It is also of note that in b. 6-7 and 10-11 of *Tristan und Isolde*, the composite sound of an oboe and clarinet 'becoming' a clarinet, is then reversed to create a form of timbral morphing and *Klangfarbenmelodie*. This phenomenon is discussed but not with reference to Wagner in Grisey 2008e, 102 and 103-4. See also Harvey 2001, 120.

of the manuals' part (played by the hands). Similar registrations can be found in Charles Tournemire's *L'Orgue Mystique* (1926-32), but the effect in the Messiaen work on the passing of time is entirely novel. The long notes of the manuals are subdivided by the regularity of the pedals, which then from b. 19 infects the manuals' part, and the limiting of the register becomes a semiotic means of closure. Crucially, despite the regularity of the semiquavers, these notes are not perceived in relationship to a meter; this is not rhythm but a partitioning that belongs to the perceptual category of duration (Grisey 1987, 239-40) and of "rhythmic periodicity" (Grisey 2008a, 29).

When Messiaen revised this piece in 1960, he added a very slow metronome mark (quaver = 52) that I would argue was an attempt by the composer to work against many players' instincts: to make lines, phrases and 'sense' for the listener. But the extreme *lenteur* of the piece is essential for the internal *sui generis* evolution of the work which indexes John 6:56¹⁵ and that attempts to conflate, I would argue, the metaphysical and perceptual by allowing the listener to hear (to a certain extent) the proto-spectralist scaffolding of the construction. In Messiaen's thinking, I would contend, the indwelling of Christ in the communicant that is the subject of the piece is enacted through and in the interior experience or perception of the listener (Grisey 1987, 242; Dufourt 2014c, 387).¹⁶ For the listener, the Symbolic leaks into the Real and vice versa. God's neo-platonic presence leaks into the being of the listener as "anthropocentric" or human-focused, as Grisey puts it (Grisey 1987, 242), and this is reciprocated (ideally) by the experience of a temporal being with God (in the communion) that acts as a *promesse de bonheur* of redemption. Proto-spectral thought through time and mode in Messiaen's religious conceptual world therefore helps enact this leak or conduit between the finite and the infinite.

II Spectral figures

Annex 2 of Chapter 3 in Messiaen's *Traité de Rythme, de Couleur et d'Ornithologie* (TRCO) Tome III provides an example, if one is needed, of Messiaen's interest in non-occidental and magical forms of enchantment (Messiaen 1996, 358). It shows, as John Bramble and other scholars such as Jason A. Josephson-Storm and Tessel Bauduin have amply demonstrated, that the roots of such modernism are in

¹⁵ "He that eateth my flesh, and drinketh my blood, dwelleth in me, and I in him."

¹⁶ While for Grisey the issue of slowness is not really metaphysical but perceptual - slowness is needed to "enter into the sound;" i.e. to be able to hear the spectral structure, the sound needs to be elongated and the temporal flow slowed down, it is precisely this slowing down that in Messiaen, associated with neo-Platonic ideals of staticism and eternity, that allows the listener to participate in the notion of indwelling prescribed in the scriptural text.

“occult symbolisms” as a site not only of the other and the exotic, but as a *locus* for enchantment and mysticism understood as a continuum of the hidden and revealed.¹⁷

The occult might seem a surprising term to enter into the register of discourse on Messiaen. Bramble describes it as a “period term for the heterodox materials deployed by modernists in their negations, contestations, and reformulations of the ‘degenerate’ modern condition.” (Bramble 2015, xv-xvi). Messiaen’s work can be seen as a continuity of this tradition, as a negation of negations and as a refiguring of the Catholic religion in the realm of the public sacred.¹⁸ Messiaen’s interest here in the meaning of numbers, shapes, prime numbers, durations, types of time, the I-Ching, leitmotives and also his *langage communicable* show a fascination with extra-musical and occult meaning (Messiaen 1996, 358). In his discussion of the Yin and Yang he seems to make a ‘note to self’, undated and unconnected to any work, but showing three ascending spectra and a descending one (ex. 5).

Ex. 5 TRCO Tome III



Spectral thought can be understood as having deep roots in modernist-occultist thought in a number of different ways: through its use of musical calculation and the use of computers connecting the natural and technological worlds; its insistence on its freedom and separation from other movements and its ‘special’ quality; its aesthetic of inner transformation akin to self-divination and a form of Surrealist (e)strangeness that becomes an instance of “the marvelous” (Sholl 2007); its insistence on the unification of musical elements (the Symbolic order) and the way in which different elements of music can be reconciled in a new

¹⁷ It is unsurprising then that the word sacrament derives from the Greek μυστήριον or *mystērion* meaning hidden thing, secret or mystery.

¹⁸ See for example in the Messiaen’s reading of Sri Aurobindo and the philosophy of love and self-transcendence in the *Turangalîla–Symphonie* (Bramble 2015, 12).

hybrid, syncretic, eclectic and composite form, and its focus on placing the transformation of sound (sometimes through trance-like static textures or through forms of internal “mobility”) into the listening subject through time and an inner energy derived from the spectrum itself. Understood in this way, some aspects of spectral thought form a type of Gnostic thought that embodies a form of yearning and idealism, a quasi-mystical refiguring and transcendence of the past and refreshment of twentieth-century music to old and new internal problems and possibilities. The way in which this thought is inscribed in certain kinds of signs is also a form of transformation of occultist thought, and Messiaen’s sacred turn is detectable in his employment of proto-spectralist thought in his religious-modernist project.

I have already indicated how spectralism can function in the continuum of Messiaen’s thought, but it shows up in certain kinds of symbolism. For example, spectral thought can often be discerned in certain types of gesture, such as the ‘cadential’ rising chords at the end of Messiaen’s song *L’épouse* (*Poèmes pour Mi*) (1936):

Ex. 6 *Poèmes pour Mi: L’épouse* (end)
 Au mouvement

or the twelve-notes that saturate registral space and illustrate rocks like a stone Stegosaurus in his *Catalogue d’Oiseaux* (1956-8):

Ex. 7 *Le Merle de Roche* (*Catalogue d’Oiseaux*) Book 6, 6/3/2

(*Stégosaure de pierre*)
 Bien modéré (♩ = 80)

In both these examples, the bass acts like a subposed root or the foundation for a spectrum of sound. These figures have a magical, transcendental quality premised on their spectralist and liminal impulses. Descending figures such as that illustrating the Fall of God (Christ) to Earth in *Le Verbe* and *Dieu parmi nous* (*La Nativité du Seigneur*) (1935), pieces IV and IX are common. A comparison of these two moments (that express a similar theological idea) shows that the chord in piece IV is much less inharmonic (more of subposed root in fact) than the sound that concludes piece IX.

Ex. 8 Chord from *Le Verbe* and *Dieu parmi nous* (opening)

IV <i>Le Verbe</i> final chord	IX <i>Dieu parmi nous</i> opening Très modéré Lent et puissant
-----------------------------------	---

In piece IX, the notes become longer as the pedal descends into the infrasound region of the organ (the last three notes in the example) where the listener can hear the “beating” within the sound (Grisey 2008d, 49). This use of infrasound as a structural component of Messiaen’s thought is a profoundly important structural feature of his music unrecognized in Messiaen scholarship.¹⁹ The C2 at 32-foot pitch (16.35 hz) acts as an inharmonic root of the chord that exemplifies what Dufourt identifies as “a transitional regime” that shows the fluctuation between “harmony and timbre, between complexity of sound and noise, between register and noise, between harmonicity and inharmonicity, between timbre and saturation” (Dufourt 2014a, 27). The dichotomy of both sound and noise here can be interpreted as an image of the mystical divine and human natures of Christ. But this note (the deepest note of the organ) expresses a theological image of triune ‘touching’: God’s presence in Christ and his kenosis into the sensorium is made present for the believer and the world. Spectral thought therefore acts as a conduit for the leak between the Symbolic and the Real.

The spectral quality of this fall is linked intrinsically to the timbre and resonance of large ecclesiastical buildings, and it is the way Messiaen’s music

¹⁹ For a recent discussions of infrasound, see Jasen 2016.

engages not merely what is heard but what is sensed that constitutes spectral and mystical aspects of his music. It is for this reason that it can be asserted that even when Messiaen is not writing music that explicitly addresses many of the catechistic elements of his faith, through the spectrum, he addresses the way in which man and God can open themselves and call to each other.

One of the most profoundly spectral pieces in this realm therefore is Messiaen's *Mode de valeurs et d'intensités* (1950) which, although seemingly static, in fact plays with interior qualities of continual "mobility." In his analysis of fig. 13 of *Le Sacre du Printemps*, Messiaen describes this passage as having what he calls an "*ordre quantitative*" of long and short durations, an "*ordre dynamique*" of intensities and densities and an "*ordre phonétique*" of timbres and attacks (Messiaen 1995, 101), and that is discussed in greater taxonomic detail in Messiaen 1994, 44-7. His commentary in *TRCO I* presents a phenomenological description of music (and a blueprint for the European post-1950s avant-garde) that defers from merely harmonic considerations. In an article written in 1966, Messiaen comments that the "augmentation or diminution of the number of harmonics (that comprise timbre) is in addition to "durations, sounds, intensities, attacks and densities" (Messiaen 1966, 39). It is precisely this form of avant-garde thought that is extended in *Mode de Valeurs* where, as Messiaen writes that:

durations, intensities, attacks are put on the same level as the sounds: the ensemble of modes [Messiaen uses this term to indicate the different organizations of musical paradigms] gives colours of durations and intensities... the influence of register on the quantitative, phonetic and dynamic states of sound...constitute the possibility of new variations of colours (Messiaen 1968).

This subjugation of categories to the 'one' supervenient category of sound-color creates "a morphology of a process from its dynamic" (Dufourt 2014c, 386) or what Grisey has called "the same music seen through different systems of expansion and compression" (Grisey 2008j, 351).

The effect in *Mode de valeurs* is not merely pointillist but non-western. In spectralese, the piece signifies a form of "elasticity, of viscosity (speed of deformation), of a capillary nature, of compression, and friction [*frottement*]" that provides a continual "change of stability" in which the "types of envelopes" function as a form of "filter" [*filtrage*] (Dufourt 2014c, 387-88) and that "designate the transition of attacks ... in a rapport with time" (Dufourt 2014c, 396). This then creates a model for the way in which "energy {is} distributed in the spectrum" (Dufourt 2014c, 389) that entails "functional; indivisibility" of musical elements (Dufourt 2014b, 343) However, it could be conjectured that, despite Grisey's "reproaches to Messiaen, Xenakis and to the neo-serialism of the Darmstadt

school” (Dufourt 2014b, 353) that the “imprint left by Messiaen” (Dufourt 2014e, 376) in this work provides the clay to build his later musical house through his investigations into the “information present in the attack of sound, the relative information of the spectral envelope and its evolution through time” (Dufourt 2014b, 359). Such a reading from the future must be balanced with a reading from the past: Messiaen here dramatizes what is heard in a Balinese gamelan orchestra (Rößler 1986: 84) where higher (smaller) instruments have shorter values, or indeed in the coalescing of timbre, duration and pitch in Cage’s *Sonatas and Interludes* for Prepared Piano (1946-8) (see Rößler 1986, 100; McNulty 2007, 72-7).

Ex. 9 *Mode de valeurs et d’intensités* b. 11-13

The image shows a musical score for piano, measures 11-13 of 'Mode de valeurs et d'intensités'. It consists of three staves: a treble clef staff, a bass clef staff, and a grand staff (treble and bass clefs). The music is in 3/4 time and features complex rhythmic patterns, including eighth and sixteenth notes, and rests. Dynamic markings include *ppp*, *f*, *pp*, *p*, *mf*, *ff*, and *fff*. There are also markings for *8va* (octave up) and *8va* (octave down). The score is written in a key signature of one flat (B-flat major or D minor).

Messiaen then shows in *TRCO* III how he adapted this idea in *Cantéyodjayâ*, *la Chouette hulotte* (*Catalogue d’Oiseaux*) and *St François d’Assise* tableau 7 (Messiaen 1996, 133-46), but it is an idea also expressed in *Couleurs de la Cité céleste* (1963) and at the opening of *La Transfiguration de Notre-Seigneur Jésus-Christ* (1965-9), where it is enunciated purely on percussion instruments and the sense of duration(s) confuses the human clock-bound mind.

The gestures of *Mode de valeurs* also mark the kind of “emancipation of timbre” (Dufourt 2014b, 370) that is connected with rhythm also emancipated from meter in the Strophes of *Chronochromie* (1958) so that these elements becomes “constitutive” of time (Dufourt 2014b, 373-4). The idea of a melody and a rhythm of timbres is implicit in Messiaen’s use of interversions in *Île de feu* 2 which he connects to the Papouasie’s “organization of the magic of the world, their initiations, their secret societies [containing terrible violence [which] seduced me,” (Messiaen 1996, 165) and to the magical interaction of the melodies and Hindu rhythms as timbre that heterophonically intermingle, along with the dodecaphonic language, in his *Pièce en Trio II* (*Livre d’Orgue*) (1951).

Messiaen makes it clear with regard to this piece that “the listeners *must* hear the rhythms, the transformations of the *personnages rythmiques* and the polyphony.” He then underlines this: “Even if one finds the music of this piece long, ugly [*laide*] and useless, it constitutes one of my greatest *rhythmic*

victories" (Messiaen 1996, 204). In other words, to extend Messiaen's notion of the actorial quality of *personnages rythmiques* (Messiaen 1995, 112-13) the dodecaphonic aspect becomes a form of "neutralization" (Grisey 2000, 1) or a background organization; the timbral density and intensity also remains constant as each voice has one single part, and each voice has a unified timbre consisting of composite voices.

Like *Le Banquet céleste* above, this work explores a flat texture (but differently) through the rhythmic and timbral partitioning of time. The length of the piece (around eight and-a-half minutes) provides a form of meditation that focuses the listeners thought not on harmony but on register, timbre and counterpoint without meter. While the earlier piece certainly shows Grisey's ideal of the "hypnotic power of slowness" (Grisey 2000, 2) both *Mode de valeurs* and *Pièce en Trio II* extend the flat quality of spectralism but with greater intensity and density of material. The rhythms are only aurally well-differentiated in the organ pieces by timbre. The counterpoint provides no metrical differentiation and the degree of textural fluctuation is seemingly minimized for the listener by the essential monotony of the works. But this outwardly anodyne or "neutral sonic archetypes" belie an interior world of movement that explores the "thresholds between rhythms and durations" and that embodies an "organic" approach to form (Grisey 2000, 3). These features imply that time is both "stretched" and "contracted" (Grisey 2000, 2) between "fusion and continuity" and "diffraction and discontinuity" (Grisey 2000: 3), and it replaces (*pace* Anderson) the elision of the "distinction between harmony and timbre" (Anderson 2000, 8) with the difference between counterpoint and timbre. These features make such works ancestors to spectralism.²⁰

These works play with perception, an important feature of music for Grisey who sounds a mandarin tone when he states that "*The difference or absence of difference qualifies all perception*" (Grisey 2008a, 29, composer's italics). This is especially the case for what Messiaen calls "the law of the rapport between attack and duration" (Messiaen 1995, 101) heard most strikingly at the opening of *Les Mains de l'Abîme (Livre d'Orgue)*.²¹ The ability to perceive the division of very long durations related to very short durations such as in the opening of Murail's *Désintégrations* (1982) also allows timbre to be heard in terms of perceptually unqualifiable duration and this is precisely what happens both in *Les Mains de l'Abîme* and arguably (in a different way) in *Mode de Valeurs*, where the value of a

²⁰ There are no extant sketches for this work, but like many of Messiaen's musical jigsaws it can easily be imagined the labor expended to work out how the pieces would fit together so that the timbres, free of any meter, can be heard as rhythms.

²¹ See my discussion of this in the chapter on Florentz in the present volume.

rhythmic tactus becomes minimized if not irrelevant (see Grisey 1987, 240 and 2008c, 43). In such music the perception of the analytical reality or the “homogeneity of the structure” is both on the surface of the piece and yet paradoxically difficult to grasp in its entirety (Grisey 2008c: 40).

Here is one final example of intimate link between melody and timbre from page 50 of *Couleurs de la Cité celeste* (1963):

Ex. 10: *Couleurs de la Cité celeste* page 50 (reduced)

The image shows a reduced musical score for page 50 of *Couleurs de la Cité celeste*. The score is for measures 69-72. At the top, it is marked "Un peu vif (♩ = 120)". The instruments and their parts are:

- Clar. 1-3:** Part 1, marked *f*.
- Pte. Trp. 2 Cors:** Part 2, marked *mf*.
- Trp. 1-3:** Part 3, marked *pp*.
- Trbn 1-3 B. Trb.:** Part 4, marked *pp*.
- Trb. basso:** Part 5, marked *pp*.
- Piano:** Part 6, marked *ff*. It features a complex rhythmic pattern with time signatures of 3/8, 3/16, 3/8, and 3/16. There are markings for "Ced." and "8va" (octave).
- Xylo. Xylorim. Mar.:** Part 7, marked *p* and *pp*.
- Cenc. Cloches:** Part 8, marked *p*.
- Gongs:** Part 9, marked *pp*.

The score includes various dynamic markings and articulation symbols, and is divided into two systems of staves.

In a note at the bottom that page of the score Messiaen describes the effect of the passage:

One must first of all hear the “Alleluia for the dedication of a church.” All the instruments that play this (on the same level of level of intensity) must spout up [*jailir*] their harmonics *spontaneously* from this. One must also hear the Alleluias for the eighth Sunday after Pentecost on the piano (and cencerros). ...The ensemble must give the impression of the abundant

colors [*des couleurs foisonnantes*] of a sunlit stained-glass window (Messiaen 1966: 50).

Messiaen's notion of *couleurs foisonnantes* refers to the irradiation of an interior quality of the texture that centripetally orientates itself around a 'deformed' A-major plainchant melody and how it is diffused and saturated with other colors.

The idea of *couleurs foisonnantes* fulfills what Dufourt has called an "inharmonic energy" (Dufourt 2014c, 406) associated with higher partials and of the "different forms of distribution of energy in the determination of timbre when it is superimposed" (Dufourt 2014c, 419), but what Messiaen is creating here could be called more properly an inharmonic ecology.²² The texture has a phenomenological quality in which there is a hierarchy of inharmonicity. Understood this way, Messiaen's work is given a slightly different nuance from the kind of "desubjectification" or "blinding" quality (Van Maas 2014, 93) associated with the totalizing effect of the ideal of *éblouissement* (sound-color dazzlement) mentioned in the *Première note de l'Auteur* of this work.

This section of the work entails a "doctrine of a continuing dynamic" rather than merely an "observation on the spectrum" as Dufourt points out (Dufourt 2014c, 414), an idea commensurate with Messiaen's ideal of form as an evolution of color in the *Première note de l'Auteur* that acts as a revalorization of mysticism. Color signifies an internal mobility that not only reconfigures time as phenomenological, but as I have shown, it functions as a form of leakage, making connections between the Symbolic and Imaginary registers and the Real. Messiaen configures the listening experience as a psychoacoustic and psycho-visual, synaesthetic [*l'audition-intérieur*] (Messiaen 1988, 5-9) and even visually-diegetic paradigm of "transitions, saturation [and] of crossing of thresholds" that reveals the *jouissance* of this "dynamic morphology" (Dufourt 2014c, 414-415).²³ This effect is placed into the listener to give a semblance of what Messiaen's hears and sees while remaining in "default" of the divine.

III Birdsong: Spectralism *ad gloriam Dei*

The third type of spectralism that I wish to discuss opposes harmonic 'groundedness'. As a broad generalization, certain kinds of circular and imminent systems (such as modes and rhythms) are used in Messiaen's music as seemingly hermetic systems of discourse. These systems then have certain forms

²² On ecological listening (from J.J. Gibson and his theory of affordances) and spectralism see Nonken 2014, 94-8.

²³ On "*l'audition-intérieur*," see Messiaen 1966, 40.

of narrative development that recreate ideals of tension and release familiar from tonal music, within different musical paradigms. Messiaen can create different forms of density and intensity of information, increasing the number of voices, the speed of material, using changes of register and timbre, or through superimposition and juxtaposition of material. All of these techniques apply to Messiaen's use of birdsong, but what interests me from a spectral purview is the way in which his birdsong (dissonant and colorful) multivalently implies subposed roots in the manner described above and the way Messiaen can dilate the spectrum to imply and yet defer from the presence of such subposed 'roots'.²⁴

Messiaen's birdsong provides a particular and personal image of God. In his music, birds become a form of arborescent iconography; their presence forms a continuation of Messiaen's earlier ideal of mysticism - an ecological mysticism - that which is hidden and revealed while also creating another form of symbolic leakage as described above. Birds are linked to a disembodied improvisation in time, color and space and therefore to supra-human freedom. They are also linked to place, to times of day, to the natural world. Birdsong creates what Grisey calls a "relative notion of time" in which "it is impossible from our constant of time to perceive their discourse." This idea of "another dimension of discourse [which] obliges us to hear the dynamic of forms differently" was precious to Grisey (Grisey 2008i, 245). They also require an altered sense of consciousness to tune into their inharmonic discourse on the edge of hearing.

Birds represent an intermedial connection to the divine that can be sensed, that is intensely reasoned by the composer himself as studies by a number of scholars have shown (Messiaen 1958, 6; Rößler 1986, 31-3; Messiaen 1988, 9-12; Fallon 2007; Chadwick and Hill 2018). They act as harbingers of the beyond (that remains unfulfilled); they therefore form an *avain sublime* in Messiaen's music. Birds not only sing too high and too fast (faster than most instrumentalists can play), but they have a different metabolic rate or existence in time: they are short lived, some can move too fast for the naked eye to comprehend; they have the natural gift of flight, they are untouchable and their music appears disinterested in the world or as Messiaen puts it "they improvise for pleasure" (Messiaen 1959, 1093).

Most importantly, we co-exist with them as though they hold no great mystery. With their supra-human skills; their intangibility; their incomparable

²⁴ For a recent study of Messiaen birdsong see Chadwick and Hill 2018. These authors wisely refrain from pitch-class set analysis. The perception of flux in such music is not captured well by this kind of work which does precisely the opposite of what Messiaen is trying to do in this music. It replaces one kind of libidinal economy (unconscious desires) for another form of thought: mysticism and the eschatological desire and liminal quality of the music are flattened by taxonomic ideals and inner coherence.

and incomprehensible language; and their parallel existence, birds provide a model for our understanding of God and indeed music itself. For Messiaen, birds are not only considered as the voice of God in nature, but through their capacity to improvise their songs they become visible signs of an invisible reality. They become harbingers of grace and freedom, which through their chimerical nature, tell us of a momentary and euphoric intimation of glory that may be perceived (perhaps by the agency of the Spirit as the theologian Jeremy Begbie has argued as a realization of the divine (Begbie 1997, 693-96).

Birdsong provides Messiaen with the means of creating some of the most colorful and dissonant music to the glory of God. Birds are natural spectralists; they sing in microintervals (Grisey 1997; Grisey 2000, 2), without meter and with a seemingly endless and voluble range of variations. Paradoxically, while Messiaen's birdsong is one of his most personal utterances (it represents a particularly hearing and transcription of birdsong), his most colorful music and also because of its outward similarity quality, the similarity of its rhythms and textures also arguably his most anodyne and undifferentiated. Such a paradox is at the heart of the modernism of this material.

This similarity sometimes provides a spectral "continuum" as in the marvelous ornithological improvisations in the *Epôde of Chronochromie* (1959-60). Here they provide a dramatic example of "sound-color dazzlement" (Messiaen 1978). Messiaen thinks of this ideal in terms of the fracturing of light through stained-glass windows, an image that tallies with the fracturing of the spectrum as color. But if the light of God metaphorically comes through this window into the deepest part of human being, this fractured spectrum also calls for a response in kind, a following of the light upwards and outwards. Birdsong therefore provides a variegated prolongation of this fracturing: understood as conduit or leak between the Symbolic and the Real, it connects those who look from below (metaphorically) towards God who is looking down from above.

The fracturing effect is often created by the speed at which the birdsong occurs. Here is the first Garden Warbler solo, the titular character in Messiaen's *La Fauvette des jardins* (1972) [for more on these solos and this piece see Chadwick 2013]. Speed partly aids and partly disguises the spectral quality of this music; the types of intervals Messiaen uses in close succession give the merest suggestion not of tonality but a play of absent bass notes or perhaps more properly of an absent lower portion of the spectrum. This example below, like the longer bird volleys in Messiaen's piano music, illustrates not merely as Messiaen states that "every note is provided with a chord, not a classified chord but a complex of sounds intended to give the timbre of the note" (Messiaen 1986, 102) but that "the harmonic structure of a sound" i.e. birdsong heard as an inherently unstable material, "can be prolonged by its timbre" (Dufourt 2014c,

385). Tristan Murail's comment on Messiaen's role in his thinking supports this interpretation. He states: "You didn't need to think about music in terms of accompanied melody or counterpoint ... [but rather] the importance given to timbre, as a way of structuring the form" (Murail 2003 cited in Nonken 2014, 71).

The speed of Messiaen's birdsong allows the listener to hear the "continuum of sound [as] *perceptible time* and not *chronometric time*" (Grisey 2008a, 31, composer's italics) as a succession of timbres often more than as harmonies, so that the "psychophysiology" is determined by a succession of timbres, subtle accents (caused by the plainchantesque groupings of notes) and harmonies (Dufourt 2014c, 385-86), but also the way instants of perceptible time, highlighted perhaps by register, agogic accent or timbre in this music, resonate in the mind as "transfigurative instants where the sound fills us with ecstasy" (Grisey 2008a, 33). Here is Messiaen's music with tendentious sub-posed roots (implying unheard spectral roots) superimposed beneath:

Ex. 11: *La Fauvette des jardins*, p. 5

Fauvette des jardins
 Un peu vif (♩ = 132)

Ped. (*bien prononcé, clair et mélodique*) *Ped.* *

Ped. *Ped.* * *Ped.*

Ped. *Ped.* *Ped.* *

It is not merely that the added-note chords in b. 2 and 8 of ex. 11 retroactively condition or anchor the previous music but that the seconds, sevenths and ninths that dominate the grammar of Messiaen's birdsong harmonizations provide a transparent sense of shifting partial (higher) spectra or of absent (lower) spectra. At speed, the reality of ex. 11 enables an aural illusion of continuous micro-variational spectral narrative. In spectralese, one cannot hear but only sense sum or difference tones. The ideal of sensing these spectra despite *la vitesse*, information density and intensity, and timbral excess is essential both the eschatological fantasy of the material and as an exemplar of the avian sublime. Birdsong charms the ear through the illusion of fleeting but absent focal points. This is precisely what occurs in Grisey's *Partiels*, completed only three years after *La Fauvette* where the initial E (having been heard and memorized) becomes redundant; it does not need to be repeated. This passage progressively does

away with any sense of groundedness to facilitate the liminal quality of this music.²⁵

In his *Poetics of Music*, Stravinsky observes that "...just as the eye completes the lines of a drawing which the painter has knowingly left incomplete, just so the ear may be called upon to complete a chord and cooperate in its resolution" (Stravinsky 1970, 45 and 47). With Messiaen's chords it is not merely that added notes irradiate and irritate the triad, but that there is a productive interdependence between the essential and inessential, so that such distinctions are rendered invalid. Like the shards of metal that form the figures of Antony Gormley's *domain field* sculptures (2003), the heart of the chord simultaneously radiate outwards to an unknown point and radiates inwards towards an invisible presence.²⁶

Fig. 1: Antony Gormley *domain field* sculpture



In Gormley's figures the essence of the person is both enshrined and released; yet there is at once no beginning or center of the energy, and no visible end to their

²⁵ See also the birdsong section of Grisey's *Partiels* from fig. 30-40.

²⁶ This image from *Domain Fields* is used by courtesy of the artist and Jay Jopling/White Cube.

invisible presence. Though there are many figures in Gormley's *domain field*, the unique quality of each person is retained in each figure. They are not atrophied, neither is their mortality diminished. Indeed, like the absence of Christ after the resurrection and his resonance in human spirituality, their absence only enhances their power. The play of absences in Messiaen's birdsong, in a spectralist sense, likewise increases their power of entrainment, their ability to promote what Rudolf Otto has called *mysterium tremendum et fascinans*.²⁷ Birdsong as numinous beings exemplifies the leak in Messiaen's symbolic register where its pure givenness and saturation provides both a form of symbolic iconographical imagery, and a theological, mystical and spectral lens through which we come to see Messiaen's image of God and through which God attempts to see us (Sholl 2011 and 2014).

IV Narrative and Meaning

"As I grew older, I grew increasingly nearer to timbre..." (Rößler 1986, 108 [interview with Messiaen, April 23, 1979])

In the final part of this study, I want to address Messiaen's opera *St François d'Assise* (1975-83) and show that spectralism acts as a diegesis of meaning, as an agency of the work as "an immense act of faith in God" (Messiaen 1988, 18) though what Messiaen describes as "thousands of chords and combinations of timbre with constant changes of Colour" (Messiaen 1988, 17). The opera tells the story of human transformation from man (tableaux 1-2), to saint (through the meeting with a leper in tableaux 3), to his visions of glory (tableau 5), reception of the stigmata (tableau 7) and his death and the promise of glory to those who remain (tableau 8). It traverses a trajectory from the Symbolic, to the Imaginary and finally the Real where the impossible is made seemingly possible (Zupančič 2008, 51).

The opera is full of spectral gestures such as the *son-pédales*, bass notes that provide a foundation for higher resonances like those used in *Couleurs* (Anderson 2000, 10-11) on trombones/tubas in tableau 1 fig. 43-46 that, together with chords of contracted resonance, subtly inform the listener of the arduousness of the spiritual journey in Francis's parable to Br. Leon. *Son-pédales* are also used in fig. 67-78 of tableau 2 where Francis expresses his fear of encountering a Leper and his desire to do so.²⁸ In *Couleurs* they are associated

²⁷ See Otto, 1923. Schloesser notes that this experience "overwhelms and repels us even as it attracts us." See Schloesser 2014, 12.

²⁸ This idea is already heard in Messiaen's *Mode de valeurs et d'intensités* b. 13-15 (see ex. 9 above).

with the abyss a biblical image from Revelation, a spiritual image of the state of the fallen humanity that requires a raising up (an image borrowed from the theologian Ernest Hello's writings);²⁹ this spectral device therefore comes to tell us diegetically about the barometer of Francis's spiritual state on his journey to salvation.

The use of inharmonic noise is an important spectral diegetic element in the opera. In tableaux 2 fig. 63-4 Francis sings: "... and the song of the wind which changes its tone in each tree" and the orchestra produces an onomatopoeia of wind. There is the noise of Christ (chorus) moving in the Leper's soul at fig. 42, 51, 53, 57, 75, 79 and 83 in tableaux 3 where increasing timbral density and inharmonicity effects the growing power of Christ, a tension that is then dramatically timbrally 'released' in the embrace of the leper in radiant C major (with added notes) at fig. 90 and at the end of act 1.

There is also the chord that already symbolizes the angel's knocking at the door in tableau 1 fig. 78, heard again with the angel knocking at fig. 39, 86 of tableau 4 and then repeated intermittently tableau 5 from Fig. 101- 110 (inclusive) to presence of Christ that knocks at the soul awaiting entry. This urgency here acts as a diegesis of an unconscious desire for the Real to breakthrough into the Symbolic, something it does through this spectral gesture in the reception of the stigmata in the chorus's dissonant stabbing chords at fig. 54 in tableau 7. Spectral thought connects the fear of the leper in tableau 2 (who will draw out Francis's saintliness in tableau 3) with and the marks on his body and the pain of receiving Christ's marks on Francis's body.

Spectral music acts as a diegesis of the mystical as symbolized not just by the angel, but by the potential of what the angel will do for Francis in what Messiaen calls the "chord of the total chromatic (Messiaen 2002, 181-90) at fig 33 of tableau 4; the same chords are used at fig. 134 after the Angel sings; "Don't ask me my name" – the intercession remains liminal and Francis remains "in default" of redemption. Spectralism here acts as diegetic image not only of what is present but cannot be touched, but of the transformative power of God's grace touching that which desires to receive it within Francis (Derrida 2005, 100; Nancy 2013, 3). This seemingly impossible touch (excavating and making present the Real) is enabled by spectralism.

Spectralism also acts as diegesis for the audience and for Br Bernard through this type of chord repeated in tableau 5 at fig. 34 on "light" [*lumière*], and at fig. 38 the word "delights" [*délices*] in: "You are for the saints the true light filled with delights" sung by St Francis. Spectral thought acts as a mystical

²⁹ In the *Livre d'Orgue* Messiaen ideal of the abyss is linked to the Romanche Gorge in Oisans (France).

conduit (a form of word-painting in fact) for the audience, as a leak between the Symbolic and the Real (the beyond). The “chord of the total chromatic” is used at fig. 76 of tableau 5 when the Angel sings: “know the joy of happiness by the sweetness of color and melody.” It becomes an example of the way in which inharmonicity is added to a chord in the way that can be seen in Messiaen’s improvisation on *Puer natus* discussed near the start of this chapter. This kind of added inharmonicity can be clearly seen at Fig. 95 tableau 5 in the chords that signal Francis’s transformation, and then in tableaux 6 when Francis sings “search the Kingdom of justice and the rest will be given to us by excess,” on the words “*Par surcroit*” at 17 after fig. 136:

Ex. 12: *St François d’Assise* tableau 6, 17 after fig. 136:

Lent ($\text{♩} = 52$)

par sur - croit

ppp

Hrb., Clar.
Bsns., 1 Trp.
6 Cors
Cordes

3 Piccs., 4 Fl.
3 Tromb., 1 Tuba
Crotales, Glock.
Vibra

(court)

*

Finally, birdsong is used throughout the opera as the harbinger of the Symbolic desire to attain the Real. It is present most potently in the avian sublime created by Messiaen’s *Hors tempo* device (birds flying free of the conductor’s control) in tableau 6 at fig. 28, 72, 109, 118-124 (inclusive). The technique or rather the kinaesthetic spectral organization of adding chords to chords is even clearer in the *Grand Concert d’Oiseaux* of tableau 6 fig. 118-124, especially just before fig. 120 in the vocal score in which piano 2 shows the strong A major mode 3 (redolent of the Angel’s music in tableaux 3). This provides a different form of centering on A major than that shown in ex. 10 above. The violin line as a reminder of the ondes martenot angel’s lyre in tableau 5 fig. 87, while piano 1 creates an avian spectral halo.

Ex. 13 *St François d’Assise* tableau 6, 2 before fig. 120

The image shows a musical score for three instruments: Violon, Piano 1, and Piano 2. The Violon part is in 2/16 time, marked *mf*, and features complex rhythms including 2+3/32 and 3+2+3/32. The Piano 1 part is marked *f*. The Piano 2 part is marked *f* and *mf*. The score includes dynamic markings like *ff* and *f*, and a measure number 120.

This moment then in effect provides a diegesis of the angel's (as God's agent) prognosis of the ineffable breaking into Francis and the leper that is played out in the opera's conclusion where a long birdsong refrains tells of the coverage of God's presence in all times and places as the liminal residue of Francis's life diegetically offered for the world that remains.

Conclusion

This study has shown that the idealized consistency of Messiaen's language coalesces around the ideal of color and that this provides for a leak or conduit between the Symbolic and Imaginary registers of his music and the Real. Spectralism in Messiaen is a foundational discourse of the mystical and the ecstatic, but it also forms a connection with the listener's sensorium allowing the limit or liminal experience of the sacred to be made tangible. By exposing this intangible, spectralism also acts to expose the feeling of the absent Absolute and human desire to call God to presence.

This is one of the most powerful ways in which the music of the *école spectrale* acts as a critique of Messiaen's thought. The religious content is not so much properly evacuated in favor of the secular sacred but integrated into the internal fabric of this music, assumed within it as latent potential. This should not be understood as withholding or weakening but as a form of entelechy that resonates a musical spirituality in which apparent finitude is enabled to imply and to approach and possibly to touch (without touching) the infinite (Nancy 2013, 3).

This spirituality is rooted in a profoundly sensual desire to touch the listener (and God) through spectralism, to make the listener aware of themselves listening and the way in which they listen, to hear the inception and resonance of

this timbre in the ear. It is properly speaking a point of ontological opening and of addressing within the listener to that which exceeds mere signification (Nancy 2013, 12-13).

Spectralism can therefore be understood not merely as a technique or as an effect but as an opening and an invitation. With this invitation comes risk, the risk of reasoning with the event of Christianity that cannot be reasoned with and a wager on the ability of the finite to imply the infinite. Spectralism therefore articulates a dehiscence (a flowering within the inner ear) and a point of contingency before sense; it offers an ontological tu(r)ning towards an awareness of a liminal experience, towards that which remains tangibly inaccessible, unrepresentable or sublime and overwhelming for the imagination. Messiaen provides this tu(r)ning, this legacy to the *école spectrale*, and thus in turn this risk is offered to and inhabited by those who listen.

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