

## **Synaesthesia and artistic experimentation in Alexandr Scriabin's works**

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**Abstract:** *The belief that painting could emulate music and the reverse, that music could emulate painting, inspired a part of the most progressive visual arts of the 20th century. The artists who made use of synaesthesia created an astounding correspondence between colour and sound, colour and idea, drawing varied and unexpected analogies to convey sensations, intimations and emotions. The aim of this research is to present some of the trends resulted from these correlations between music and painting of the beginning of the 20th century, a period when the artists aimed to create an impersonal and conventional music in an attempt to reach the objectivity, rationalism and constructivism, focusing on the works of Wassily Kandinsky and Alexandr Scriabin. For many of the artists of the beginning of the past century, music represented the new idea of transposition into visual arts. It was no longer the content to reproduce the visible world, but, for a change, the painters strived to put into their canvasses the emotional intensity, the structural integrity and the aesthetic purity generally attributed to music.*

**Keywords:** *music, painting, synaesthesia, Scriabin, association*

### **1. Introduction**

The relationship between music and the visual arts, a relation where dance or literature can be also included, has been intensively studied by musicology or art history and proliferated a valued literature of specialty.

At the end of the 19<sup>th</sup> century, the winds of change within the Impressionism were illustrated at the perceptual level in the visual arts in the analogy between the composition of the colour surface and the notes succession from a musical composition. Getting inspiration from the alchemy of the Romanticism, the artists transfigured a chromatic universe which extended towards polytonalism and polymodality, concretised by: unpredictable cromatisations, enharmonic and chromatic modulations to distant tonalities, major and minor chords, integrated tonal-modal scales, modes of limited transposition, oscillations between tonalism and polytonalism that altered the functionality to disappearance.

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The striking intervention of the visual into the territory of the other arts is manifested starting with the 20<sup>th</sup> century, and the orientation of artists of the epoch was towards conveying moods and emotions according to some very personal and subjective rules, thus because the artist of the times was a cerebral creator who did not perceive the events intuitively or sensorially, but intellectually. The first half of the 20<sup>th</sup> century do not abdicate from the laws governing the evolution of the arts, because the coexistence of the conservative aesthetics with the most recent aesthetic conceptions is the expression of the incessant tension between the classic and the modern, the old and the new or between tradition and innovation.

During this period, the experiences borrowed from the visual arts grow in number within the musical genres and techniques (Arnaldo, 2003). The interest for the visual representation of the musical subjects led to the exploration of some specific procedures in order to imitate the musical effects (Kandinsky 1989). Most interesting is the visual emulation of polyphony, especially attractive for the artists who explored abstract expressionism. For instance, pictural fugue as a genre was cultivated by Ciurlionis, Kandinsky, Kupka, Klee, Marsden, Hartley and others (Maur 2004, 17-27). Another orientation took into account the rendition of moods and emotions according to a set of personal and subjective rules, aspiring to an independent condition for music through the exploration of compositional relation between sound – colour – form – movement or even by association of the two genres in works defined by synaesthesia.

## 2. Synaesthesia

There are inherent difficulties when talking about the phenomenon of synaesthesia. Many of those who wrote about the interdependence between music and the other arts used the term “synaesthesia” as a label for those connexions.

The definitions given to the term of “synaesthesia” are different depending on the way the mechanism of producing synaesthesia is analyzed: the phrases that join together two sensations of different nature are perceived as semantic figures based on analogical or contiguous associations. There are at least 60 known variants of synaesthesia (Day 2013, 903-923.), including reports of synaesthetic experiences of color (Baron-Cohen, Wyke, Binnie 1987, 761-767), taste (Ward and Simner, 2003, 237-261), touch (Ward, Banissy, Jonas 2008, 259-265), and sound (Saenz and Koch 2008, R650-R651).

Accordin to DEX, 2009, synaesthesia is „an association of sensations, different by nature, that give the impression that one is the symbol for the other”. From a neurological point of view, synaesthesia is the name for the phenomenon where, at the level of perceptions, a single stimulus is able to trigger various sensorial responses of the receiver (for instance, for a synaesthetic person, a colour is able to influence smell significantly, giving the impression of a smell which is not

present in the surrounding environment). A synaesthetic person is endowed with exceptional memory and unmatched intelligence, he/she is able *to hear* colours, *to taste* words and shapes, *to associate* colours with letters or numbers and is even able to describe the colour, the shape and the aroma of the human voice.

Synaesthesia was present along the ages in various forms of artistic manifestation. It can be encountered in the writings of some great poets, such as Charles Baudelaire or the Romanian symbolist George Bacovia, as well as in the works of important painters or musicians. Most of the types of musical synaesthesia are defined by simultaneous perception of the colour, but the association with concurrent perceptions of different nature, as smell or taste, are rare, but they do not lack. The phenomenon can also be extended to musical- kinaesthetic associations, involved by the different manners of playing a musical instrument (musical dynamics and agogo) (Pepelea, Rucsanda 2016, 292).

The PhD professor Hugo Heyerman uses the concept of „created synaesthesia”, following an analysis of the art of the beginning of the 20<sup>th</sup> century, where works of art of many of the visual artists explore aesthetic forms which involve multisensory reception. (Burducea 2014, 1).

### 3. Premises of the emergence of synaesthesia

The belief that painting is capable to emulate music and the reverse inspired a part of the most progressive visual arts of the 20<sup>th</sup> century. Colour has many possible interpretations in music. Over time, colours have been associated with different particularities of sound, such as: pitch, quality, melodic ornamentation, and so on. The physicist Isaac Newton was the first to observe the correspondence between „the proportionate width of the seven prismatic rays and the string lengths required to produce the musical scale D, E, F, G, A, B, C”. (Peacock. 1988, 397-406).

The artists who made use of synaesthesia created an astounding correspondence between colour and sound, colour and idea, which resulted in a variety of analogies, strikingly conveying personal feelings, moods and emotions.

A pertinent point of view is that of Fred Collopy, Professor and Chair of Information Systems and Professor of Cognitive Science, at Case Western University, USA who *notes the way in which we receive and make sense of sound and colour are very different* (Collopy 2009, 65).

In the diagram he designed, he concentrated the theories about association of sound with different colours during a period of three centuries, starting with Isaac Newton in 1704 and ending with Steve Ziecerink in 2004 (figure 1).

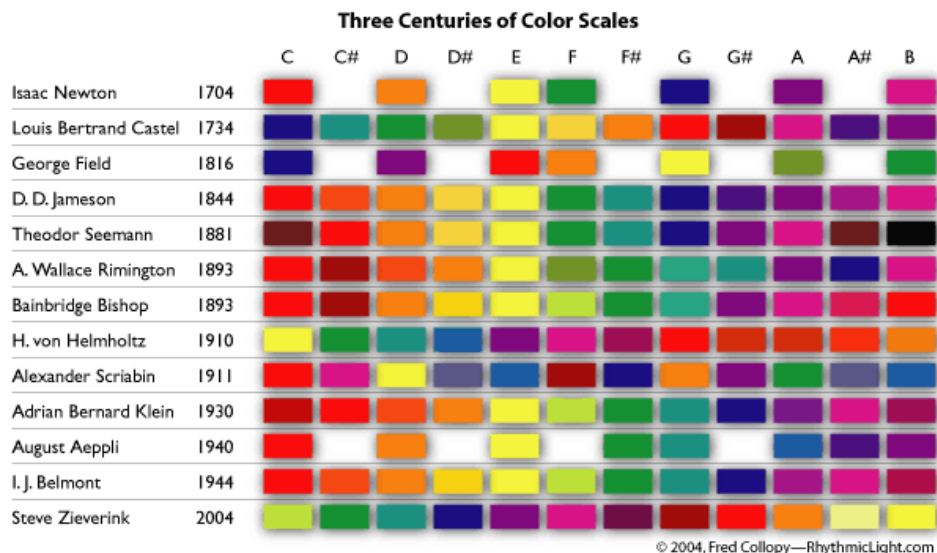


Fig. 1. Fred Collopy's *Three Centuries of Color Scales*, a sonochromatic scale matrix

In the 20<sup>th</sup> century, the French poet Charles Baudelaire, known to have had and express a different perception of the reality, said: „It would be truly surprising for me to find that sound could not suggest colour, that colours could not evoke the idea of a melody, and that sound and colour were unsuitable for the translation of ideas, seeing that things have always found their expression through a system of reciprocal analogy” (Baudelaire 1964, 116.)

Baudelaire called Delacroix painter-musician, because these admirable accords of accords of his colours make one dream armies and melodies, and the “impression his canvasses create is, most of the time, cvasimusal” (Baudelaire, 1992, 189-190). He often compares the colour tones with the musical notes and considers that, in music, harmony exists not only in musical chords, but also in their ratio, in their logical succession, in their combination. He was a good violinist and he adored to listen to good music: ‘when I listen to music, I feel to urge to create, because music is the supreme delight for imagination” (Delacroix 1977, 19).

Richard Wagner (1813-1883) argued through the concept of *Gesamtkunstwerk* (the work of art of the future) that music, poetry and dance, these three *eternal sisters*, would form the unified whole to reflect the Universal, the Truth and the Absolute: (Nattiez 2006, 96-97). At the same time his intuition is that movement can be added to rhythm for a connexion with the visual, that the melody combines with the text and the sound succession can be accompanied by chromatics due to scenography.

#### 4. The Visual and Auditive Perception at the Beginning of the 20<sup>th</sup> Century

The Russian painter Wassily Kandinsky (1866 - 1944), famous for his saying: *Cease thinking!*, admitted the synaesthetic experience when he listened Lohengrin by Richard Wagner at Moscow: „*I saw all my colors in my mind; they stood before my eyes. Wild, almost crazy lines were sketched in front of me*” (Kandinsky, 1913, 364). The colour and the geometric figures were associated to grave sounds and the different pitch of the wind instruments and violin.

Wassily Kandinsky showed a peculiar interest for the analogy between the abstraction in the visual arts and musical creations, and expresses his interest in the volume *Spiritualul în artă (On the Spiritual in Art)*: „each art has its own forces, which cannot be replaced by those of another art” (Kandinsky 1994, 155). He expressed the beliefs of many of the most important artists of his generation, stating that perception as an instrument of knowledge synthesises all the senses to construct a subjective version of the environment; both music and painting are able to express personal emotions.

Kandinsky considered that the graphic representation of music can be obtained through a combination of points and lines. In figure 1 can be seen the way Kandinsky analysed a section of musical notation and made a virtual representation for it, conveying the same content through points and lines. Although he done this in his book, *Point and Line to Plane* he did not have the same intentions for his paintings. He wrote in one of his lectures he did not intend to ‘paint music’. For him, music was a source of inspiration, an equivalent of painting, but he did not have the intention to compose his paintings as an illustration of musical pieces.

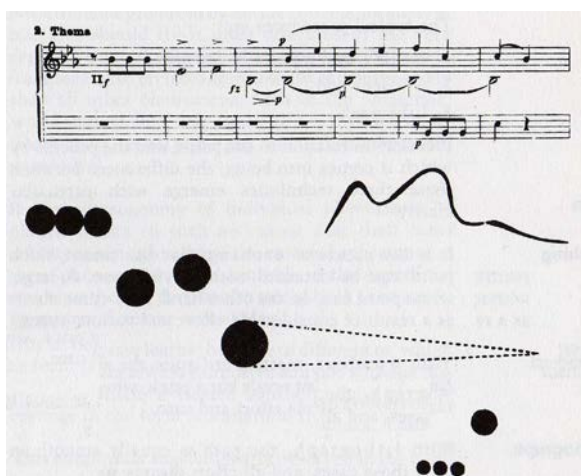


Fig. 2. Kandinsky translated music graphically using points and lines.  
(Image taken from Kandinsky, 1982)

The aesthetic theories mentioned in his work support the existence of a connexion between different arts, a connexion born out of the perceptual mechanisms of the senses: 'Musical sound has direct access to the soul. It finds there an echo, for man hath music in himself (Kandinsky 1994, 161). Between the 1909 and 1914, Kandinsky developed an aesthetic theory, along with painting a large group of abstract paintings, conceived as musical metaphors.

The painter explored the multisenzorial perception in his scenic composition titled *Der Gelbe Klang* (1912), an experimental show where elements of scenography, choreography and music ere syncretically reunited in order to enhance the inner, emotional experience of his public. In the centre of his composition are scenes presenting kinetic pictures, which substitute the dramatic scenes, dialogue and narration in theatre and opera. The scenic productions had three variants of scores, written by Thomas of Hartmann, Anton Webern and Alfred Schnittke (Borza 2015, 121)

The aesthetic connection between music and colour was also explored by composers, such as Berlioz, Wagner and Rimsky-Korsakov, Debussy, Messiaen or Scriabin. A representative of the Symbolism, composer, pianist, poet and mystic, 'a semi-neo-theo-phylosopher' (Bowers 1973, 76.), who fought against routine and always had an aspiration to the absolute, idealizing the beauty in a language of symbols where the musical phenomenon was the trigger for all emotions is taken into consideration in the following paragraphs.

Attracted by synaesthesia, Alexander Scriabin (1872 - 1915) developed a theoretical system where sound was in close connection with magical effects of colour and light. That was best illustrated in his vocal-instrumental composition for piano, organ, choir, orchestra and clavier à lumières or tastiéra per luce, *Prometheus, The Poem of Fire* (1910). The composition was based on a very elaborate program which ended with the creation of the world and a cosmic dance of atoms. The synaesthetic element is present through the organ of colours which was supposed to accompany the dance, lights an the atmosphere, one of the composer's desires being that the concert room should be flooded by coloured lights as a synaesthesia of all arts, in a mystical manner. Colour organ was an electromechanical dispositive, built to project coloured light, from red to purple (ROYGBIV), based on the circle of words of the tonal system and based on the theories of Isaac Newton. Nonetheless, the coloured light, essential to the composer, has never quite worked satisfactorily in performance as the composer wished (Berman 1999, 15-22) still, at the opera's premiere, on March the 2<sup>nd</sup>, 1911, the instrument proved to be unpractical and was thus abandoned.

*Prometheus* was the first composition where Scriabin systematically avoided using the major and minor tonalities. Although his music was rendered by acoustic instruments, Scriabin associated colour to tonality, and modulation had an intense emotional support. In his theory, Scriabin did not differentiate the major tonalities

from the minor ones having the same name, as I can be seen from the quadrant illustrating the colour-tonality association (figure 3<sup>2</sup>).

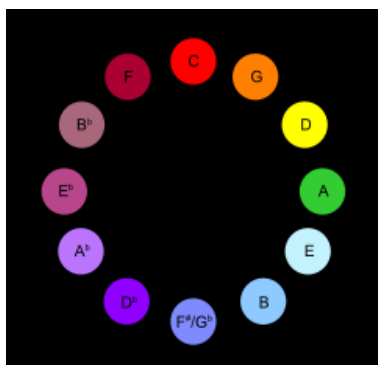


Fig. 3 Keys arranged in a circle of fifths in order to show the relationship with the visible spectrum in Scriabin's variant of synesthesia

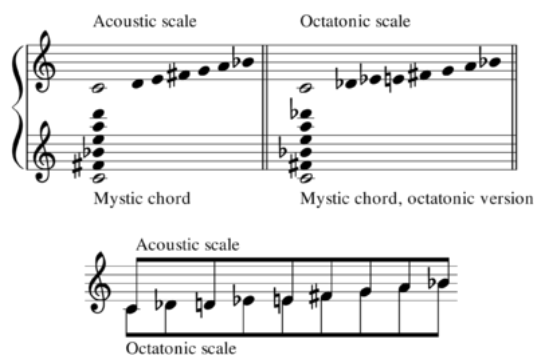


Fig. 4. The acoustic and octatonic scales

Because of his mysticism, the composer was considered incomprehensible by many critics. He created the so called “mystical chord” (figure 4), obtained by superposing six notes placed at a quarter interval and he wrote several composition starting from this.

In *Prometheus*, the main theme is written in F sharp major and the mystical chord is introduced from the first bars of the composition, and the woodwinds and in the strings in tremolo to create the nebulous, chaotic atmosphere before the creation (Polina 2009).

**4. theme of the creative will**  
**in the trumpets, bars 21-23**

*p* = 76, 21

**A pure blue-violet ray of light pierces the dark**

*mf*

*p*

(strings, vertically completing the Mystic chord in bars 21 & 23)

<sup>2</sup> [https://en.wikipedia.org/wiki/Alexander\\_Scriabin](https://en.wikipedia.org/wiki/Alexander_Scriabin), accessed on 18.11.2017

During the same period, he was working on his composition, *Mysterium*, which he considered to be a synthesis of all the arts, a great, apocalyptic work, defined by hypnotic, polymorphous extravaganza of sound, sight, smell, touch, dance, décor, of orchestra, piano, singers and of sculptures colours, vision (Schonberg 1997, 490). The composer saw himself as a Messiah who stived to express the end of the world and the creation of a new human race, and *Mysterium* had to be sung in a temple in India which had the form of an hemisphere. But the composition was left unfinished, just a project, as Scriabin died of infection.

As seen in the following diagram, (Fig. 5), every mystic chord has a componence corresponding to a major tonal scale. For example, G major and G mystic both have one sharp, D major and D mystic both have two sharps, and A major and A mystic both have three sharps. Like F major, F mystic has one flat; like B flat major, B flat mystic has two flats. (Gawboy, Townsend 2012, 1–86). [http://mtosmt.org/issues/mto.12.18.2/mto.12.18.2.gawboy\\_townsend.html](http://mtosmt.org/issues/mto.12.18.2/mto.12.18.2.gawboy_townsend.html)

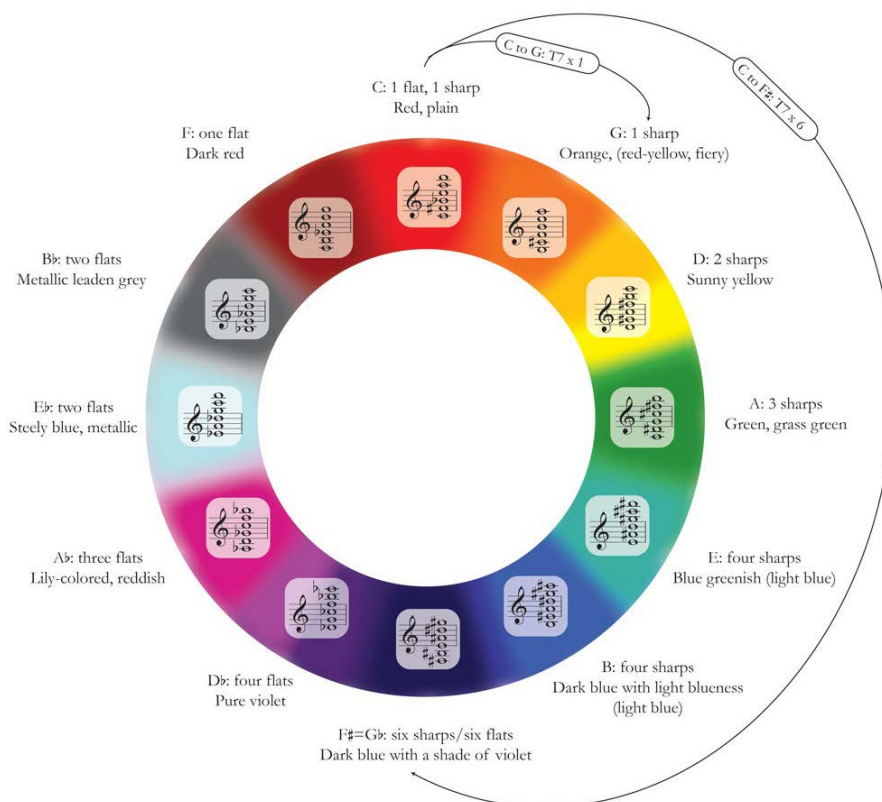


Fig. 5. Scriabin's Mystic chord colour wheel. Eg. 10 from Gawboy and Townsend, „Scriabin and the Possible”



## 5. Conclusions

Apart from its entertaining value, another of the purposes of art is to convey an aesthetic message. The fascination of the sounding colours correspondence has persisted even from the Greek antiquity to the present days and the attempts to create syncretic art by various means and media was justified by the desire to find a representation which is liberated by the limits of the conventional artistic languages. Although many of the non-artistic individuals show signs of synaesthesia, most of the research indicates that it is a more frequent attribute of the artists.

Among the plastic artists, Kandinsky developed an aesthetic theory together with large group of abstract paintings, conceived as musical metaphors.

Alexandr Scriabin was not a mere composer, but he aspired to look beyond art and to associate the sounds of music to colours (Mihailo, 1972). He created a strong polisensorial experiment, amplified through programmatic motivation, resulting in significant associations of sound and colour. By his music, the colour can be perceived both by the interpreter and the listener.

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