

“MIROIRS ET REFLETS” BY GABRIEL IRANYI – AN AUDITORY METAPHOR OF VISUAL INTERACTIONS

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SUMMARY. The work *Miroirs et reflets* by composer Gabriel Iranyi explores the concept of mirroring and reflection in both technical and metaphorical ways. Iranyi was inspired by the visual art of Claude Monet and Paul Klee, translating principles of reflection, symmetry, and heterophony into his musical composition. The piece is structured in two distinct parts, with the first section characterized by a static and rigorous approach, and the second part defined by spontaneity and fast tempo. Iranyi uses various compositional techniques, such as isolated sustained sounds, pitch shifts, harmonics, and convex motion, to create an auditory metaphor for visual interactions. The work aims to engage the listener and performer in an artistic exploration that adds depth to the musical motifs.

Keywords: contemporary music, mirroring and reflection, auditory metaphor, visual art, compositional techniques, 21st century

“Many of my works are designed with two dimensions: spontaneity and rigorous organization.”– Gabriel Iranyi²

The work *Miroirs et reflets* by composer Gabriel Iranyi, completed on March 7, 2024, written for solo cello and a small instrumental ensemble, was commissioned by the Sound Borders Association as part of the *Quartet in Residence - Mirrors* project, held in Cluj-Napoca.

The first audition of this work is scheduled for October 1, 2024, featuring cellist Diana Ligeti, to whom it is dedicated, alongside the Couleurs Ensemble. Through this composition, Iranyi explores a subtle and complex

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² Interview by Alexandra Magazin with composer Gabriel Iranyi, on ZOOM, 23.05.2024.



dialogue between contemporary music and visual art, inviting the audience to a sonic experience where techniques of mirroring and reflection not only structure the musical material but also transform it into an auditory metaphor for visual interactions. Thus, *Miroirs et reflets* promises to be a captivating journey into how the arts can mutually influence and enhance each other.

The Innovative Concept in the Creation of the Musical Work

In this piece, the concept of the “mirror” is addressed from two main perspectives: technical and metaphorical. From a technical point of view, mirroring in music refers to techniques through which musical motifs or phrases are reflected, either by inversion or recurrence.

Conversely, mirroring can also be understood metaphorically as a freeform approach to transforming and reinterpreting musical material. In this case, the composer does not follow strict rules but explores emotional reflections or creates new interpretative perspectives. Thus, mirroring becomes a means by which the musical structure attains depth and symbolism, establishing a connection between auditory and visual perception.

According to the composer, in contemporary music, artists reflect on the past but do not seek to replicate exact reproductions of previous works. Gabriel Iranyi stated: “The concepts of mirroring and reflection have fascinated me deeply, which is why I have explored the use of these techniques from the origins of music, including before and during the Renaissance, as well as in Bach’s works.”³ This approach was central to the development of his piece, demonstrating his interest in integrating visual and musical concepts.

The composer also explained the concept of “mirroring” in his work *Miroirs et reflets*: “From a practical perspective, the use of a mirror can facilitate the exploration of various musical effects on a musical image and the associated notes. Placing the mirror vertically on the left or right side of the musical image produces a modified repetition of the initial motif, emphasizing sonic symmetry. Conversely, positioning the mirror vertically in front of the motif generates an inverted version of the musical phrase, a technique that creates significant contrast within the piece and adds complexity to the compositional structure”⁴. This process reflects the idea of mirroring not only visually but also aurally, giving rise to new variations of the same musical material.

³ Ibidem.

⁴ Ibidem.

Another technique present in his work is the use of two mirrors of different sizes, one small and one large, placed facing each other. This arrangement creates an effect of infinite reflection, where the image in the small mirror can generate a series of increasingly smaller images. This repetitive reflection effect is analogous to a painting composed of multiple small images, which merge to form the fundamental image. This technique appears in various passages of the work (see Stage VII, measures 51-53).

Mirroring plays an essential role for Gabriel Iranyi, exemplifying certain forms of flexibility, in which reproduction is carried out with specific interpretive liberties.

Interdisciplinarity Between Visual Arts and Music: Exploring the Concepts of Reflection and Mirroring

In the interview with composer Gabriel Iranyi, he explained the connection between musical art and visual arts, highlighting how these two fields have influenced his creative process.

In particular, the composer was influenced by Claude Monet and Paul Klee. Monet, renowned for his series of works dedicated to the garden at Giverny, created famous pieces depicting the lake, water lilies, and the Japanese bridge. The composer found sources of inspiration in two specific works: *Water Lilies*⁵ from 1907 and *Water Lilies*⁶ from 1916, exploring how the reflections of water and light can be translated into musical structures.

A notable element of these works is that “by observing the paintings, we distinguish a diversity of water lilies arranged in the water, manifesting in a wide range of colors and shapes. These water lilies, reflected on the lake’s surface, mirror alongside the willows and the sky. Although the sky is covered with clouds, it seems not to provide a clear perspective, suggesting that the water lilies float above the clouds while the sky lies beneath them”⁷. Thus, the painting creates an alternative reality based on principles of reflection, a reality that transcends ordinary physical dimensions.

For the composer, reflections are a central element, but they are treated differently from the approach in Bach’s works. Instead of a strict use of themes, he prefers an interpretation where thematic reproduction enjoys greater artistic freedom. This technique is similar to the way Monet manipulates visual reflections in his paintings: he does not reproduce a

⁵ <https://www.wikiart.org/en/claude-monet/water-lilies-16>, accessed 25.05.2024.

⁶ <https://www.wikiart.org/en/claude-monet/water-lilies-40>, accessed 25.05.2024.

⁷ Interview by Alexandra Magazin with composer Gabriel Iranyi, on ZOOM, 23.05.2024.

faithful image of reality but creates multiple layers of perception and light that challenge the viewer to see beyond the surface. Thus, musical reinterpretation becomes an artistic exploration that engages both the listener and the performer, adding depth to the musical motif.

Paul Klee, the second visual artist from whom Gabriel Irunyi drew inspiration, made a significant contribution to modern art through his work *Fugue in Red*⁸ (1921). This painting not only reflects Klee's fascination with music but also transposes musical elements into visual language. The title of the work refers to the complex musical form, the fugue, which involves imitation and variation, features that Klee integrated into the structure of his visual composition. In *Fugue in Red*, Klee uses colors, shapes, and textures to create a sense of movement and rhythm, fundamental elements in music. The vibrant colors and intersecting lines suggest a dynamic interplay between themes, like how different voices intertwine in a fugue. This work exemplifies how Klee translates musical principles into visual art, a process that inspired Irunyi to explore analogies between sound and image in his musical compositions. Multiple themes are presented that, through their execution, align with the concept of heterophony. In folk music, heterophony often involves a main theme accompanied by various improvisations derived from the same theme⁹. In the painting, a motif repeats, but with subtle variations in each appearance, thus reflecting stylistic similarities to the heterophonic technique. Other relevant works by Klee that contributed to the composer's creative process include *Crystal Gradation*¹⁰ (1921) and *Growth of the Night Plants*¹¹ (1922).

Stylistic, Analytical, and Interpretative Aspects: Investigating the Complexity of the Masterpiece

The work *Miroirs et reflets* is characterized by a complex and innovative structure, highlighted by the strong contrast between its two distinct parts. These are delineated by the tempo markings *Lento* and *Subito allegro molto*, with a sudden shift from a slow movement to a very fast one starting at measure 81. The composer aims to provide the listener with a sense of unified work despite the evident differences between the two sections.

⁸ <https://www.wikiart.org/en/paul-klee/add-in-red-1921>, accessed 26.05.2024.

⁹ And this heterophonic technique is defining for a significant portion of Romanian composition, which traces its roots back to George Enescu.

¹⁰ See <https://www.paulklee.net/crystal-gradation.jsp>.

¹¹ See <https://www.wikiart.org/en/paul-klee/growth-of-the-night-plants-1922>.

The first part of the work, which includes ten stages according to the composer's statement, is characterized by a static approach and rigorous organization. It develops using isolated sustained sounds (measures 1-2, solo cello), reflections (measure 3, glockenspiel and harp), pitch shifts, harmonics, *glissando*, free imitations, trills, dynamic fluctuations, direct musical gestures, convex movements, and other compositional techniques. In contrast, the second part, which comprises six stages, is defined by spontaneity and a fast tempo, including mirroring, motoric movements, alternating measures, asymmetries, very fast trills, quarter tones, *pizzicato duro*, and *glissando*.

The first stage of the work is presented from measure 1 to measure 23 and is defined by the concept of isolated sustained sound, theorized by Belgian musicologist Harry Halbreich¹². The work begins with an isolated sustained A in the solo cello (measures 1-2), followed by the introduction of a second sound, B \flat , positioned a quarter tone lower. The composer uses this technique to create a motif in measure 3, which is then reflected in the harp and glockenspiel, analogous to how Monet achieved reflections in his water lily paintings¹³. The initial motif, realized in the harp through the combination of the two sounds (G \sharp and A), is taken up by the glockenspiel in an inverted form (B and B \flat), thus generating an auditory "reflection." Simultaneously, harmonics are introduced in the violin and viola, contributing to the "mirroring" effect and creating a reverberation effect. These harmonics are arranged in a distinct configuration, a semitone interval from the initial motif rendered by the viola, amplifying the sonic complexity of the passage. In the cello, alongside the isolated sustained sound (A) in measure 3, a new "mirror" motif, B \flat , appears with the indication to be performed a quarter tone lower.

¹² In Harry Halbreich, *Olivier Messiaen*, Fayard, Foundation SACEM, Paris, 1980.
See https://www.lemonde.fr/disparitions/article/2016/07/01/mort-d-harry-halbreich-musicologue-belge_4962041_3382.html, accessed on August 28, 2024.

¹³ Interview by Alexandra Magazin with composer Gabriel Iranyi, on ZOOM, 23.05.2024.

E.g. 1

Arpa
Accordez: 1REb
re#dobsib
mi#fabsol#la#
pp *delicato*
8va
Monet's Reflections
dobsib

Glockenspiel
15
2
pp *delicato*
Monet's Reflections
pp *delicato*

2 Piatti sosp.
pp *delicato*

sustained isolated sound
Lento ♩ = 44
s iasto
senza vibr.
poco vibr.
ORD
senza vibr.
ppp
p poco
espr.
pp
musical motif - image

Violoncello solo
ppp
p poco
espr.
pp

Violino
Reflections - Harmonics.
pp

Viola
pp

G. Iranyi – *Miroirs et reflets*, mm. 1-4

Since the work is conceived as a concerto piece for solo cello and a small instrumental ensemble, the solo cello part includes a variety of techniques, such as complex articulations, trills, harmonics, gestural techniques, *pizzicato*, *arco*, exceptional divisions, as well as changes in tempo and dynamics.

E.g. 2

Vcl. solo
poco accel.
6
II
dim.
5
C A tempo
pp
p
trill
oscuro
mp
dolce
Tempo flessibile
(colla parte)
arco
pizz.
III
IV
C
IV
C
IV
C
IV

G. Iranyi – *Miroirs et reflets*, mm. 18-20.

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The second section (mm. 23-29) is characterized using quarter tones and chords in a distinctive manner. The composer implements mirroring effects within the instrumental ensemble (flute, clarinet, violin, viola, cello, and double bass - harmonics). Three of these instruments perform small steps, moving upward in quarter tones asynchronously, while the remaining three instruments move downward. The instruments with ascending movement mirror each other through free imitation.

E.g. 3

The image shows a musical score for measures 21-24 of 'Miroirs et Reflets' by Gabriel Iranyi. The score is for a full instrumental ensemble: Flute (Fl.), Clarinet (Cl.), Violin solo (Vcl. solo), Violin (Vn.), Viola (Vla.), Violoncello (Vcl.), and Contrabasso (Cb.).

- Measure 21:** Flute and Clarinet parts begin with *pp*. The Clarinet part includes the instruction: *se necessario, respira brevemente e continua suonare immediatamente*.
- Measure 22:** A key signature change to D major is indicated. The tempo is marked *A tempo*. A blue box highlights the beginning of the section. The Flute and Clarinet parts are marked *pp dolce, tenuto*. The Violin solo part features a *trillo* (trill) with *lenia* (slowing down) and *rapido* (speeding up) markings, followed by a *convex motion* (purple box) and a *gett.* (glissando) marked *mp* and *pp*.
- Measures 23-24:** The score illustrates mirroring effects. Red circles highlight ascending quarter tones in the Flute, Clarinet, and Violin parts, labeled 'free imitation' and 'MIRRORINGS'. Orange circles highlight descending quarter tones in the Viola, Violoncello, and Contrabasso parts, labeled 'descending quarter tones'. Blue lines connect the ascending and descending passages, showing their mirrored relationship.

G. Iranyi – *Miroirs et reflets*, mm. 21-24.

The convex motion, previously illustrated in the solo cello part in measures 21-24, constitutes another technique used by Gabriel Iranyi in his composition. This technique involves introducing a descending passage, which is then mirrored by an ascending passage.

Stage III (mm. 30-33) is defined by a direct musical gesture. This section features ascending passages with vivid sounds, and the instruments are carefully selected to construct a fragment that evokes light. In contrast to the earlier stages, which created shadow effects or touches reminiscent of visual arts, the addition of the vibraphone with pedal contributes to creating a musical gesture that brings light (measure 31). In the instrumental ensemble, dynamic fluctuations are achieved through the arrangement of sounds and the use of color dynamics. Thus, when one instrument performs a *diminuendo*, the other instrument executes a *crescendo*.

E.g. 4

9

E Poco più mosso
♩ = 50

Ar.

Vibr.

direct musical gesture

bright and metallic sound

LIGHT

mf *f* *p.d. chevilles* *f*

mf *f* *Ped.*

G. Iranyi – *Miroirs et reflets*, mm. 30-31.

The climax of the first part is reached in measure 33, where tensions build up in the instrumental ensemble using *gettato* techniques and quintuplets. This accumulation sets the stage for the entrance of the solo cello, which will present “color” passages in the fourth part (measures 34-38), intended to resolve the accumulated tensions.

The image shows a musical score for five instruments: Flute (Fl.), Clarinet (Cl.), Arpa (Ar.), Vibra (Vibr.), and Violoncello solo (Vcl. solo). The score is for measures 47-49. The Flute part has a 'non frullato tremolo' marking and dynamics 'p', 'mp', and 'mf'. The Clarinet part has a trill (tr) and dynamics 'p', 'mp', and 'p'. The Arpa part has a 'do sol #' marking and dynamics 'mp' and 'mf'. The Vibra part has a 'gliss.' marking and dynamics 'mp' and 'mf'. The Vcl. solo part has 'ORD I' and 'II' markings, dynamics 'p', 'mp', and 'mf', and a '7' marking. A yellow line connects a yellow box in the Flute part to a yellow box in the Vcl. solo part, with the word 'reflections' written in yellow. Two blue boxes highlight specific passages in the Arpa and Vibra parts.

G. Iranyi – *Miroirs et reflets*, mm. 47-49.

The composer creates a moment of tension through the art of the fractal¹⁴ in the seventh stage (measures 51-53), where a motif is repeated across three distinct octaves, and this motif diminishes in terms of both distribution and the distance between the notes.

¹⁴ Fractal music is a type of composition that uses the principles of fractals, i.e., self-similar mathematical structures, to create sound shapes and patterns. In fractal music, structures or musical motifs are repeated at different scales, just as a mathematical fractal exhibits the same recurring patterns at various levels of magnitude (cf. K.J. Hsu, "Fractal Geometry of Music: From Bird Songs to Bach" in: A.J. Crilly, R.A. Earnshaw, H. Jones, *Applications of Fractals and Chaos*. Springer, Berlin, 1993. https://doi.org/10.1007/978-3-642-78097-4_3).

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E.g. 7

The image shows a musical score for Violin solo, measures 51-53. It consists of three staves. The top staff is in treble clef, the middle in alto clef, and the bottom in bass clef. Dynamics range from *p* to *fff*. Performance instructions include *molto accel.*, *Presto*, and *fractal technique*. The bottom staff includes specific bowing instructions: *al tallone*, *increase bow pressure*, *tone with scratching noise*, and *tone with scratching noise*. There are also numerical annotations like '3' and '6' above notes, and 'cresc.' and 'f cresc.' below notes.

G. Iranyi – *Miroirs et reflets*, mm. 51-53.

The section of contrasts (measures 54-65) introduces new percussion instruments, such as the tamburo piccolo and gran cassa. In this section, the string section presents a *lots of bow changes* and marked dynamic differences.

Stage IX (measures 66-72) reintroduces the solo cello, utilizing *tremolo* combined with *pizzicato* and *gettato*, within a convex form with free imitation. The clarinet, in measure 68, employs the *bisbiliando* technique to produce a coloristic trill, while the flute plays a repetitive sound, accompanied by the articulation of consonants (*t, k, t, k*), to create a color and timbre effect with repercussive effects. In measures 71-72, the solo cello presents a convex passage with differentiated rhythms.

Stage X (measures 73-80) sees a significant decrease in tempo to *Lento*, reminiscent of the beginning of the work where reflections are presented on the cello through two-voice imitation.

The second part, *Subito allegro molto*, begins with a bridge note *A* on the cello. This section is notable for its variation art. In Stage XI (measures 81-87), passages of mirroring are developed, first on clarinet and flute (measures 81-82), followed by combinations between flute-clarinet and violin-violin (measures 83-85). The following stage (measures 88-97) presents gradual mirroring and staccatos, preparing the entrance of the solo instrument, while Stage XIII (measures 98-116) dissolves the perception of the 4/4 meter through the introduction of asymmetries, meter changes, and other rhythmic

combinations. Beginning with measure 108, an ascent on the violin and viola prepares the climax of the second part, which occurs on the solo cello in measure 113.

E.g. 8

mm. 107

Vcl. solo

Vn.

Vla.

mm. 112

Vcl. solo

Vn.

Vla.

G. Iranyi – *Miroirs et reflets*, mm. 107-113.

The final stages, XIV (measures 116-121) and XV (measures 122-138), gradually lead to Stage XVI (measures 139-147), characterized by an *Adagio extremo tempo*. According to the composer's instructions, a half note will last approximately four seconds, creating an extremely static atmosphere that complicates the interpretation of the notes and requires a very slow conducting gesture. There are brief elements that recall the first part (measure 145, harp and glockenspiel), which lead to the conclusion (measures 148-156). Short elements reminiscent of the first part of the work appear (measure 145, on harp and glockenspiel), leading to its conclusion. The chords in the string section, initially consisting of four notes, gradually reduce to three notes, then to two notes a quarter tone apart, culminating ultimately in the performance of a single note.

The image shows a musical score for three instruments: Violin solo, Violin, and Viola. The Violin solo part is marked with a '4'' and has several notes highlighted with purple and blue boxes. The Violin and Viola parts have notes highlighted with purple and blue boxes. A red box highlights a note in the Violin solo part, with the text 'sustained isolated sound' written below it. The word 'perdendosi...' is written above the Violin solo part.

G. Iranyi – *Miroirs et reflets*, mm. 148-156.

Conclusions: Sound Reflections and Visual Mirrors in Gabriel Iranyi’s “Miroirs et Reflets”

At the end of the interview with Gabriel Iranyi, he reveals a significant aspect of his work: “It is interesting that I managed to conclude this piece on a single isolated sustained note. The work begins and ends on an isolated note, but in different ways: at the start, it is a pure note, whereas at the end, there are disturbances in the sound through quarter tones that gradually clear up, leading to a single note. It is a coincidence that the piece starts on A and ends on E, with no connection to Bach.”¹⁵ Johann Sebastian Bach is renowned for his rigorous musical structures and mathematical symmetries, including the symbolic use of notes (such as his musical motif “B-A-C-H”). In contrast, Iranyi adopts a more liberated approach, where the movement between A and E is not intended to evoke specific symbolism but is rather part of his personal creative process.

In conclusion, Gabriel Iranyi’s *Miroirs et reflets* represents a profound exploration of the concepts of reflection and mirroring, blending advanced compositional techniques with visual influences inspired by the visual arts. Structured in two distinct but unified parts using these techniques, the work demonstrates remarkable complexity and innovation. Iranyi succeeds in creating a captivating sonic experience where elements of rigorous organization and spontaneity intertwine harmoniously, offering the listener not just a musical piece but a genuine auditory metaphor for visual interactions. Through the subtle use of reflections and mirrors, the composer achieves his goal of transforming musical material into a vibrant, dynamic, and expressive structure.

¹⁵ Interview by Alexandra Magazin with composer Gabriel Iranyi, on ZOOM, 23.05.2024.

Thus, *Miroirs et Reflets* not only made a valuable contribution to contemporary music but also illustrates the power of interdisciplinarity in art.

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