

## **‘ALLELUIA’ BY SOFIA GUBAIDULINA AS A SYNAESTHETIC EXPERIMENT**

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### **Abstract**

Sofia Gubaidulina is one of the most iconic personalities in modern art, and, as a composer, she has already become a living classic. The multidimensionality of Gubaidulina’s musical thinking reflects the philosophical depth of both the concepts of her compositions and their musical language.

The light’s part of Alleluia has many times been the object of research for the leading musicologists specialised in Gubaidulina’s works. However, their research interest has been focused mainly on the rhythmic forms of colours rather than on colour symbolism or the semantics of colour combinations.

The existence of the light’s part as an independent component in Alleluia’s music texture can be explained within the framework of postmodern conceptual trends, which imply the presence of an idea that defines the concept, content and form of music. The concept behind Gubaidulina’s Alleluia is the sacrament of the Eucharist, as indicated by the names of some parts of the cycle taken by the composer from the liturgical ritual. The light’s part is considered – to determine if this concept governed the composer’s use of specific colours or if the colour scheme of Alleluia had its own semantics – mainly by analysing the biblical and icon colour symbols along with the doctrine of colour chromatism, V. Kandinsky’s system of dynamic colour coupling and the psychological colour tests of M. Lüscher, M. Pfister and R. Heiss. Gubaidulina uses of pairs of contrasting colours, considered by the authors as opposing earthly (warm) and heavenly (cold) ones, and a detailed analysis of their interaction has shown that colour information clearly correlates with the dramaturgical context of Alleluia that can be defined as catharsis.

Gubaidulina’s Alleluia was a forerunner to modern light-and-music shows, in which visual associations enhance the emotional impact of music, and this fact can explain both keen attention to this composition at the time of its writing and unabated interest in it today.

*Keywords:* absorption, anaphora, conceptualism, colour form, epiclesis

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## 1. Introduction

Sofia Gubaidulina, a prolific and renowned composer whose works are performed by the world's best musicians, undoubtedly belongs to those who shape and define modern music.

*Alleluia* for soloists, choir, orchestra and colour projector is one of the most significant works in Gubaidulina's artistic legacy. This composition has many times been the object of research for the leading Russian and international musicologists specialised in Gubaidulina's works: V. Kholopova [1], V. Tsenova [2], M. Kurtz [3], C. Askew [4], J. Milne [5], F. Neary [6] and others. Their interest was focused on a unique textural relief, sonoristic experiments and a new feature – the part of the colour projector or the light's part (*Farbe*).

The originality of Gubaidulina's concept lies in the use of light as a constant and independent structural element endowed with a certain semantic function to enhance music perception.

In this experiment, Gubaidulina relied on the theory of absorption implying that the perception of certain colours depends on the ratio between reflected and absorbed light rays. Their ratios correspond to colour intensity decreasing from left to right (Table 1).

**Table 1.** Colour intensities.

Yellow	Orange	Red	Green	Blue	Dark blue	Violet
7:1	6:2	5:3	4:4	3:5	2:6	1:7

It should be noted that the light's part, as a new compositional element, has been analysed by art historians from various angles. V. Tsenova emphasised in her monographic study, *The Numerical Mysteries of Sofia Gubaidulina's Music*, a correlation between the intensity of colours and music time expressed by the duration of *crescendo* and *diminuendo* in quarter notes [2, p. 27]. The analysis of the light's part by V. Kholopova is based on Gubaidulina's interpretation of white as a symbol of sacrifice: for a rainbow colour to appear, a white ray incident on a surface has to lose some of its components [1, p. 266].

However, the analyses of the light's part carried out by the aforementioned musicologists focused mainly on the rhythmic forms of colours [1, p. 265-275] and general colour symbolism, while leaving behind the semantics of colours used by Gubaidulina and the logic and meaning of their combinations, i.e. all those components that make *Alleluia* a colour-and-music drama with the light's part showing the main story line and the colours acting as characters [M.V. Tsvetkov, *Light and music experiment of a composer*, October 19, 2001, <http://triak.narod.ru/kazan.htm>, retrieved July 08, 2014].

The light-and-music composition with integrated audio and visual means of expression originated in the epoch of Romanticism. The aspiration of Romantic-era composers to express in music the visual images inspired by painting, architecture and literature did not, however, relate directly to synopsis but rather reflected their widely-preached concept of the 'pan-musicality' of the

world [7]. The 'colour hearing' was first talked about only at the end of the 19<sup>th</sup> century. Liszt, Berlioz and Rimsky-Korsakov had the ability to see colours in sounds, and Ciurlionis made experiments in 'colour painting'.

In the 20<sup>th</sup> century, the role of visual perception and the synthesis of various forms of arts increased, and composers became more interested in light properties, spectrum and colours. The resulting emotional impact of music was found to be higher than without visual associations, and light became an integral musical component. A. Skryabin, A. Schoenberg, I. Stravinsky, R. Schedrin, K. Stockhausen, P. Boulez, V. Scherbachev, I. Xenakis, A. Schnittke, G. Bantock, A. Laszlo, M. Belodubrovsky, J.-M. Jarre and other composers widely experimented with colour light music.

Apart from enhanced psychoemotional feelings caused by the perception of music and light, they were interested in the semantics of light colours. The use of certain colour combinations to express the artistic idea of a composition and its eidetic model was within the framework of the conceptual course established in the art of the 1960-80s. According to G.V. Grigorieva, the conceptual aspect of an art work is in its new programme, which reflects the character of the artist's intention, and this new programme primarily implies a certain code to organise the semantic form of music [8].

For such codes, composers often use both musical structures (for instance, certain forms of compositions, organisational forms of music or harmony) and non-musical ones, such as a temple introduced by A. Kneifel in *Chapter 8. Cantium canticorum*, verses by F. Holderlin that were written over the score *Fragmente – Stille, an Diotima* by L. Nono, or the number symbolism widely used by J. Cage, A. Berg, A. Kneifel, P. Boulez, A. Schnittke, S. Gubaidulina and others, or experiments with colour scores.

The concept of Gubaidulina's *Alleluia* is the sacrament of the Eucharist, or communion, which was the New Testament made by Jesus during Lord's Supper for those who would be redeemed by His sacrifice and would thankfully remember it in accordance with Christ's words "Keep doing this in remembrance of me" (Luke 22.19).

This concept defined the dramaturgical structure of the composition: the names of most of its parts reflect the structure of the Eucharist canon. The first, second, third, sixth and seventh parts are named *Confession and Repentance*, *The Making of Breads*, *Anaphora*, *Epiclesis and Alleluia*, but the names of the fourth and fifth parts – *Disangelion and Maria Sews a Purple Mantle* – are not from the traditional Eucharist ritual.

The fact that the light's part is an integral part of *Alleluia*'s dramaturgical plot brings up the question: did Gubaidulina use specific colours depending on the Eucharist programme code or did the colour scheme of *Alleluia* have its own semantics?

## 2. Research methodology

A correlation analysis has shown that the colour combinations used by Gubaidulina go beyond the Biblical symbolism that is not sufficient to decode the light's part of the score. For this reason, the authors also employed the theory of colour chromatism, V. Kandinsky's system of dynamic colour coupling and the psychological colour tests of M. Luscher, M. Pfister and R. Heiss.

## 3. Discussion

The dynamics of the first part, *Confession and Repentance*, is associated with the orange colour produced by mixing yellow and red. According to V. Kandinsky, "yellow is a typical Earth colour" that "almost palpably approaches man" [9]. When red is enhanced with yellow in the resulting orange "red is brought to the verge of the motion of radiation, outflow into the ambience" [9, p. 41]. He also compares orange to a self-confident man. According to M. Luscher, orange-red symbolises will power and is eccentric, outwardly-directed and active [10]. In the Pfister-Heiss colour pyramid test, orange is interpreted primarily as a 'bodily colour' [11]. Thus, orange used by Gubaidulina in the first part symbolises the appearance of 'my-own-self action force', according to Y. Obukhov [12].

The appearance of blue in the second part, *The Making of Breads*, can be explained by the biblical symbolism in which blue is a symbol of the heavenly and divine. The change of eccentric orange to blue at the very beginning of the composition defines the opposition between man and God, worldly and heavenly, immanent and transcendental. Kandinsky also emphasised the other-worldliness of blue that is extremely far from man and is "as far and indifferent as the high blue sky" [9, p. 48].

After blue comes yellow. The 'earthliness' of this colour, as perceived by Kandinsky, has already been mentioned above. The hypothesis that yellow used in *Alleluia* is one of the colours depicting the human nature can be confirmed through R. Heiss and H. Hiltmann's interpretation of yellow in the Pfister's colour pyramid test. Psychological researchers interpret this colour as "live ... extraversion and the universal force of motivation and activity" [11, p. 31]. In Luscher's test, the selection of yellow is associated with hopes, expectations and moving forward, i.e. with the features of human nature.

The semantic polarity of blue and yellow is expressed in the timbres and dramaturgy of this part. The broken clusters of the string instruments against the organ background symbolise the opposition between the unruly human nature and the divine eternity.

The appearance of green after yellow logically agrees the colour chromatism, in which green is the result of mixing blue and yellow. The fusion of these diametrically opposite colours produces, according to Kandinsky, a perfect balance [9, p. 44], tranquillity and harmony. This is the colour of the Absolute. It is no coincidence that Saint John's Revelation describes green as

God's colour: "And the one who sat there had the appearance of jasper and carnelian; A rainbow, resembling an emerald, encircled the throne" (Revelation 4.3). Jasper and emerald represented green stones including jasper, nephrite, jade and emerald [Y.A. Fedorov, *Talk #7: Symbol of stone in church jewelry art*, Part 2, in *Jewelry garden*. #4, 2005, <http://www.feodorov.ru/public08.htm>, retrieved January 17, 2014].

The appearance of orange at the end of the second part of *Alleluia* can be interpreted as a repeat that closes the first phase of the light part's development and, at the same time, signals a transition into a new dramaturgical dimension.

In the third part, *Anaphora*, green is present over a long interval of time. The subsequent appearance of red and its cooling by blue causes a new colour event – the appearance of violet in the next part. In discussing the semantics of red and blue, it should be noted that Kandinsky's red was 'of material nature' [9, p. 41]. He described red as a lively, vital colour that reveals, "with all its energy and intensity..., a certain characteristic of a deliberate, unusual force" [9, p. 45]. According to Luscher, "red expresses the vital force and energy of autonomic arousal" [10, p. 7]. In Christian painting, red is the colour of life-giving warmth and is interpreted as a symbol of life [Y.A. Fedorov, *Talk #3: Color symbols in Christian art*, in *Moscow jeweler*. #1, 2005, <http://www.feodorov.ru/public03.htm>, retrieved January 17, 2014]. Besides, red is the colour of blood and a symbol of martyrdom.

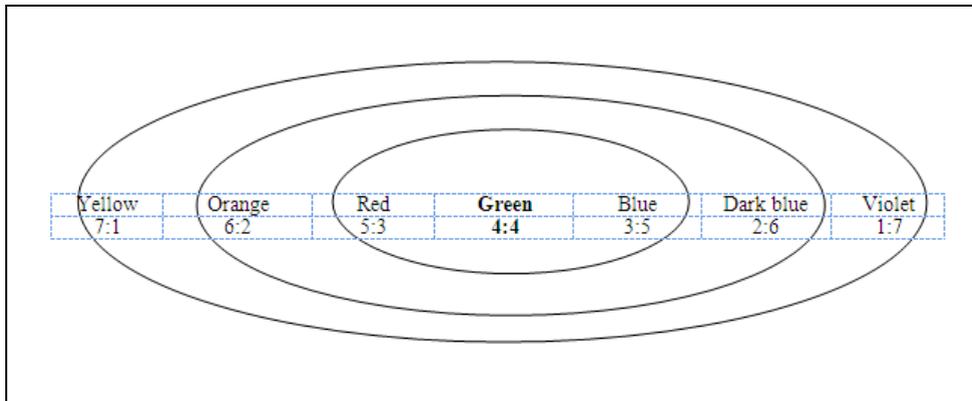
Kandinsky considers blue 'a typical celestial colour' [9, p. 41] with a tendency to deepen and move into the infinite and the supersensual [9, p. 40]. Luscher finds dark blue to be associated with religious meditation. This interpretation is in line with Christian art where it symbolises the incomprehensibility of God.

Violet that first appears in the fourth part has different meanings in the Christian symbolism and in Christian art. Formed by mixing red and blue, it symbolises the struggle between the spirit and the flesh in Gothic church stained-glass windows. Writing about medieval stained-glass window art, Olivier Messiaen noticed the dual semantics of violet meaning love for truth when the dominant tone is red and truth of love when it is blue [K. Samuel, *Talks with Olivier Messiaen*, Chapter 2, Paris, 1968, <http://musstudent.ru/biblio/82-music-history/samuel-omessiaen/70-klod-samyuel-besedy-s-olive-messiaen-perevod-s-fr-1968-glava-2.html>, retrieved July 17, 2014]. In Christianity, violet is associated with repentance, redemption and self-analysis [<http://www.feodorov.ru/public03.htm>]. This interpretation agrees with Kandinsky to whom this colour would 'sound' as 'sick, suppressed and sad' [9, p. 48].

Violet is opposite to yellow, and Gubaidulina made them fight by varying their intensities. In full accordance with the name *Disangelion*, the Greek word for bad news, the struggle between yellow and violet reflects the crisis of man and the resistance of his sinful nature to God's will.

The timbres and textures of this part are similar to those of the second one. However, Gubaidulina raised the tension by silencing the orchestra at the climax and retaining only the percussions and a screaming tritone in the choir. The fifth part, *Maria Sews a Purple Mantle*, is in harsh contrast to the fourth one. In this part, Gubaidulina uses a combination of a marimbaphone, women's voices and flutes that clear the stuffy atmosphere of the previous part and fill up the sonoristic and polyphonic texture with colours. Light and clear timbres, textural variations and a high register – all these features, enhanced with violet, produce a bright, sparkling and iridescent effect. However, it would be wrong to say that the light's part is here reduced to pictorialism or illustration. Obviously, the appearance of purple in the fifth part reflects its name. A purple mantle, the ceremonial mantle of monarchs and a symbol of the King's power, was put on Christ by Roman soldiers to mock him and then became a symbol of Christ's reign and martyrdom.

However, it is known that in ancient times purple was not as deep red as in more recent times but rather violet lilac, the appearance of which in the context of *Alleluia* meant that violet won over yellow. This victory is confirmed by the fusion of these two colours symbolising the first two hypostases of the Trinity: green of God the Father appears against the prevailing purple background of God the Son.



**Figure 1.** Sequence of colour combinations in Part 6.

In the sixth part, *Epiclesis*, the light's part is for the first time divided into four independent ones (Figure 1). In the first of them, green is represented by the organ point throughout the music, and each of the remaining three parts is a combination of two colours. Of special interest is the light's first part in which colour combinations appear successively:

1. Red and blue from *Anaphora*,
2. Orange and dark blue from *The Making of Breads*,
3. Yellow and violet from *Disangelion*.

This succession is repeated three times, as well as a prayer that opens the *Epiclesis*: "Lord, of Your Holy Spirit..."

As the climax approaches, the light's part gradually becomes a solo one thanks to the rhythmic organisation of the appearance of colours. Initially, Gubaidulina uses the Fibonacci series and then, in the climax zone, the rhythmic proportions give way to aleatoric colour music corresponding to a free improvisation by the orchestra and the complete polyphonisation of the choir part. Gubaidulina, most probably, wanted to create a chaos of sounds and colours – an effect associated with stochastic compositions by Xenakis.

At the climax, the music collapses and totally disappears as a harsh opposition between white and black replaces a bright show of colours. The two-colour 'still frame' that previously occurred in the fourth part gets maximum meaning at the end of the Epiclesis, as white and black have no hues and are semantically opposite. According to Kandinsky, white is a symbol of a world with no material properties or substances, and black is eternal silence without future or hope [9, p. 44]. Flickering of white against solid black means an extreme decoupling of the two worlds – sacred and profane – and the resulting opposition of eternity and temporality, infinity and finiteness, faith and faithlessness, holiness and sinfulness, etc.

The solo of black and white gives way to a polychromatic projection onto a ceiling to reproduce the colour sequence of the first through fourth parts of the cycle: yellow, orange, blue, green, red, dark blue and violet. Seven colours against a black background are associated for the composer with the Biblical rainbow that appeared after the Flood as a symbol of God's covenant between Him and mankind and His promise to never again destroy the earth by flood [S.A. Gubaidulina, *Interview with S.Gubaidulina on Orfei Radio*, 2012, April 13, <http://www.muzcentrum.ru/news/2012/04/item6184.html>, retrieved January 15, 2014]. The core of the rainbow concept is unification, the point which all the worldly variety of things come to and the point of unification with God, symbolised by the reduction to a unison of the whole variety of tone colours of the choir and orchestra. The colour semantics of the cycle's final part reflects its concept.

The end of *Alleluia* is monochromatic and is accompanied with a light violet colour. This violet hue was used in medieval paintings and icons featuring the Passions with Christ wearing violet clothes, which offers a way to interpret light violet's meaning as Christ's sacrifice. This is confirmed by the quotation of the Old Russian hymn 'Let my mouth praise You, Lord!' – the only complete text in *Alleluia*, and this is a liturgical text about gratitude to Christ for his sacrifice reflected in the communion.

#### **4. Conclusions**

A detailed semantic analysis of the light's part in Sofia Gubaidulina's *Alleluia* shows that colour information clearly correlates with the dramaturgical context. In other words, the composer did not aim to colour the music. The light's part serves as a compositional model, "the integral and abstract scheme and logical pattern of a preconceived development process" [13]. Interrelations

between light and sound cannot be considered based on the top or second priority of one or the other. They are formed deeply within Eschatological myths that include the Eucharist. The archetypal plot of resurrection through death is self-standing in both the musical form and the light's part, which probably explains the fact that the musical material often does not correspond directly to the light dramaturgy, for instance, in the first, third and sixth parts. The strongest indication is the central episode featuring opposition between black and white, followed by a rainbow of colours, which was conceived by Gubaidulina to take place in complete silence. It can thus be assumed that Gubaidulina used an array of visual associations as the best way to influence the audience.

The colour symbolism of the light's part seamlessly fits into its sacred concept, 'from grieving to glorifying'. The light's part embodies the main concept of art as felt by the composer: identification and elimination of the tragic. "The elimination of the tragic is very painful. Pain suddenly becomes part of the conscious, turns clearer and acquires a structure. And only then comes the catharsis", says Gubaidulina, "You have to go through the transformation from one state to another, walking on Earth and ascending to Heaven, from a horizontal, earthly state with its collisions and tragedies to an essentially vertical one." [O.S. Dusaev, *Sofia Gubaidulina confessed at the end of our talk...*, The New Times. #4, 2007, March 5, <http://newtimes.ru/articles/detail/13463>, retrieved January 18, 2014] The best means to express this concept in *Alleluia* was the synthesis of sound and visual means in which music and light merged in one space to facilitate perceptual unity.

However, the practical implementation of such a large-scale and multi-dimensional composition as Gubaidulina's *Alleluia* was technically difficult. That is probably the reason why Gubaidulina has never been satisfied with any of the light's part performances. The main technical obstacle was the composer's desire to play the light's part not on a screen or monitor but by colouring the space of the auditorium, which is only possible by lightening the air. Moreover, Gubaidulina planned to project the rainbow, having a special meaning and appearing at the climax, onto the dome of a church or other building.

Particularly challenging in this colour and music experiment is the temporal dynamics of the light's intensity. Gubaidulina interprets the light's part as a living element of the musical texture, with light equipment to be governed by the conductor's baton and placed in the orchestra. However, the composer's concern that listeners can be distracted from the music by colour combinations lead to the need to project light to the visual field periphery: the glowing and gleaming floor, walls and ceiling should be noticed out of the corner of the eye not to produce the opposite effect and thus ruin Gubaidulina's concept of the composition. Such a 'super-objective' can only be achieved by adapting or, to be more exact, modernising a concert hall using light-reflecting or light-emitting liquid crystal panels with laser projectors behind them – ideally, in a specially designed concert hall, such as the Polytope de Montreal in the French Pavillion, a media installation by Iannis Xenakis, but possibly also in a relatively low seating capacity hall that would accommodate the audience and performers

under a high domed shell made of white semi-transparent plastic, with light equipment being placed outside it or, if needed, in the centre of the hall.

Thus, the full-fledged performance of *Alleluia* according to the composer's idea, as a light-and-music drama, unambiguously requires a special, technically equipped hall. That is probably why all the performances of *Alleluia* in Russia and Europe, with the exception of the very first one, were staged without the light's part. Gubaidulina's conception seems to be several dozens of years ahead of current technical capabilities. However, *Alleluia* was a precursor of light-and-music shows that became popular in the 21<sup>st</sup> century thanks to the appearance of various laser projectors that can not only project colour combinations but also complete images, and the composer clearly foresaw the influence that music has on the audience when combined with various light effects. Today, the interest in colour and music shows is on the rise – and not only because of technical developments in lighting technology but also thanks to the ever-growing synaesthesia and syncretism in modern art. This means that Gubaidulina's ideas contained in *Alleluia* have yet to be implemented.

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