

CHAPTER 3. DEFINITION OF *MUSIQUE COLORÉE*

Although it may seem plausible that any type of music would have evoked color for Messiaen, such was not the case. Messiaen often spoke of how, for him, the music of Debussy, Wagner, Moussorgsky, Stravinsky, Chopin, and Mozart evoked color.¹ However, only some of Bach's music evoked color; further, Schoenberg's music was "obstinately gray."² Discussing his own music, Messiaen described colorations only of certain types of music, suggesting that certain key features were necessary for the evocation of color. The term *musique colorée* refers to passages within Messiaen's works in which musical features enable the corresponding colors to emerge fully. The present chapter explains nine identifying features of *musique colorée*.

Features of *musique colorée*

1. *Texture is in block-chord form.* Messiaen's synesthesia was stimulated by chords. In his writings, he provided colorations only for harmonies in block-chord form. Since Messiaen never described colors of individual pitches, arpeggiated chords, or chords whose constituent pitches are not heard simultaneously, one may assume that block-chord texture is essential for the evocation of color.

2. *Chords are classifiable.* Passages of *musique colorée* emphasize chordal types that are classifiable according to Messiaen's theories. These sonorities comprise modal

1. Olivier Messiaen, *Musique et couleur: nouveau entretiens avec Claude Samuel* (Paris: Pierre Belfond, 1986), 66–67.

2. "In Bach there are colored spots, but not everywhere. He has two styles, the fugal, very tonal one and then the style of the chorales and the very poignant parts of the Passions, which is chromatic and of a very different nature." Almut Rössler, *Contributions to the Spiritual World of Olivier Messiaen: With Original Texts by the Composer*, trans. Barbara Dagg, Nancy Poland, and Timothy Tikker (Duisburg: Gilles und Francke, 1986), 77. "La couleur de Kandinsky peut être violente alors que la musique de Schönberg est obstinément grise." Messiaen, *Musique et couleur*, 49.

chords, special chords, and tonal chords. A modal chord may be either a part of a “modal passage” (a series of chords all in the same mode) or intermixed with other chordal types.

3. *Tempo is slow; durations are not short.* The tempo must be slow enough and the durations long enough to allow the listener (i.e., Messiaen) enough time to recognize and fully appreciate the harmonic colorations.³

4. *Music is not mimetic.* Although *musique colorée* is often found in programmatic works, it does not occur in the imitation of extra-musical ideas, in particular the musical rendering of birdsong. Messiaen sometimes harmonized birdsong with color chords, but I would not classify such music as *musique colorée*, as the very quick durations in Messiaen’s birdsong harmonizations would have been much too short to allow Messiaen time to appreciate fully the harmonic colorations.

5. *Music is in middle register.* For Messiaen, register affected shading. Music in high registers evoked pale colorations, while music in low registers evoked dark colorations.⁴ A given chord consistently evoked the same coloration; transposed an octave higher it evoked the same coloration but with a lighter shading, while transposed an octave lower it evoked the same coloration, albeit with a darker shading.⁵ Judging from

3. The notion that a stimulus must be of a certain duration in order to evoke a synesthetic response is supported by the research of neurologists Vilyanur Ramachandran and Edward Hubbard, who studied the perceptions of chromatic-graphemic synesthetes. While presenting graphemic stimuli at various speeds, they found that their subjects experienced a synesthetic response when durations were 0.25 seconds or longer. When durations were between 0.1 and 0.2 seconds, the graphemes could still be identified, but there was no synesthetic response. At durations shorter than 0.1 seconds, the stimuli could not be identified, nor was there a synesthetic response. Vilyanur Ramachandran and Edward Hubbard, “Psychophysical investigations into the neural basis of synaesthesia,” *Proceedings of the Royal Society of London (Series B)* 268/1470 (2001), 982.

4. After surveying the reports of numerous color-music synesthetes, Lawrence Marks concluded that the correspondence between register and shading is generally consistent. He also found a correspondence between register and the size of the photism, higher pitches evoking larger photisms. Dynamics and tempo likewise produced similar responses, loud music evoking larger and brighter photisms, and fast music evoking sharper, more angular photisms. Lawrence E. Marks, “On Colored-Hearing Synesthesia: Cross-Modal Translations of Sensory Dimensions,” *Psychological Bulletin* 82/3 (May 1975), 315, 318.

5. Olivier Messiaen, *Conférence de Kyoto* (Paris: Alphonse Leduc, 1988), 6.

Messiaen's descriptions, all pitches below D3 were virtually black; all pitches above E6 were so pale as to be nearly white.⁶ *Musique colorée* occupies the middle register, where the harmonic colorations are neither too dark nor too light, and are the most distinct.

6. *Voice leading is smooth.* Within a harmonic succession, each chord's voicing tends to cover the same general span. From chord to chord, individual voices tend to move in similar motion; outer voices generally do not leap. The register-shading correspondence in Messiaen's synesthesia seems to account for the general registral consistency within *musique colorée*.

7. *Meter is irregular.* Although a constantly changing meter is typical of Messiaen's style, it may have been vital for the evocation of color. Some synesthetes report that meter can have an effect on synesthetic perception. My subject AF, a composer with color-music synesthesia, explained her preference for changing meter:

Vierhebigkeit [the tendency for music to fall into four-bar phrases] and any type of regularity makes one color more prominent than the other. An example: Mozart's music is clearly measured and thus I start hearing the downbeats only—and thus the colors of the downbeats become more prominent—and thus the picture loses its interest. If in eight measures every downbeat is a D tonic or an F mediant all the beautiful progressions in the middle will go unnoticed because of my hopelessly classical education.

The rhythm in my music changes constantly not only because I am Bulgarian (and permanently changing rhythms are one of the characteristics of our folk music), but mostly because the irregularity of the patterns keeps my senses and interest awake.⁷

Thus, it seems that for certain synesthetes metric regularity can highlight certain colorations and suppress others. Messiaen spoke of his preference for ametric music—what he referred to as “rhythmic music”:

6. Physiologist Otto Ortmann noticed a similar phenomena while studying the perceptions of his subject D, an adolescent girl with color-music synesthesia. For D, pitches below F1 and above E6 were virtually colorless. Otto Ortmann, “Theories of Synesthesia in the Light of a Case of Colored Hearing,” *Human Biology* 5/2 (1933), 184.

7. Personal interview with AF, January 5, 2002.

Schematically, rhythmic music is music that shuns repetition, measure, and equal division; it is inspired, in short, by the movements of nature, movements of free and unequal durations. Classical composers (in the Western sense of the term) are bad rhythmicians, or rather musicians who are unaware of rhythm. In the music of Bach, there are harmonic colors and extraordinary counterpoint; it is marvelous and brilliant music, but there is no rhythm.⁸

Perhaps Messiaen's penchant for ametric music was linked to his synesthesia. By avoiding metric regularly, he could better control the relative prominence of juxtaposed harmonic colorations and ensure that all colorations were equally distinct.

8. *Durations are additive.* Rhythmic durations within *musique colorée* comprise different combinations of a simple durational unit. Irrational values are absent in *musique colorée*.

9. *Music was composed after the early 1950s.* After the early 1950s, Messiaen's comments about musical color show a marked change. Before that time, his descriptions of musical color were generic; after that time, they were specific. It seems apparent that by the early 1950s Messiaen's synesthetic perceptions were seemingly affecting his compositional choices..

Like the majority of synesthetes, Messiaen first took note of his synesthetic perceptions as a pre-adolescent.⁹ However, during his youth, Messiaen did not fully comprehend his synesthesia, nor did he pay particular attention to it; Messiaen's writings suggest that he only gradually grew to appreciate his condition. Cytowic found that while most synesthetes report having experienced the condition as far back as they can remember, there are some who started noticing the condition later in life—particularly during

8. "Schématiquement, une musique rythmique est une musique qui méprise la répétition, la carrure et les divisions égales, qui s'inspire en somme des mouvements de la nature, mouvements de durées libres et inégales. . . Les classiques, au sens occidental de ce terme, sont de mauvais rythmicians, ou plutôt des musiciens qui ignorent le rythme. Dans la musique de Bach, il y a des couleurs harmoniques, un travail contrapuntique extraordinaire, c'est merveilleux et génial, mais il n'y a pas de rythme." Claude Samuel, *Entretiens avec Olivier Messiaen* (Paris: Editions Pierre Belfond, 1967) 66.

9. Rössler, *Contributions*, 54.

adolescence—after which their perceptions became gradually more intense.¹⁰ My subject AF first took notice of her synesthetic perceptions during late adolescence:

Synesthesia slowly revealed itself to me, since I was not really sure what I was experiencing while listening to music. The older I became, the more I was able to define that the colors I thought I was imagining are definitely connected with certain pitches. Only about a year and a half ago I read somewhere what synesthesia was and I suddenly became aware that some of the descriptions—especially the one about a “screen” or the “inner eye”—appeal to me in a very familiar way.¹¹

Messiaen often spoke of how his first meeting with the Swiss painter Charles Blanc-Gatti, a color-music synesthete, gave him cause to reflect upon his own perceptions. Messiaen and Blanc-Gatti first met when Messiaen was in his early twenties. Messiaen said:

I think that I have always possessed this “sixth sense,” but I only became aware of it very gradually. At first, I had it without consciously realizing it. Then little by little, perhaps because of my encounter with the painter Blanc-Gatti, I became aware of what was happening in me. And then I ended by studying it, by studying myself, by codifying certain sound-color relationships that appeared more obvious to me, and even including them in my treatise. But that was not done in one day because it is, all the same, very specific and very delicate.¹²

Most likely, Messiaen was unfamiliar with contemporary medical research on synesthesia; like most synesthetes, he was probably confused about his condition. Except for his acquaintance with Blanc-Gatti, whose particular synesthesia was somewhat different than

10. Richard E. Cytowic, *Synesthesia: A Union of the Senses*, second edition (Cambridge: MIT Press, 2002), 58. Kevin Dann also discusses synesthetic perception becoming more elaborate over time. Kevin Dann, *Bright Colors Falsely Seen: Synaesthesia and the Search for Transcendental Knowledge* (New Haven: Yale University Press, 1998), 3.

11. Interview with AF, January 4, 2002.

12. “Je pense que j’ai toujours possédé ce sixième sens mais je ne m’en suis rendu compte que très progressivement. Je l’ai d’abord eu en moi-même sans que ça parvienne à la conscience claire, puis peu à peu, peut-être à cause de ma rencontre avec le peintre Blanc-Gatti, j’ai pris conscience de ce qui se passait en moi. Et puis j’ai fini par l’étudier, par m’étudier moi-même, par codifier certains rapports son-couleurs qui me paraissaient plus évidents et même les transporter par écrit dans mon traité. Mais ça ne s’est pas fait en un jour parce que c’est une chose, tout de même, très particulière, très délicate.” Robert Laliberté, “Messiaen : musicien de l’arc-en-ciel,” *La Vie musicale* (March 1971), 9. See also Messiaen, *Conférence de Kyoto*, 6.

his own, the only way Messiaen learned more about his condition was by studying himself. He later recalled, “I was my own doctor.”¹³ As Messiaen grew to accept his condition as real, he began to study his colored perceptions more closely. He ultimately created charts for each of his modes and special chord-types, illustrating all possible voicings and transpositions, and their respective colorations.

Messiaen’s first published comments regarding sound-color correspondence date from the late 1930s and show the influence of contemporary thinking. While at the Paris Conservatory, Messiaen studied composition with Paul Dukas (1865–1935), who did not have synesthesia but did believe in a correspondence between sound and color.¹⁴ Messiaen recalled, “Under his tutelage I understood that there are colors in music that one can see.”¹⁵ In the opera *Ariane et Barbe-Bleue*, Dukas related certain gemstones and their corresponding colors to particular tonalities (pc collections).¹⁶ Messiaen described the music of Paul Dukas as “a divination of many modern theories of luminous vibrations, colored audition, and the rapports between colors and sounds.”¹⁷

Until the mid-1940s, Messiaen’s references to sound-color are generic, symbolic, or metaphoric. The preface to *Quatuor pour la fin du temps* (1942) mentions swords of fire, lava flows, stars, and “a gyrating interpenetration of superhuman sounds and colors.”¹⁸ A scriptural passage from the book of Revelation describing the precious gems

13. “J’ai été mon propre médecin.” Messiaen, *Musique et couleur*, 183.

14. Dukas also instilled in Messiaen an appreciation of compositional methods that exploited natural resonance, and encouraged Messiaen to study birdsong. Olivier Messiaen, “*Ariane et Barbe-Bleue* de Paul Dukas,” *La Revue Musicale* 166 (May–June 1936), 403.

15. “[Ich] habe durch seine Lehrtätigkeit begriffen, daß es in der Musik Farben gibt, die man sehen kann.” Leonardo Pinzauti, “Gespräch mit Olivier Messiaen,” *Melos* 1972/5, 272.

16. Messiaen published an appreciation of this work. Messiaen, “*Ariane et Barbe-Bleue*,” 399–406.

17. “Ceci est une divination de bien des théories modernes sur les vibrations lumineuses, l’audition colorée, les rapports des couleurs et des sons.” Messiaen, “*Ariane et Barbe-Bleue*,” 400, 404.

18. “Une compénétration giratoire de sons et couleurs surhumains.” Olivier Messiaen, *Quatuor pour la fin du temps* (Paris: Durand, 1942), i–ii.

of the heavenly city of Jerusalem provided a continual inspiration for Messiaen.¹⁹ The score of *Visions de l'Amen* (1943) references “sapphire, emerald, topaz, hyacinth, amethyst, sardonyx, the entire rainbow of precious stones of the Apocalypse that sound, shock, dance, color, and perfume the light of life.”²⁰ Messiaen’s writings also contain references to rainbows and stained-glass windows; in *Technique*, Messiaen went so far as to list rainbows and stained-glass windows among his “musical” influences.²¹

Messiaen’s writings from the mid-1940s to the mid-1950s contain virtually no mention of the sound-color relationship. During this time, Messiaen experimented with various compositional techniques, including dodecaphonism; also at this time, Messiaen’s rhythmic experiments reached a zenith. From 1949 to 1952, Messiaen taught at Darmstadt, where his compositional aesthetics were stimulated by progressive students including Pierre Boulez and Karlheinz Stockhausen. Notable experimental works of Messiaen from this period include *Quatre études de rythme* (1950) for piano, *Livre d’orgue* (1951) for organ, and *Timbre-durées* (1952) for magnetic tape, abandoned by Messiaen and later realized by Pierre Henry.

In the mid-1950s, Messiaen first specified harmonic colorations evoked by his music. In *Catalogue d’oiseaux* (composed 1956–58), indications in the score identify colorations of specific modal passages. In the score of the orchestral work *Sept Haïkai* (1962), Messiaen noted the colorations of specific modes and chords. In *Couleurs de la cité céleste* (1963), Messiaen again indicated harmonic colorations in the score; in the

19. Revelation 21:19–20.

20. “Saphir, émeraude, topaze, hyacinthe, améthyste, sardoine, tout l’arc-en-ciel des pierres précieuses de l’Apocalypse, qui sonnent, choquent, dansent, colorent e parfument la lumière de Vie.” Olivier Messiaen, *Visions de l'Amen* (Paris: Durand, 1943).

21. Olivier Messiaen, *Technique de mon langage musical*, 2 vols. (Paris: Alphonse Leduc et Cie, 1944), I, 4.

preface, Messiaen stressed that the form of the work depended entirely on color.²² *Traité*, published in 1992, contains dozens of description of harmonic colorations.

Although Messiaen used many of the same “colored” compositional resources (i.e., modes, special chords) throughout his career, only works composed after 1950 qualify as *musique colorée*. During the composition of his early works, Messiaen did not fully appreciate the music’s colored evocations. Later in his life, Messiaen described colorations in his early works; however, such descriptions were made *a posteriori*, which reduces their validity as proof that color played a meaningful role in the composition of early works.

Conclusions

For Messiaen, not all types of music were capable of evoking color. *Musique colorée*, a special type of music composed by Messiaen, contained certain musical characteristics necessary for the evocation of color. Within *musique colorée*, musical parameters are simplified: texture is a consistent block-chord form, registral extremes are minimized, rhythms are based on an additive durational unit, and durations are simple rather than irrational. The simplification of musical parameters not only allows colorations to emerge fully but perhaps also prevents elaborate surface features from distracting attention from the colors, thereby highlighting the coloristic dimension of the music, allowing color to become an integral component of the work as a whole.

22. “La forme de l’œuvre dépend entièrement des couleurs. Les thèmes mélodiques ou rythmiques, les complexes de sons et de timbres, évoluent à la façon des couleurs.” Olivier Messiaen, “Première note de l’auteur,” *Couleurs de la cité céleste* (Paris: Leduc, 1966).