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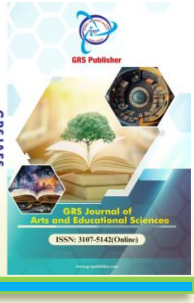

Multidimensional Graphical Images. Visualization and Fractal Analysis

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Abstract: The presented paper deal with the graphical expressions (pictures, images and their transformations) which is believed induced by the communication with the multidimensional space. The last means a space out of the traditional 3D world. There are many examples of people who believe they have an informational communication with the space out of the ordinary one where we exist our ordinary daily life. The author of the images spoke how they have been obtained in several stages – the original picture was drawing in specially selected places with a special technique including direct communication with the outside world. Next step is transformation of pictures by mirroring and rotational algorithm and obtained resulting pictures, displayed in the text. Without going deeper in the energy exchange between the external world and the recipient, we discuss the results of the fractal analysis done by the box-counting method and applied to all presented images. The results obtained show that the investigated pictures are clear fractals. The fractal dimensions are different for the investigated objects, but very similar in their transformed variants. The explanation of the observed results needs more and deeper analysis.

Keywords: Multidimensional Space, Images, Fractal Analysis, Box-Counting Method.

Cite this Article

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Introduction

This paper investigates a series of visual images that are claimed to originate from multidimensional spaces, using independent fractal analysis as a tool for empirical assessment. The source of these images is Rozalina Kassabova—a Bulgarian artist, musician, and writer—who asserts that the drawings are not merely products of imagination, but visual interpretations of phenomena perceived through non-ordinary states of consciousness. The purpose of this study is to subject these images to scientific scrutiny using fractal geometry, with the aim of determining whether they display characteristics consistent with complex, self-organizing structures. The exploration of multidimensional space has attracted growing interest across diverse disciplines, ranging from physics and mathematics to esotericism, philosophy, and consciousness studies. One notable figure in this context is Daniel Nemes (https://www.youtube.com/watch?v=uPAbt-K66X4), who claims to have developed a device called Energy Vision capable of capturing visual representations of entities from other dimensions. According to Nemes, the apparatus uses a combination of ultraviolet, infrared, and electromagnetic filtering systems to detect otherwise invisible realities. His work, though lacking formal scientific validation, has generated considerable attention online and has been supported in certain alternative research communities. However, mainstream science has largely dismissed these claims due to the absence of replicable methodologies and concerns over experimental controls. During the last days, new discoveries in CERN emerged confirming in some way the Nemes ideas (https://www.youtube.com/watch?v=zeJXbx98h6o)

The theoretical foundation of this research rests on the assumption that a multidimensional reality may exist and that communication or interaction with it is possible—either through technological devices or via the extraordinary perceptual abilities of certain individuals. Various cognitive models, including field-based theories of consciousness and quantum brain dynamics, have been proposed to explain how such interactions might occur. Within such frameworks, anomalous perceptions—often labeled as extrasensory—may reflect resonances with nonlocal informational structures. The subjective reports of individuals claiming multidimensional perception often include visual, auditory, or symbolic phenomena. In Kassabova's case, the experience is described as receiving spontaneous inner images that she externalizes through drawing. These images are said to vary based on location and contextual elements, suggesting a kind of site-specific informational channeling. Comparable ideas have emerged in New Age and metaphysical literature under terms such as "light language" or "multidimensional downloads," where abstract visual structures are interpreted as coded expressions of nonverbal, high-frequency communication. This study examines a selection of Kassabova's drawings using fractal analysis to evaluate whether they contain geometrical properties commonly associated with natural complexity and self-similarity. Fractal geometry, first formally described by Benoit Mandelbrot (1982), provides a quantitative framework for measuring the degree to which a pattern

occupies space at multiple scales. The primary metric used is the fractal dimension (D), a non-integer value that increases with the intricacy of spatial structure. Preliminary findings indicate that some of Kassabova's drawings display high fractal dimensions ($D > 1.7$), suggesting internal consistency and complexity beyond simple human sketching. Although fractal structures can occur naturally in both artistic and chaotic systems, their presence in this context may warrant further exploration, especially given the claim that the imagery originates from interaction with non-physical dimensions. It remains an open question whether such complexity arises from unconscious aesthetic intuition, spontaneous access to structured internal models, or interaction with external informational fields. While the presence of fractal structure is not definitive proof of multidimensional origin, it provides a valuable basis for ongoing inquiry. Integrating additional data—such as neurophysiological recordings, environmental parameters during drawing sessions, or comparative studies with meditative and trance-state artists—could enrich the interpretative framework. Furthermore, the implications of this research extend to broader questions about the limits of perception, the structure of consciousness, and the possible existence of nonlocal information systems accessible through human cognition. In conclusion, this study represents an interdisciplinary effort to assess whether visual artifacts associated with multidimensional perception exhibit quantifiable complexity consistent with natural fractal systems. Although the results do not confirm the source of the imagery, they support the possibility that such drawings encode structurally rich information worthy of further investigation within both scientific and philosophical paradigms.

Methodology and data

Box-Counting Method for Fractal Analysis of Images

In this study, fractal analysis was performed using the box-counting method to estimate the fractal dimension of grayscale or binary images. The fractal dimension is a quantitative measure of the complexity and self-similarity of patterns across multiple scales [1]. Subsequently, binarization was applied using Otsu's thresholding method, which determines an optimal cutoff by minimizing intra-class variance within the grayscale histogram [2]. This threshold converts the normalized grayscale image into a binary format, facilitating the detection of structural features relevant to fractal analysis. Otsu's method is widely recognized for its effectiveness in automatic image thresholding, particularly when the histogram exhibits a bimodal distribution representing distinct foreground and background classes [2].

The core fractal estimation employed the box-counting algorithm. In this method, the binary image is covered by square boxes of varying sizes (ε), typically decreasing in powers of two. For each box size, the number of boxes containing at least one foreground pixel, denoted as $N(\varepsilon)$, is counted. The relationship between $N(\varepsilon)$ and the box size ε is analyzed by plotting $\log(N(\varepsilon))$ against $\log(1/\varepsilon)$. The fractal dimension D is then estimated as the slope of the linear regression line fitting these points, according to the equation [1]:

$$D = \lim (\varepsilon \to 0) [\log N(\varepsilon) / \log (1/\varepsilon)]$$

This slope characterizes how image complexity scales with resolution, revealing fractal-like properties if the relationship approximates a straight line. The box-counting method is a widely used technique in fractal analysis, providing insights into the self-similarity and scaling behavior of complex patterns [3], [4].

To evaluate the quality of this linear fit, the coefficient of determination (R^2) was computed, where values near 1 indicate a strong fractal structure consistent with self-similarity. The linear regression was solved using a least squares approach.

Finally, the results were visualized by plotting the log-log data points along with the fitted regression line. The plot includes the calculated fractal dimension and the R^2 value, providing a graphical representation of the fractal complexity assessment.

This methodology combines standard image processing techniques with mathematical fractal analysis, enabling the objective quantification of complexity in images of natural or synthetic origin [5].

Data source and Data preparation

1. Creation of Primary Resonance Drawings

The creation of the primary resonance drawings does not follow a traditional artistic methodology based on concept, preparatory sketch, or compositional planning. Instead, the images emerge spontaneously and in real time, as a direct result of interaction between the subject and the surrounding environment, which is understood as an informational field.

Only minimal materials are used—compressed graphite sticks of varying hardness applied to paper—in order to avoid aesthetic stylization and to preserve the authenticity of the signal.

The method employed is intuitive, bodily-energetic, and ritualized in nature. It is not a drawing process in the conventional sense, but rather an act of internal attunement and spontaneous response to the energetic field of a particular space or individual.

The act of drawing is typically preceded by a period of silence, deep concentration, slowed breathing, and a state of meditative presence. The process begins with a shift into a state resembling peripheral awareness—an open mode of attention oriented toward bodily sensation, spatial impression, and inner stillness, rather than focused mental activity. This enables the conscious mind to relinquish control, allowing the process to unfold naturally.

The body functions as both mediator and instrument. It acts as a "resonator," perceiving subtle field-based signals—such as pressure, directional pull, or vibration—which are then transformed into movements of the drawing hand. The resulting line on the paper is not the product of visual intention, but the imprint of an internal impulse. In this way, each gesture captures a moment of invisible perception.

A key feature of the method is the absence of conceptual premeditation—there is no predetermined image. Rather, the image reveals itself. In this sense, the process bears resemblance to automatic drawing, though it unfolds within a more focused, somatically attuned, and field-responsive context.

During this creative act, the artist often experiences a fusion between inner sensation and external space. The boundary between subject and object becomes fluid—the space "speaks," and the

body responds. This state of resonant co-participation gives rise to unique visual structures that cannot be exactly replicated.

Interpretative Significance

This creative approach may be seen as a distinct visual practice of presence, in which each graphic imprint emerges from a living interaction between consciousness, the body, and the surrounding field. Such a perspective opens the possibility for scientific exploration of subjective experience through external form, revealing aspects of perception and resonance that are typically intangible.

Moreover, it allows for the application of fractal analysis as a means of objectifying an inherently subjective process—bridging intuitive artistic expression with measurable structural complexity.

2. Sensorial-Field Perception

The creation of the primary resonance drawings is grounded in a specific mode of heightened sensitivity known as sensorial-field perception. This form of perception transcends conventional sensory input (sight, hearing, touch) and includes sensations arising from a subtle, embodied interaction between consciousness, the body, and space.

From an interdisciplinary standpoint—including physics, philosophy, and phenomenology—space is not a neutral container but an active field containing information, frequency patterns, memory traces, and structural coherence. On a deeper level, space may be "saturated" with energetic imprints of past events, cultural memory, material histories, and latent geometric patterns.

The artist perceives the space through the body, which acts as both a biological and energetic resonator. This embodied receptivity may manifest as:

– Pulsations in specific body regions

– Waves of warmth or coolness

– Impulses of flow or vortex-like motion in the hands

– altered breathing or heart rhythms

– Spontaneous, non-volitional movement

Upon entering a space, there may be a distinct sensation of presence—as if the environment is "animated" by something invisible. This may be experienced as a call, invitation, or impulse to begin drawing; as a shift in emotional tone; or as a spontaneous internal emergence of colors, images, or geometric forms.

In this process, the image is not invented—it is translated. Through a complex inner mechanism, field information—possibly energetic, emotional, symbolic, or archetypal in nature—is transformed into line, structure, and texture. The resulting drawing becomes a kind of visual code of the experienced field.

Such experiences resonate with phenomena across different domains:

– In somatic psychotherapy, as a form of embodied environmental reading

– In shamanic or ritual practices, as trans-sensory perception of energetic fields

– In quantum field theory, this explores non-local interactions and wave-based information transmission

Summary

Sensorial-field perception provides the foundational mode through which the resonance drawings are generated. Space becomes an active participant in the creative process, while the image becomes a visible trace of the invisible dialogue between consciousness, body, and field.

3. Spatial Context

The environment in which the primary resonance drawings are produced is not experienced as a passive background but as a dynamic, responsive field. It possesses its own memory, geometry, frequency characteristics, and mood—all of which influence the artist and participate in the creative process.

The selection of a location is not based on visual aesthetics but typically arises from an inner impulse—an intuitive attraction or "calling" from the space itself. Often, these are archetypal sites such as ancient sanctuaries or natural landscapes with strong energetic presence.

Philosophically and physically, space may be conceived as an informational system embedded with traces of natural and human activity. In this context, the artist does not simply inhabit space but enters into communication with it.

Upon entering a site—or encountering another person—the body responds before the mind has fully processed the experience. These responses may include:

– Sensations of pressure or density

– localized vibrations

– Perceptions of spatial expansion

– Uncaused emotional states

These impressions form a tactile map of the space, which is then visually expressed. The artist thus becomes not a creator in the traditional sense but a translator of the spatial imprint. Each form, line, or structure becomes a visual result of the wave-based influence of the environment. As such, each drawing is unique, tied to a specific temporal and spatial alignment.

Summary

Space is not merely a setting, but a co-creator of the visual image. Each drawing serves as an "imprint of encounter" between human presence and the spirit of place.

4. Secondary Drawings – Mirror Exposure

Following the creation of the primary drawing, the image may undergo a process of mirror exposure, in which it is symmetrically reflected and overlaid onto itself. This technique is not used for decorative symmetry but rather to uncover latent structural layers within the original composition.

Mirror exposure is rooted in the principle of symmetry found in biology (bilateral anatomy), sacred geometry, and archetypal symbolism (mandalas, labyrinths). When applied, it generates new structures—both visual and energetic—that are absent in the original.

These emergent forms may include:

– Symmetrical fractal motifs

– Archetypal symbols (e.g., eyes, spirals, cosmic forms)

– Portal-like structures suggesting depth, movement, or dimensional inversion

These secondary structures often evoke strong psychophysical responses in the viewer, such as activation, emotional resonance, or associative imagery.

This process may also be interpreted as a visual form of self-reflection—where the image "observes itself"—and initiates a dialogic field between the seen and unseen, the conscious and the unconscious.

The increased structural complexity in these secondary drawings lends itself to fractal analysis. The presence of self-similar and scalable patterns suggests that these images embody fractal characteristics which can be objectively measured.

Summary

Mirror exposure functions as a method for revealing the hidden layers of a visual field. It enables deeper engagement with the multidimensional, symbolic, and structural potentials embedded within the original gesture.

5. Interdisciplinary Potential

Resonance drawings—especially those involving mirror exposure and multilayered compositions—possess significant interdisciplinary value. Their interpretation exceeds any single framework, integrating visual art, psychology, field theory, and physics.

The emergence of fractal-like patterns allows for analytical approaches from mathematics and complexity science, including fractal geometry and scaling theory. Artistically, these works align with practices of authentic expression—automatic drawing, body-based art, and energy painting—yet extend them through structured depth and resonance.

The creative process activates sensory, emotional, and intuitive dimensions, making these drawings potential tools for studying subjective perception, altered states, and field-based awareness. They may also serve therapeutic and diagnostic functions in fields such as art therapy or somatic psychology.

From an esoteric perspective, secondary images may be understood as visual codes carrying symbolic or archetypal messages—forms that bridge myth, geometry, and multidimensional perception.

Summary

Resonance drawing functions not only as an artistic practice but as a method of inquiry. It provides a visual language through which hidden structures of experience and consciousness may be explored, analyzed, and revealed.

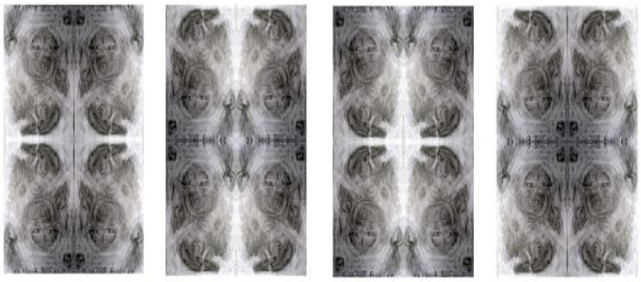
Data preparation algorithm

The present study examines five primary drawings produced as a result of resonant interaction between Rozalina Kassabova and sacred spaces, alongside the symbolic figure of a man born in Egypt, serving as the subject of interdisciplinary analysis. Each drawing is presented through three stages of transformation: the original image, a mirrored and rotated version of the original, and finally, a composite image created through superimposition. It is proposed that the original drawings are inspired by a resonance between the multidimensional realm—beyond the confines of everyday three-dimensional space—and the recipient, in this case, Rozalina Kassabova.

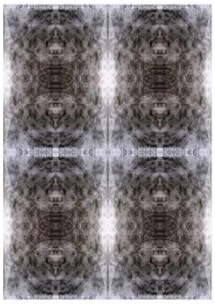
First drawing

1. One of the primary drawings was created on April 18, 2018. The object of interaction in this case is a man born in Egypt.

2. Four secondary drawings were generated through mirrored and rotational transformation of the primary image, serving as visual extensions and conceptual reflections of the original.



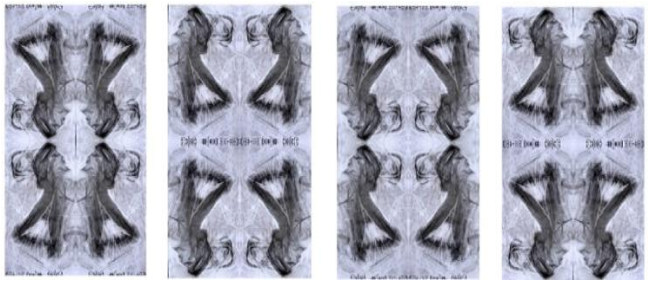
3. Superimposition of the four secondary drawings.



Second drawing

1. Primary drawing created on April 8, 2016. The object of interaction is the Madara Historical and Archaeological Reserve. The drawing was made at the center of the reserve, in the area surrounding the Great Cave – a rock overhang approximately 30 meters in height.

2. Four secondary drawings were generated through mirrored and rotational transformation of the primary image, serving as visual extensions and conceptual reflections of the original.



3. Superimposition of the four secondary drawings

Third drawing

1. Primary drawing created on October 6, 2013. The object of interaction is Perperikon – the sacred city. It is an early-historical, ancient, and medieval stone complex. The drawing was made at the site of the eastern crypt.

2. Four secondary drawings were generated through mirrored and rotational transformation of the primary image, serving as visual extensions and conceptual reflections of the original.

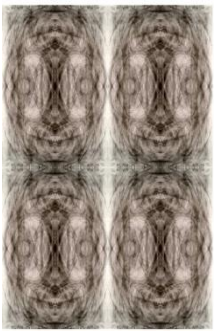
3. Superimposition of the four secondary drawings.

Fourth drawing

1. Primary drawing created on July 25, 2014. The object of interaction is an ancient domed tomb – a heroon (mausoleum) located near the town of Pomorie.

2. Four secondary drawings were generated through mirrored and rotational transformation of the primary image, serving as visual extensions and conceptual reflections of the original.

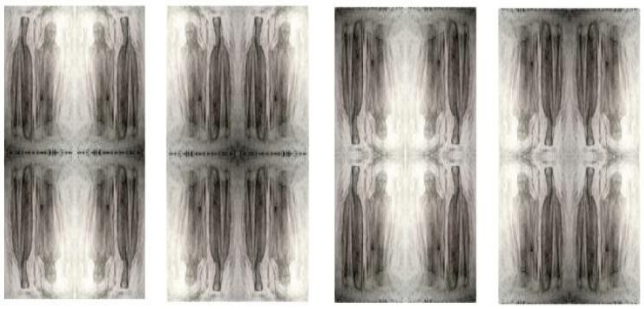
3. Superimposition of the four secondary drawings.



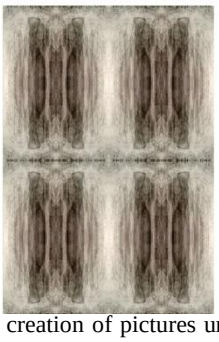
Fifth drawing

1. Primary drawing created on August 9, 2015. The object of interaction is the tomb of Saint Ivan Rilski the Miracle Worker. He is regarded as the greatest Bulgarian saint and hermit, the heavenly protector and patron of the Bulgarian people, as well as the founder and patron of the largest stavropegial monastery in Bulgaria.

2. Four secondary drawings were generated through mirrored and rotational transformation of the primary image, serving as visual extensions and conceptual reflections of the original



3. Superimposition of the four secondary drawings.



So, the algorithm of creation of pictures under the fractal analysis consists of:

Primary Drawing (Resonant Interaction) -> Secondary Drawing (Mirror-Exposed Primary and rotated each time) - > Graphically Interwoven Image of the Four Mirrored Secondary Drawings

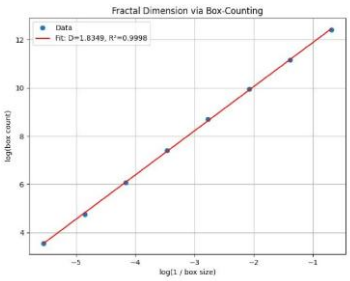
The process unfolds in three stages:

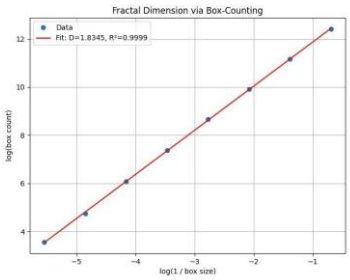
1. A primary drawing, created through resonant interaction
2. A secondary drawing, produced via mirrored exposure of the primary and rotation to fold the drawing symmetrically
3. A graphically interwoven composition, integrating the four mirrored secondary drawings

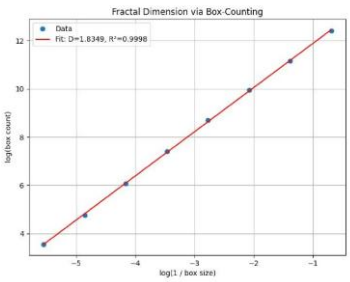
Results and Discussion

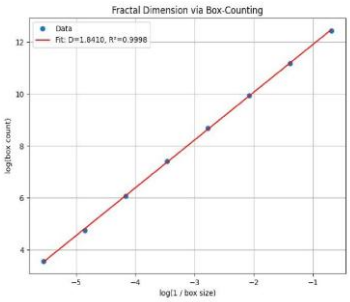
The results of the fractal analysis applied to the original five drawings and their subsequent transformations are presented below:

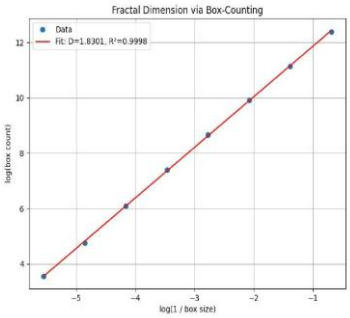
First drawing

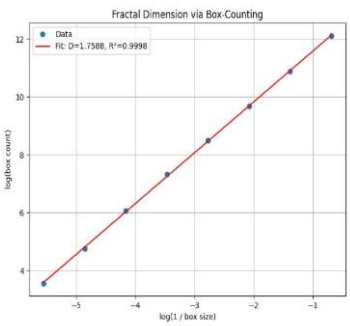


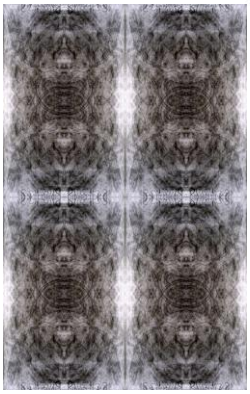


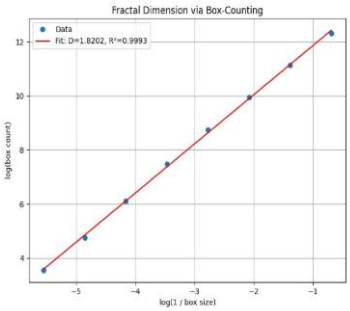


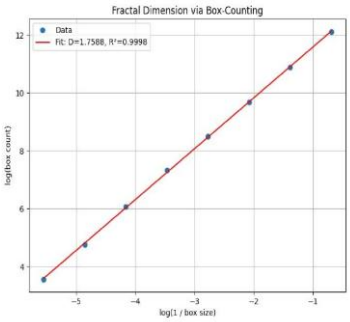




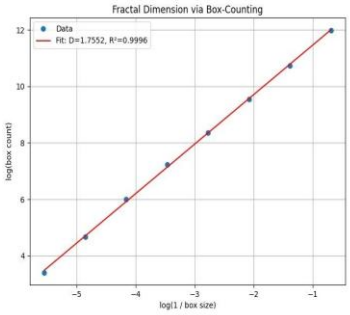


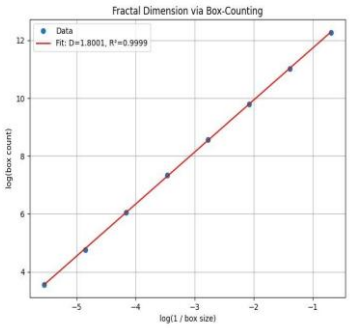




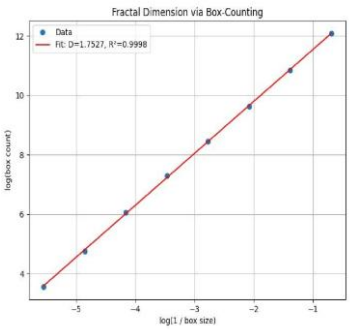


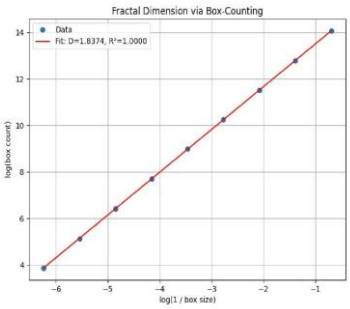
Second drawing

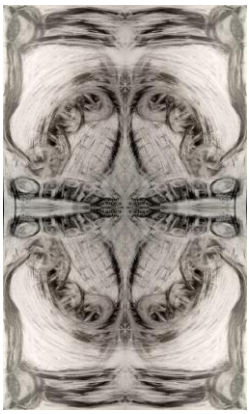


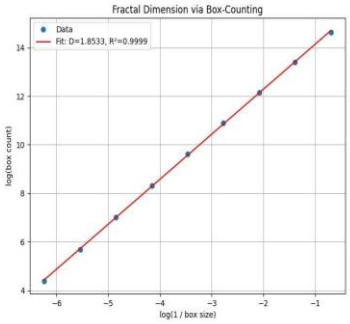


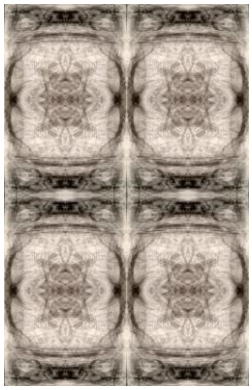
Third drawing

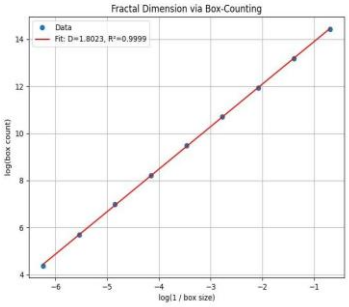




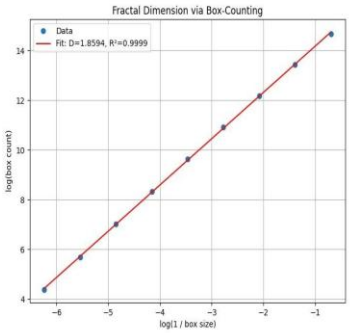


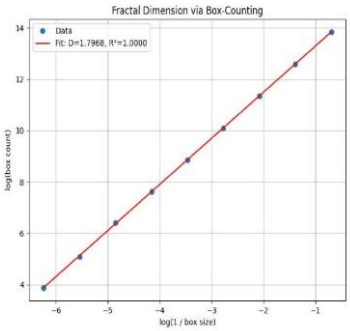


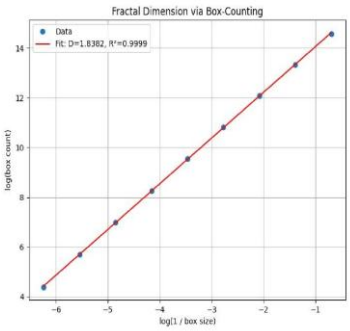


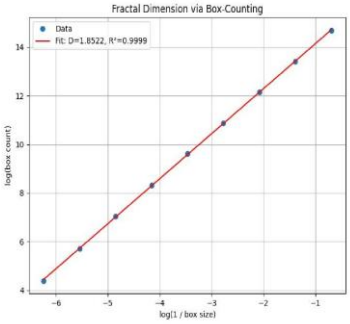


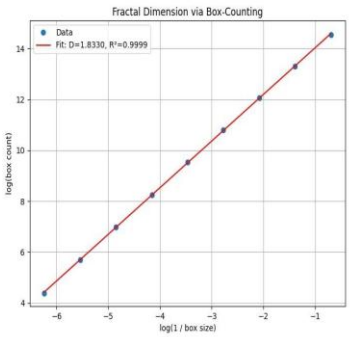
Fourth drawing

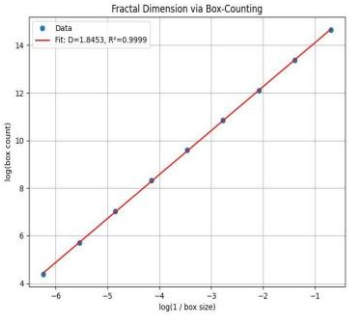


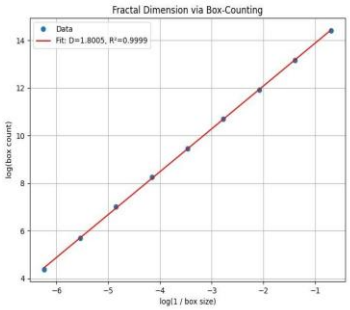


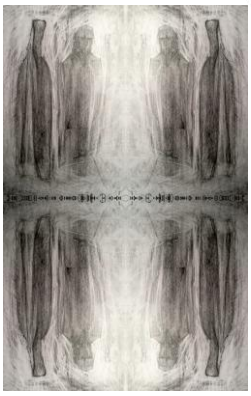


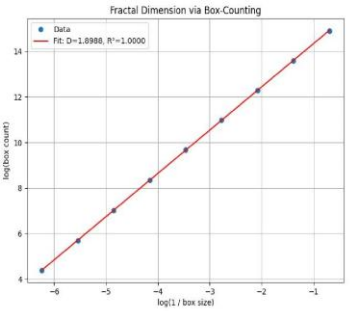


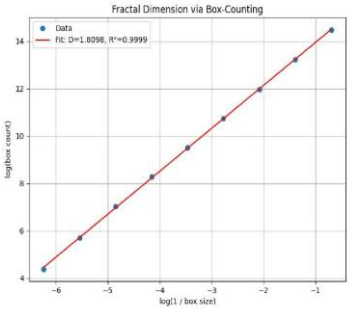


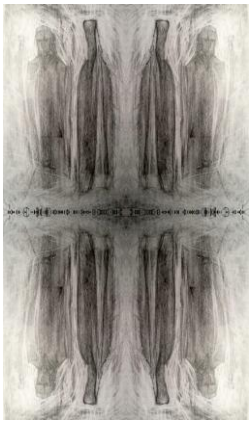


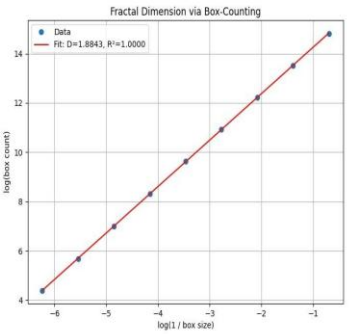


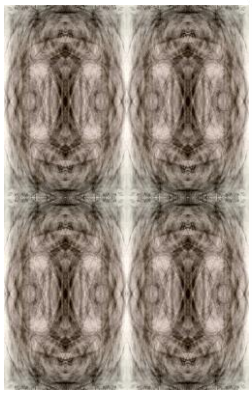


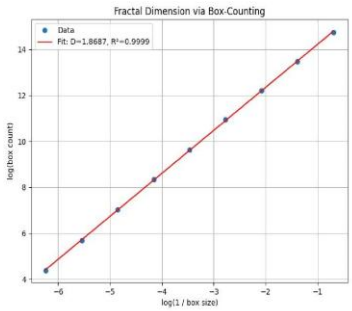


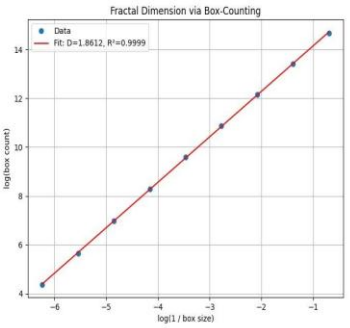




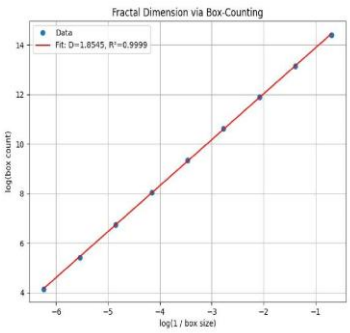


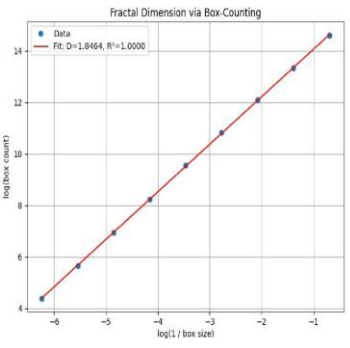


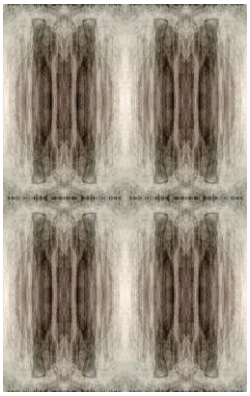


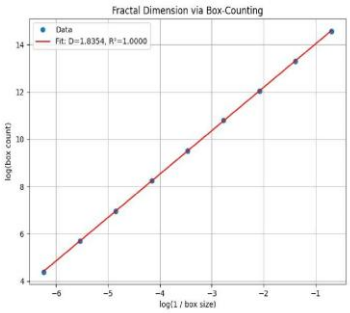


Fifth drawing









The aim of the experiment is to clarify and establish the similarities and differences influenced by the initial image and its fractal properties, as well as to examine how the duplication and subsequent algorithmic transformations affect the fractal dimension at each step. The results of the experiment are summarized in Tables 1 and 2.

Table 1 Fractal dimension (D) versus correlation coefficient (R) about each step of the algorithmic transformation.

Case	D1o	R1o	D1	R1	D2	R2	D3	R3	D4	R4	D5	R5
Egypt	1.8456	0.9998	1.8349	0.9998	1.8301	0.9998	1.8410	0.9998	1.8345	0.9999	1.8202	0.9993
Madara	1.7552	0.9996	1.7588	0.9998	1.7634	0.9998	1.7631	0.9997	1.7527	0.9998	1.8001	0.9999
Perper	1.8374	1.0000	1.8594	0.9999	1.8533	0.9999	1.8330	0.9999	1.8382	0.9999	1.8023	0.9999
Pomor	1.7968	1.0000	1.8522	0.9999	1.8453	0,9999	1.8005	0.9999	1.8098	0.9999	1.8687	0.9999
SvIvRil	1.8545	0.9999	1.8988	1.0000	1.8843	1.0000	1.8612	0.9999	1.8464	1.0000	1.8354	1.0000

D1o represents the fractal dimension of the original image, while R1o denotes the correlation coefficient between the observed data points and the regression line for the original image. Di (where i = 1 to 5) and Ri (where i = 1 to 5) correspond respectively to the fractal dimensions and correlation coefficients for each step of the algorithmic transformation.

From this table, it is evident that all examined images across the various selected cases exhibit pure fractal characteristics. This conclusion is strongly supported by the high values of the correlation coefficients. Moreover, the close similarity in fractal dimension values suggests a unified origin of the images, which may be generated either by the painter's mind or potentially transferred via the parallel space of a multidimensional world.

In any case, variations in fractal dimensions could serve as indicators of the source of the graphical information. For a single image with a calculated fractal dimension, it may be attributed to the group of images transformed through the algorithmic steps. Another noteworthy aspect is the fine tuning of the fractal dimension, which appears after several decimal places and likely reflects subtle characteristics of the transformed images.

Table 2 Ranges of Fractal Dimension and Logarithmic Parameters from Box-Counting Analysis of Five Cases

Case	Diapason D	Diapason R	Diapason log (1/box size)	Diapason log (box count)
Egypt	1.82-1.85	0.9993-0.9999	3.5-12.5	-5.7-0.6
Madara	1.75-1.80	0.9996-0.9999	3.5-12.0	-5.6-0.6
Perper	1.80-1.86	0.9999-1.0000	4.1-14.2	-6.5-0.5
Pomor	1.80-1-87	0.9999-1.0000	4.5-14.5	-6.5-0.5
SvIvRil	1.83-1.89	0.9999-1.0000	4.1-14.5	-6.5-0.5

To assess the extent of variation in both the log(1/box size) and log(box count) parameters across the five investigated cases, Table 2 was constructed. Given that the analysis operates within a logarithmic scale, even subtle shifts in these ranges may yield diagnostically significant insights. Such variations can serve as indicators of the degree of fractality present in each image and may also reflect differences in the structural or informational origin of the visual patterns. Identifying consistent or divergent scaling behaviors across cases provides a valuable basis for interpreting whether the observed complexity arises from inherent geometrical order, intuitive aesthetic processes, or possible interactions with non-ordinary informational fields.

Conclusions

The results of the fractal calculations, applied to both the original drawings and their algorithmically transformed versions, are

presented below. Each image underwent analysis via the box-counting method to determine its fractal dimension (D) and the correlation coefficient (R^2), which quantifies the degree of linearity in the log-log plot used to estimate fractality. The process included not only the original hand-drawn images but also their mirrored, rotated, and superimposed variants, allowing for a comprehensive examination of how structural complexity evolves through geometric transformation.

This approach aims to evaluate whether the core fractal characteristics of each drawing are intrinsic to the original composition or emerge more strongly through transformation. In cases where the fractal dimension remains stable across all stages, this may suggest a coherent informational or energetic source that transcends form. Conversely, variation in fractal values across transformations may indicate sensitivity to spatial symmetry, orientation, or internal dynamics of the visual field.

Notably, certain drawings displayed high consistency in their fractal metrics despite transformation, which may reflect an underlying generative pattern or resonance field. This reinforces the hypothesis that the original drawing process may have tapped into a structurally organized, possibly field-based informational source. Further research incorporating neurocognitive, environmental, and phenomenological data could deepen understanding of the observed structural consistencies and variations.

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*Scientist Went Missing After Creating Device To See Multidimensional Beings

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