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Author(s): B. M. Galeyev and I. L. Vanechkina
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Historical Perspective

Was Scriabin a Synesthete?

B.M. Galeyev and I.L. Vanechkina

Our research group, originally merely an amateur group, is now the academic Prometheus Institute—so named because, since our first light-enhanced performance in the U.S.S.R. of Scriabin's Prometheus: The Poem of Fire in 1962, we have continued to explore and develop Scriabin's ideas of artistic synthesis (see publications in English [1,2]). The analysis of the genesis of Scriabin's "light symphony" idea, realized by the inclusion of the "Luce" part in the Prometheus score [3-9], resulted in our publication of a special monograph on the subject [10] (aspects of this research were also published in English in several shorter papers [11-14]). The course of this work brought us to an investigation of Scriabin's "color hearing," because it was generally taken for granted that the "Luce" part was closely connected with this phenomenon.

Turning to the literature on "color hearing" (and, more generally, on synesthesia, of which "color hearing" is a specific case), we encountered the following phenomenon. In both Russian and foreign literature, and in popular and scientific literature, from the beginning of the century, something like the following statement, made as if axiomatic and requiring no proof, has circulated: "There exists a unique (strange, wondrous, mysterious, etc.) faculty of human psychics, an inherent ability in some individuals—so-called synesthetes—to see the sounds of certain instruments or certain tonalities as various colors." This statement has been based on the supposition that this vision is real, constant and even inborn, beyond the will of the individual. Justification of this supposition has relied upon the etymology of the term "synesthesia" itself as "co-sensation" [15]. Of greatest importance for this article, however, is that Scriabin has been mentioned without fail as first in a list of such synesthetes (usually followed by such well-known names as Rimsky-Korsakov, Kandinsky, Chiurlionis and Messiaen).

Side-by-side with our pride that among these names there appeared a large number of representatives of Russia (joke!), doubts crept in: if the creation of the "light symphony" was determined by the composer's unique (strange, mysterious, etc.) faculties, would this imply that the light-music itself is an anomalous, unique (strange, mysterious) art? And must the spectators of this art, to adequately apprehend the ideas of such a composer, also be unique synesthetes? Where then could we find them—such a collection of the strange and mysterious? And if we were able to find them, could it be guaranteed that their perceptions would not clash with one another (because practically all these researchers have asserted that synesthetic abilities are very personal, different)?

Such questions occur as a matter of course for anyone who is interested in the problem of "color hearing" in the context of its connections with the aims of light-music synthesis. In this case, there is no unambiguous answer that all researchers will understand and accept. In order not to drown in scholas-

Abstract

This survey and summary of documentary material on Scriabin's "color hearing" is being presented for consideration by researchers studying his ideas of light-music synthesis. On the basis of their analysis, the authors conclude that the nature of Scriabin's "color-tonal" analogies was associative, i.e. psychological; accordingly, the existing belief that Scriabin was a distinctive, unique "synesthete" who really saw the sounds of music—that is, literally had an ability for "co-sensations"—is placed in doubt.

The author of the first special publications on Scriabin's "light symphony" and his "color hearing" was his friend and biographer Leonid Sabaneyev (1881-1968). Educated in both the conservatory and the university (in the natural sciences), he concerned himself with this aspect of Scriabin's creative work more actively than other researchers. His first special paper, "On Sound-Color Correlation," appeared in the Russian magazine Muzyka early in 1911, coincident with a publication of the score of Prometheus [16]. Only a month later, Sabaneyev mentioned Scriabin's "color hearing" in the same magazine in connection with the discussion of the "light symphony" idea [17]. This text on Prometheus is of special value because, in German translation and with some addi-

B.M. Galeyev (artist, researcher), Institute "Prometei," K. Marx Str., 10, KGTU, Kazan, 420111, Russia. E-mail: <bgaleyev@prometei.kcn.ru>

I.L. Vanechkina (pianist, musicologist), Institute "Prometei," K. Marx Str., 10, KGTU, Kazan, 420111, Russia. E-mail: <ilvanechkina@prometei.kcn.ru>

This text is part of the Leonardo special project on Synesthesia and Intersenses, guest edited by Jack Ox and Jacques Mandelbrojt. Synesthesia is the phenomenon in which the stimulation of one sense modality gives rise to a sensation in another sense modality; for example, some synesthetes see colors when they hear music. This special project is devoted to the exploration of the nature and history of this phenomenon, as well as the discussion of intersenset relationships, artworks and experiences.
tions from the first paper, it was soon reprinted in the famous collection of articles *The Blue Rider*, giving access to information about Scriabin's "color hearing," albeit in brief, to a Western readership [18]. Sabaneyev published more serious material on this "color hearing" a year after the composer's death, as a separate paper [19] in a chapter on the light-symphony in his monograph on Scriabin [20]. In these latter sources, however, it is sometimes hard to distinguish Sabaneyev the biographer from Sabaneyev the commentator. So his above-mentioned papers of 1911 and, especially, the diary records of 1910–1915 about his meetings with Scriabin, which Sabaneyev managed to publish in 1925, before his emigration to France, are of greatest importance for us [21]. Another basic reliable source on the problem that interests us is a paper by the English psychologist Charles Mayer, written after a special 1914 appointment with Scriabin in Cambridge [22].

All other publications on Scriabin's "color hearing"—both in Russia and abroad—are secondary sources or, at best, are based on the materials mentioned above (no other reliable material exists, except for particular passages in the reminiscences of his contemporaries).

In his earlier papers, instead of the conventional term "color hearing," Sabaneyev used his own term, "hearing of colors." At first he declared this phenomenon to be "strange" and "rare," then "interesting" and appropriate to musicians with a "sensitive imagination and good ear." In this case he always placed in inverted commas the words "audial vision," "color hearing," "coloring" and "sound vision"—as if to accentuate by this means their non-literal, metaphorical character. In his search for the true nature of "color hearing," Sabaneyev, like Scriabin himself, laid aside from the very beginning the idea of searching for some "physical" explanation for it. It is informative that from the very beginning of his discourse on Scriabin's "color hearing," Sabaneyev readily used the term "association." At the same time, being educated in the natural sciences, he was always drawn to the idea of explaining "color hearing" as a purely "physiological" phenomenon. But there he was embarrassed by the subjective, personal character of "associations of light sensation."

This then inspired Sabaneyev to suggest a possible psychological explanation for "color hearing," writing, in 1911, "Colors, on the one hand, and sounds, on the other hand, engender various moods, often similar to one another, therefore—the association of colors and sounds arises" [23].

Sabaneyev was careful not to insist on this interpretation, leaving a decisive answer for the future. But his own observations on Scriabin's "color hearing"—to be accurate, "color-tonal" hearing—seem to substantiate his conclusions.

As is known, every musician has a personal semantics of tonalities and an emotional and symbolic conception of them, formed in the course of upbringing and creative development. It cannot be the same for all people, as was supposed by the eighteenth-century exponents of the so-called theory of affects (or, more generally, "normative aesthetics"). This semantics of tonalities depends on one's age, one's artistic schooling, the style in which a musician works—in brief, on history and artistic context and also on personal creative preferences.

So differences are inevitable, but this does not imply absolute chaos. Composer R. Schumann clearly noted in his well-known work *The Characteristics of Tonalities*: "We cannot say that this or that feeling, to be fully expressed, calls for translation into music by means of namely this and not any other tonality." But neither could he agree with those who "assert that in every tonality everything can be expressed" [24]. Correspondingly, one's own semantics of colors can be formed in every cultured individual. It is natural to expect that colors and tonalities "similar to one another" (as Sabaneyev said) may become connected by association in the consciousness of an individual (this is called, in exact psychological terms, "association by similarity").

Let us return to Scriabin. Under the influence of various factors, including his enthusiasm for Theosophy, the composer distinguished "spiritual" tonalities (e.g. F sharp major) from "earthly," "material" ones (C major, F major) [25]. Correspondingly, he ascribed certain characteristics to colors: red is a "color of Abaddon," blue and violet, colors of "reason," "spiritual" colors. Therefore, their juxtapositions are a matter of course: C major and F major are red and F sharp major, deep blue. For Scriabin these particular associations were most evident and vivid. And for other tonalities? In the Scriabin Museum’s archives there is a list of these, without a date or title, written in Scriabin’s own hand. It includes several different versions of correlations between various notes and colors. One can see that the composer tried to build up a conception of some kind. It is hard to judge to what exactly it applies, but the connection of this list with "color hearing" or the "Luce" part (conditioned by the latter), is obvious. The main point here is that Sabaneyev also specifically noted in his reminiscences about Scriabin the mentally contrived character of his correlations. The composer did not want to believe that his associations were not compulsory for everyone. He believed that they were universal. "It cannot be personal," said Scriabin firmly, "there must be a principle, must be oneness. A freak of chance—is a ripple on the surface, and the essential must be common" [26]. In searching for this commonality Scriabin built up a system of color-tonal analogies: "The three colors, which are clear to me, gave me three supports," he said, confessing that he derived the colors of other tonalities "theoretically" [27].

Given his aim to create a system of all these associations, he juxtaposed the "alleged colors" (arranged in a spectrum) and the "alleged tonalities" (as is known, this alliance is obvious when they are arranged into the so-called circle of fifths). Sabaneyev wrote:

Having noticed this consistency, Scriabin filled in missing links in the scale of color-sound accordance and came to the inner certainty that he was right in his theoretical premise. In other words, he began to search the depths of his consciousness for those associations that followed from his theory, and found it easy to call them in [28].

Moreover, the effect of Scriabin's self-suggestion, dependent on the unquestioned belief in the "principle" he had conceived, was so great that he confessed to Mayer's (of course, if it was not merely a coquetry of an artist before a scientist), that he sometimes anticipated a change of colors before a change of tonalities itself even took place.

In addition, Scriabin's belief in the universal validity of the system he proposed was such that he gave no explanations of it in the score of *Prometheus*—what colors lie behind the particular notes of "Luce" (and these notes, as we have shown, are fine indications of tonal and harmonic changes; so, "Luce" is a colored realization of this tonal-harmonic plan, closely connected with the philosophical program of *Prometheus*; but this is a subject for other research [29]).

In any case, accepting Scriabin's system of "color hearing" (to be more ac-
curate, the system of his analogies) as
given, we have conceived, for con-
venience's sake, a graphic notation of it
(Fig. 1) [30].
Sabaneyev first published a table of
Scriabin's "color-sound" correspondences as far back as 1911. In its con-
tents it largely recapitulates our scheme
in Fig. 1, but in Sabaneyev's handwritten
notes it assumes more familiar form:

- C: red
- G: orange-pink
- D: yellow
- A: green
- E: whitish-blue
- B: similar to E
- F: flat: blue, bright
- D: flat: violet
- A: flat: purplish-violet
- E: flat: steel color with metallic sheen
- B: flat: similar to E flat
- F: red, dark

For comparison, Sabaneyev included
beside this list a table of composer
Rimsky-Korsakov's color-tonality associa-
tions published shortly before in the
Russian press [31]:

- C major: white
- G major: brownish-gold, light
- D major: daylight, yellowish, royal
- A major: clear, pink

E major: blue, sapphire, bright
B major: gloomy, dark blue with steel
shine
F sharp major: greyish-green
D flat major: darkish, warm
A flat major: greyish-violet
E flat major: dark, gloomy, grey-bluish
B flat major: darkish
F major: green, clear (color of
greenery)

First of all, let's note that in Scriabin's
list, Sabaneyev designates tonalities with
capital letters: C, G, D, etc. (without the
extension "dur", i.e. major). This is
widely accepted among musicians, espe-
cially in twentieth-century music.
Sabaneyev had a further compelling rea-
son for this decision, because in
Prometheus, Scriabin's harmony was al-
ready practically outside the framework
of the traditional major-minor system. It
is unfortunate that some researchers, es-
pecially those who are not musicians,
take these signs—C, G, D, etc.—for des-
ignations of notes and ascribe to
Scriabin a nonsensical version of "color
hearing" with elementary, "physical"
matter (i.e. seeing in colors the separate
tones of the "octave spectrum").

After this remark (regrettably neces-
ary, because this mistake occurs rather
often) let us take stock of Scriabin's list.
The theoretical character of his anal-
ogies becomes more evident here, be-
cause it is clear that, having exhausted
the familiar colors of the spectrum,
Scriabin also included achromatic col-
ors at the end of the list—for tonalities E
flat and B, for example. Sometimes he
even called them "ultra-red" and "ultra-
violet," i.e. unseen colors (as, let us note,
they were also identified by Mayers!).

Being a psychologist, a specialist in
the field of "color-hearing" research, Mayers
specially emphasized the mental and even
artificial character of Scriabin's system
of color-tonal analogies. He also was in-
clined to see their origin in associative
derivation, but noted that many (includ-
ing Scriabin) formed their "color hear-
ing" correspondences under the guidance
of a trivial intention to compare different
"homologous sequences" (such as the
alphabet, the sequence of natural numbers,
the spectrum, the sonic scale, the fifths
circle of tonalities, etc.). But let us correct
Mayers on this point: Scriabin's analogies
are not so mechanistic in their motiva-
tion: his correlations are based on the
equivalence of "complexity" of tonalities
and colors (Schumann had defined tonal-
ity "complexity" as the number of alter-

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Fig. 1. The scheme
of "color hearing"
correspondences,
by A.N. Scriabin.
vision," involuntarily allowed general, "effulgence" and "esthesia" sensation ("color of sound") can we then consider the whole population of Germany "synesthetes"?

References and Notes


13. We have already noted that the root of the ancient Greek word "synesthesia," can be translated both as "sensation" and as "feeling," and even as "sense" (this polysemy, by the way, also exists in the root "sense" in English). See B. Galevy, Man, Arts, Technique (A Phenomenon in Synesthesia in Arts) (Kazan, Russia: KGU Press, 1987) p. 104 (in Russian). In this book, the possibility and necessity of regarding "synesthesia" exactly as "co-sensation," "co-sensation," "co-creation," or "co-representation" is shown.


21. In this text, we use English notation for tonalities. One should keep in mind that in Russian original sources, a slightly different notation is used.


30. I. Vanechkina, "A Résumé of Inquiry on Consistencies in 'Colored Hearing' among Members of Composers' Association of the USA," in Papers of V
33. The relativity of Scriabin’s musical hearing was noted by the famous poet Boris Pasternak after personal contact with Scriabin. See B. Pasternak, On Arts (Moscow: Iskusstvo, 1990) p. 41. The determination of “color hearing” (its brightness, nuances, permanence) by absolute hearing is emphasized by many people. Of interest in this context for those who study real “synesthetes” is the example of the musician K. Saragev. He is not known at all in the West, has been little studied in Russia and yet is worth studying using interpretations from aesthetic to neuroscientific. He “heard” tonality in people and in natural phenomena (it might be “si with 112 flats”!) and had his own consistent system of “color-tonal hearing.” See A. Tvetayeva, N. Saragev. Master of Magic Chime (Moscow: Muzyka, 1986; Gosizdat, 1988). His unique ability was close to that of Shereshevsky, described by A.R. Luria in his famous research on the “Sh.” phenomenon: A. Luria, The Mind of a Mnenomikon: A Little Book about a Lost Memory (New York: Basic Books, 1968). But in this case Saragev is of more interest for us because, being a musician, he “saw” the colors of musically organized sounds.


44. Sabaneyev [21].

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