

## Abstract Painting Expressions and their usage in Scientific Visualization and Classifications – A study

Vivek Velayutham<sup>1</sup>, K Raman<sup>2</sup>

<sup>1,2</sup> The Tamil Nadu Dr J Jayalalithaa Music and Fine Arts University,  
Government College of Architecture and Sculpture, Mamallapuram,  
Tamil Nadu, India

Email: [vivekvelayutham@gmail.com](mailto:vivekvelayutham@gmail.com)

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### ABSTRACT

Art is an inevitable part of human life in all forms and actions to express and register. In the modern era of art forms, abstract painting is used in navigating several aspects of communication in sociocultural nature. Abstract painting is an outcome of the interpretation of illusionist ideas from the artistic perspective, abstract paintings can elicit many types of emotional responses from the viewer. Scientific visualization using abstract painting and colours for a complex role in classifying the aesthetic value is used in visual guidance. The ideological framework of this paper talks about the various critical analysis and aspects of abstract painting fusion, starting from the visual point to the colour of nature.

### INTRODUCTION

Commonly, people are attracted to art because of the following characteristics: beautiful, realistic, non-realistic, figurative, and nonfigurative. Contemporary artwork plays a significant role in today's world, and it seems to grow with the free spirit either to imitate nature or not to mimic nature. The abstract painter's ideology is obtained from nature and it revokes as a pearl of divine wisdom in art which is from the deepest nature fusions. From rock cave paintings to contemporary works of art, it depends upon the artist's ideal thought to execute their expressions and emotion. The work and workstyle of the artist are expressed through different forms, and colourful patterns to convey the aesthetic values as information in paintings. Art is always interlocked with the part of society revolving in and around the ecosystem. Art represents reality, communication of expression, and emotions with allied qualities in different forms (visual, applied, decorative, performing, and liberal arts).

### BACKGROUND

The motto of abstract painters is to deliver the spiritual illusionist energy in the form of ideal beautiful work of art but it still maintains the absolute spirit in its space. The abstract artist differs from the realistic artist as the abstract does not have limits in the boundaries of executing the ideas or emotions whereas the realistic artist has some restricted boundaries. The abstract work is a way to absolute fantasy, but expression and emotions pave the way to texturally coloured space. According to Hegel's philosophy [1] of fine arts, "A work of art is, however, not a merely censorious thing, but spirit manifested through a sensuous medium. Sense of taste in a work of art is a holistic approach which differs for every artist and is dependent on the individual thought process.

The emotional values in the abstract painting are is just a part of the totality that includes





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feelings for thoughts and the emotions which arise in the mind. The emotional values in abstract art can be identified by its own kind of perception and response from the viewer of the artwork. As the viewer is attracted towards the abstract painting and its emotional values, they can respond to (Healey and Enns 2002) artwork depending on their own taste and viewing perspective.

This article aims to examine the aesthetical, and emotional values in the domain of abstract painting. Abstract art shows the complex sociocultural nature and the reflections on the emotional aspect of the artist's psychology. The other end is the viewer's perception of how they are attached towards abstract art. Abstract painting evaluates the play of various dimensions in cosmic and spiritual energy and the artists who enjoy the delivery by expressing a point in their abstract painting. Abstract painting is attained with a great flow of dynamic composition, and narrative visual values with the associated memories.

## LITERATURE SURVEY

C.G.Healey and Enns.J.T in [2] explain that scientific visualization is the outcome of images with the combinations of validating data in large sum and correlation of analysing, discovering, and exploring many facts of data. In multidimensional visualization, there are two paths; one is to focus on M mapping features on data design and its functional visual features such as colour, texture or motion to represent data. The other path is to determine the viewer's analysis of the image M produced. The visual impact of M generates the viewer to explore the data in an accurate and effortless way. The author's important discussion about the overlap of the impressionist painter's brush style and stroke properties with fundamental visual features was detected in low-level visual systems.

K Zhang in [3] has approached a technique by presenting the information in visual aspects and the difference with colligation (form, line, shape). Aesthetic usage is represented by the form in contour and its balance by colour and texture. Using abstract painting, one can solve the metaphors of solving more complex intergraded maps to visualize the world in a pleasing manner. Fishwick in [4] discussed the role of aesthetics applied in computing. Healey in [2] motivates the viewers' interest in applying aesthetics for visual display. Finally, the authors infer that information visualization is a discipline successfully used in art and science to intersect the image, numbers and words. However, the author missed out on the significant challenge in terms of the area called balance in the frame, work positive and negative which plays a vital role in aesthetics.

Chamorro-Premuzic, T. et. al. [4] have preferred the triad methods to explore the personality factors, demographics selected unconventionality with the preference of visual art genres portraiture, abstract art, geometric art and impressionism. The authors made a collection of data based on emotional liking and its guide with the perception of the situation, which allows defining whether artistic preferences can be predicted or not using a basis related to historical art, taxonomies etc.

The matrix given in the descriptive statistics and their inter-correlations with x and y, where y is to be as preferences for visual art classifications, the x variables are denoted to be personality factors and the categorised visitors (sex, age, their education). The results showed that women prefer in looking at simple, impressionist, colourful, and happy paintings rather than men who tend to look at geometric, sad and complex paintings. The



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challenges in this work could be that the authors missed out on the aesthetic views and their calibrations to the artist and the participants. Further, the aesthetic thought of the artist bridges the connection between the painting and the viewer's emotional valance and its terms. More over study is based on British people alone and it can be extended to their societies from all over the globe to perceive the border spectrum.

Judith Mottram in [5] has analysed the case study of two artists' interviews regarding the colour and the material context. The two case studies were based on the artists Liam Gillick and Catherine Yass who were shortlisted for the 2002 turner prize. The main reason for choosing this artist was due to their achievements and recognition level, their material usage and colour attributes. The artist Catherine Yass proposed a methodology which deals with negative and positive transparency printing. The artist Liam Gillick's method of work deals with a variety of mediums which includes screens, platforms and ceilings of constructed aluminium. The challenge in this paper is that it is very difficult to understand the relationship between material science, neuroscience, and psychophysics in the work of art. It is based on the aesthetic chronology under the material within the added value of colour, its placement and appetite in the work of art.

Schnugg, C., and Song, B. [6] have approached the view of artist creations, and innovations, with extraordinary ideas creating an artistic eagerness to learn and express in new terms. To generate art-science collaboration and to identify the important contribution from artistic, technological, and scientific correlations acts as the solution for modern-day problems. Arts-based initiatives (ABI) interventions and investigations between the artist, scientist, management and organisation is happening throughout the globe for the last two decades. The outcome was created by the space given to artists not only through consultancy or workshop but also to pave the way for an interdisciplinary approach, R&D, complex problems, collaborations, and brainstorming which aids in the derivation of the sole outcome of the project.

These relents of scientists, artists and management collaborations are aimed to streamline the structures, blindness, requirements, change, cultural issues and goals which results in incorporating innovations into the organizations. The authors also explain the organizational perspectives on the support of Art science collaborations and the approaches followed in developing the database structures, value adds, interpersonal, personal learning, development, leadership quality, cultural transforms, complementary thinking process, interdisciplinary and cross-culture thinking which derives to the possible solutions for benefit of future problems.

Hambleton, J. [7] examined the process and co-relation between the scenic designer, scenic artist and the usage of a digital tool for visualization, opposing and underdetermining the traditional flow of designer based on artistic authority. Digital vinyl printing offers a cheaper alternative instead of traditional techniques. The detail and accuracy of digital print are cost-effective and less time-consuming than the traditional expensive hand-painted scenic worked backdrop. The usage of digital fabrication tools in commercial workshop are more effective in using a software-programmed CNC milling machine to cut out scenic props but today 3-D printing makes the other pavement in output as the finished product. The scenic painter stated that producing the designer's design and converting the design into a bigger one like a



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HUMAN XEROX MACHINE. The scenic painter must have a high proficiency level in handling paint medium and an elastic ability to work in large-scale works.

## CONCLUSION

This work summarizes the various aspects of abstract painting in scientific visualization. It also surveys the various kinds of digital tools used for creating efficient and visually appealing scenic art. Most of the task performed in designing creative art was eased by digital vinyl printing. The challenge still exists in understanding the exact ideology of different humans working in various domains. Future work might be to overcome this by using cognitive analytical tools to gain more info about the accurate requirements which could be visually and logically more pleasing.

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