Artistic Conceptualization In The Digital Art Work: Exploring Artistic Conceptualization In The Portrayal Of Climate-Change Related Digital Art

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Abstract–The primary objective of this research study was to explore the artistic conceptualization in the digital art depicting the issues of climate-change. How the issues were being presented on digital canvas through conceptual stage- the idea or expression to be conveyed through visual component. A unique artistic conceptual treatment captures a viewer's eye and holds their attention. An attempt has been made to understand how the ideation and conceptualization in the composition of digital art work applied in sync with the global climate-change related digital art works were being created on digital canvas categorically conveying the message on climate change impact on living beings.

Keywords: Digital Art, Climate-Change, Environmental Awareness,

Materials and Methods: - The present research paper primarily an interpretative exploratory study which is based on the secondary sources of information for systematization, analyses and conclusions. Relevant arts, art-websites, arts and climate expert's views, e-books, journals, newspapers, magazines, allied e-resources etc. have been referred/cited as a secondary sources of data.

Limitation of the Study: - Only select digital art works and design on conceptual painting depicting the climate change pictorial message have been deliberated. The study is not exhaustive, only <u>relative</u> aspects have been touched upon considering the scope and nature of the research paper. The allied reference material used was based on the secondary source of dataset/information, which has its own inherent limitations. An attempt was made to cover wider spectrum of digital and design artworks and thoughts

on the climate change related issues, which is not adequate, further study is still needed for wider perspective and generalisation.

Introduction –

Human are wired naturally to understand and connect more with visuals than complex data/info or dataset/info-set. Human beings are visual creatures- human brain processes images 60,000 times faster than text, and 90 percent of information transmitted to the brain is visual (Eisenberg, 2014). When we talk or refer about the climate change phenomenon it is mostly scientific dataset/info-set way beyond the comprehension of general public. And how to make People aware about the imminent threat the climate change is posing to the very existence of living beings on the earth, by just presenting mere hard data in public domain wouldn't be enough. It calls for more efforts on bringing out visual imagery encompassing hard data-set in comprehensible form. The solution lies in Visual Imagery/Arts. The digital art works come handy in this case as with the aid of design software application the Visuals arts can be created far quickly than the conventional art work and equally transmitted or transported with the aid of computer network assisted pathways. The wider intricacies and complex aspects of the climate change issues can be accommodated in the digital art work by creative conceptualization with the help of computer aided design software. The whole digital art work's intellection and conceptualization would be climate change impacts on living begins or the change observed and recorded in the climatic or atmospheric conditions.

What Is Climate Change And Climate Change Art?

On the United Nation's (UN) web portal, in 'The Science' section, the climate change refers to long-term swings in temperatures and weather patterns. These swings may be natural, such as through variations in the solar cycle. But since the 1800s, human activities have been the main driver of climate change, primarily due to burning fossil fuels like coal, oil and gas (United Nation, 2002). The production of greenhouse gas emission through transportation, and energy affecting standard atmospheric conditions. Its climatic impact amounts to radically upsetting the temperature or atmospheric conditions, intensified or abrupt weather events, glacier melting, irregular rain, flooding, etc. The climate change domain experts, scientist and researchers are increasingly calling for the arts and humanities to contribute to the climate change discourse. Through the power of imagination and storytelling, they have the capacity to implicitly address a topic that feels too overwhelming to understand (Hulme, 2011). Our climate actions are sufficient enough to giving sense of emotion, attachment and impact and help establish connect with the general public? The meaningful conceptual art visuals portraying climate change and global warming, is climate change art. The art inspired by climate change phenomenon and global warming, generally intended to overcome humans' hardwired tendency to

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value personal experience over data and to disengage from data-based representations by making the data "vivid and accessible" is a climate change art (The Economist, 2019). In digital still life paintings, Micheal Collery, Harold Hadelman, Alan Bar, David Weimer and Tuner produced efficient transparency, reflection, and textures in their still lives painting in 1980s.

Digital painting brings about digital images which contain subject, form, content and data. Artists creatively use scientific dataset/info-set in Artistic Information Visualizations (AIVs) to address climate change issues. Yet, it is unclear how effective they are in making viewers consider climate change as important and life threatening to the living-beings (Ulrike & Berkers, 2020). The visual literacy can help people understand and comprehend subject matter and conceptualization in the digital Artworks. Without the process of doing painting, the product (painting) has difficulties to congeal the level of its representation. However the form: Digital painting remains its visual literacy- simplified and relatable forms in the conceptualization may go long way to understand the climate change issues. The acceptance of digital painting and its access lot depends on the exhibitors, civil societies, climate advocacy groups, environmental scientist, curators, art historians, art critics and its patron. Their reach and impact may affected by various social context such technology penetration, digital literacy, knowledge, scientific temperament, culture, economy, and belief. Over the past three centuries artists have contributed to environmental understanding by addressing colonialism, urbanization, the impact of industrialization on natural resources and contemporary ecological activism, including climate change (Kusserow, 2018).

Literature Review

Mokhtar Mumtaz [1] discussed in her research article titled 'A Conceptual and Technical Discussion on Digital Painting as New Media Art: Introducing Some Malaysian Works', emergence of digital painting as a new media art form. The author has discussed the term digital painting as convergences of scientific term and art term under two sections- conceptual and technical issues. The author in conceptual issues part deliberated on the ingredient and components of art including the artist, the form, the audience and its surrounding, the subject, and the content. In the technical part of digital painting- concept of digital image, the hardware and the software as a medium have been discussed for which a few Malaysian digital paintings situation and scenario were being studied. The drawing and design Application software (Adobe Illustrator, Adobe Photoshop, CorelDRAW, Macromedia FreeHand, and MetaCreation Painter 3D software for paint or image editing) and hardware requirements have been slightly touched upon. The author elaborated the four components of digital paintings- artist/painter, form, audience, and

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[1] Mokhtar Mumtaz, a Faculty of Art and Design, University Technology MARA, Selangor Darul Ehsan, Malaysia

Environment. The digital painting brings catalyst to new aesthetics experiences, new form discovery and new mode of appreciations concludes the author. (Mokhtar, 2013).

Ulrike Hahn & Pauwke Berkers [2] elaborated creative use of scientific data by the artist in artistic information visualizations (AIVs) to sensitize people on the issues of climate change in their research article titled- 'Visualizing climate change: an exploratory study of the effectiveness of artistic information visualizations.' How effective they are in making viewers consider climate change as important was the focal point of the research. The authors compared AIVs in relation to four additional visual forms- information visualizations, news photos, digital art visuals and cartoons, which are commonly used in communication of climate change. The Authors argues that artists' free choice of data focus and artistic styles faces limits when depicting a complex topic such as climate change. They suggested that when targeted at the general public without art training, it is necessary that for message or information clarity purpose the art or the visualizations should be accompanying by descriptions (Hahn & Ulrike, 2021).

Nithin Kalorth [3] discussed about the trends and scopes of the digital art in the environmental awareness campaigns in the research article titled, 'Digital Art and Environmental Awareness: Trends and Scope' in the Indian context. The researcher analyzed 30 posters out of 350 (shortlisted for final round), which were created digitally and circulated online on the theme green economy as part of World Environmental Day poster designing competition for environmental awareness (designed for Indian environment or made for Indian audience). The user engagement within analyzed in terms of social connections (likes, share, and comments) which help to understand the virility and accomplishments of the posters. He argues that the underlining capacity of the digital is with the artist (messenger), the art (message) and the content manager who post and circulate the media text online (environment of the message). The researchers concluded that the digital art could serve as a communication tool for making environment awareness campaigns (Kalorth, 2004).

Amanda Gorsegner [4] in her master thesis work titled- 'The Role Of Art In The Global Climate Change Movement' suggested that artists and arts administrators have significant roles to play when using the arts to address climate change. The author suggest that art has certainly role to deepen personal engagement with the issues of climate change by providing new platforms for deeper reflection and discourse. The intent may or may not be catalyzing activism (Gorsegner, 2016).

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[2] Ulrike Hahn & Pauwke Berkers, academics, Department of Arts and Culture Studies, Erasmus University, Rotterdam, Netherlands

[3] Nithin Kalorth , Research Scholar, Mahatma Gandhi University, Kottayam, Kerala

[4] Amanda Gorsegner, Thesis work, Master of Science in Arts Administration, Drexel University, a private research university, Philadelphia, Pennsylvania, USA
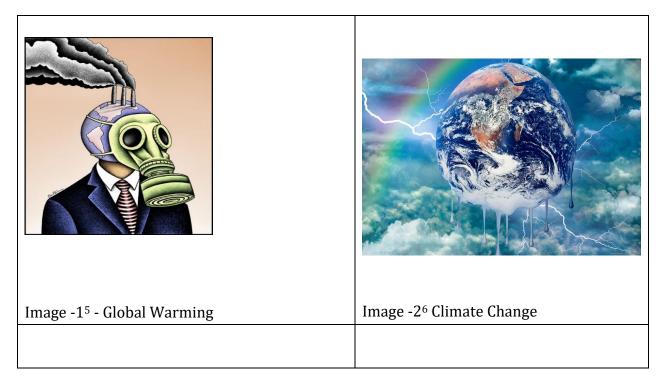
Discussion –

The tools for Digital art is digital pen input device and display one can draw on other fundamentals of drawing remains the same, however complex ideas and conceptual exploration freedom is far better than the conventional painting art form. Digital art is a general term for a range of artistic works and practices that employ digital technology as an essential part of the creative and/or presentation process (Paul, 2006). The digital arts can be used for showcase personalities or different issues. The creative industries known for mirroring the prevailing issues concerning human beings such as oppressions, inequities, exploitation of the real world. The contemporary digital art extends its creativity along with traditional art forms – paintings, drawing, and sculpture and music/sound art (Gere, 2006) Global environmental change engages scientists as well as artists working with many art forms. Artists who respond to such changes provide their personal interpretations of the topic. With respect to climate change (Nurmis, 2016.)

The four digital arts selected, listed below, for the research study analysis provides personal interpretation of the artist on the climate change issues

1. Global Warming by Ben Heine
2. Climate Change by Robert Orinski
3. Future Flooded London Cityscape by Philip Openshaw
4. Team Earth by Ana Đačanin

The primary reason of selection of these digital artworks was, it depicts climate change issues as a statement and message embedded in it. It goes in sync with the scientific dataset points the issues pertaining to global climate change and global warming. According to Artnet News, climate change can be characterized suggestively in artwork because "Art has a way of getting ahead of the general discourse because it can convey information embedded with message in novel ways (Rea, 2020). Each of the selected art work conveys information and message as a novel conceptual artistic expression. (Snoswell & Wade, 2006), suggested that artists chose a specific theme or subject in their painting so as to work on some details and concentrate on a particular imagery. In the chosen artworks each of the artist chose the theme and concentrated on a particular imagery- Air Pollution, Global warming, Melting of glacier overall impact on the mother earth, futuristic issues that may arises because of environmental impact and action needed to be taken or responsibilities to be shouldered, suggesting these imagery respectively. Subject in painting is like a problem to be solved sorted out twelve categories for digital painting themes. It was labeled as Character in Repose, Character in Action, Portraits, Transport, Wildlife, Environment, Still Life, Abstract and Surreal, Humorous, Editorial Illustration, Fantasy and Concept Art.

The audience: Instead of sharing expression, experience and pleasure, audience grasps knowledge and information in digital painting physically or virtually. Question arises: how can the general public be effectively engaged beyond awareness? One possibility is to create visualizations that depict climate change as an important topic, i.e. to create a sense of issue salience (Nicholson-Cole 2004; O'Neill et al. 2013). Artists create artistic modifications of artistic information visualizations to creatively contribute to the augmentation of visualizations. AIVs' core contribution lies in their unique ability for artistic freedom, and boundary-less capability to show novel data-based visuals in times of information overload (Moere and Purchase 2011). In each of the images shown below Artist creatively augmented visualization on digital canvas with the absolute artistic freedom and armed with numerous art

Image -1[5] - Global Warming	Image -2[6] Climate Change

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[5] Image – 1 – Ben Heine's avatar Global Warming Published: Feb 1, 2008 by BenHeine https://www.deviantart.com/benheine/art/Global-Warming-76148801
[6] Image – 2 - Robert Orinski - Climate Change- Climate Change- is a piece of digital artwork by Robert Orinski which was uploaded on July 25th, 2013.https://pixels.com/featured/climate-change-robert-orinski.html

Image- 3[7] - Future Flooded London Cityscape	Image -4 [8] - Team Earth

Digital Art works depicting the impact of the climate changes on the lives of Living beings

Sr. No	Digital Art Work	Climate Change Conceptualization Depiction	Category
Image-1	Global Warming	Air Pollution cause of burning of fossil fuel, Industrial emission	Conceptual Illustration
Image-2	Climate Change	Depicts overall impact on mother earth due to climate change issues	Conceptual Illustration
Image-3	Future Flooded London Cityscape	Captures the magnitude of damages that might be reality in distance future	Conceptual Illustration
Image-4	Team Earth	Responsibilities to be shouldered as a counter measure, climate action	Character in Repose, Action

depicting capacities which might not be possible with conventional painting methods.

Image-1 : Depicts, Global Warming   Air Pollution cause of burning of fossil fuel, Industrial emission is an   Conceptual Illustration, in the image the artist Ben Heine precisely presented in his digital art work, the impact and the cause of fossil fuel and Industrial emission on the lives of living being, the message and warning it issues that the time soon we needed to wear mask to get the breathable air.

Image-2 : is an digital art depict Climate Change, it comments on overall impact on mother earth due to climate change issues is an Conceptual Illustration by digital artist Robert

[7] Image – 3 - Philip Openshaw- Future Flooded London Cityscape Conceptual futuristic image of the city of London with buildings flooded due to global warming and rising sea levels and gulls by Philip Openshaw, weblink- https://pixels.com/featured/future-flooded-london-cityscape-philip-openshaw.html
[8] Image – 4 TEAM EARTH Ana Đačanin, 17 year old., Serbia. Digital artist. weblink -https://digitalart4climate.space/#rec374020001

Orinski. It artistically portrays the earth's deformation as a constant threat human modern devolvement at the cost of environment.

Image-3 : Portrays what might be the future, as scientific data suggest. The artist shown Future Flooded London Cityscape captured the magnitude of damages that might be reality in distance future is a conceptual Illustration by Philip Openshaw.

Image-4 : In Team Earth, artist Ana Đačanin emphatically present us before in an action image illustrates the human's responsibilities towards climate action, here the character is in repose mode, to shoulder the responsibility as a counter measure to help restore the nature.

In a Ted talk, Ben Twist [9], hosted at Heriot Watt University, under the title, 'Why the arts are essential in addressing climate change?', stated that climate change is not the scientific or technical issue but the cultural issue. Quoting, Mexico City declaration on cultural policies UNESCO Mexico City, 1982… in its widest senses culture may now be said to be the whole complex of distinctive spiritual, material, intellectual and emotional feature that characterize society or social group. It includes not only the arts and letters, but also modes of life, the fundamental rights of the human being value system tradition and belief. He interpreted the definition of culture, in a broader and wide sense is the way and which we live in the world and we live in the culture of consumption and climate change is the function or the product of that culture of consumption. That's how the climate change is happening and in the human culture art plays and important role to sensitize society towards their duties and responsibilities. He further quoted Bertolt Brecht, Essays on the art of theaters 1954, that Art is not the mirror held up to reality but a hammer with which to share it. Art can help reveal the world around us, frame it, amplify it and also highlight our precarious relationship to it as rightly pointed out by Sarah Urist Green [10]

Conclusion –

Humans Process Visual Data Better. In that perspective the digital conceptualization art painting depicting cause, impact and effect of climate change will certainly go long way to enlighten more about our understanding of the climate change and how to deal with it through the climate conceptualization art.

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[9] Director of Creative Carbon Scotland, supporting the essential role of arts and culture in transformational change to a sustainable future, and a researcher exploring behaviour change. https://www.youtube.com/watch?v=AVqoTEcHrsI

[10] Sarah Urist Green Art curator (https://www.youtube.com/watch?v=dvQocRS3RdE). How Climate Changes Art.

There is an urgent need of artist to come forward and address the issues of climate change and challenges become the image visualizer of the hard data on climate change threat in a form and manner in which public will understand and initiate a richer and more complex conversation that addresses climate change.

As rightly put by Bertolt Brecht Art is not the mirror held up to reality but a hammer with which to share it. And what possibly the better hammer than a digital paint brush and entire design canvas that offers lots of creative freedom, tools and facilities to portray conceptual illustrative digital art works on climate change, impact, action and initiatives for the living being survival and living and cultural sustainability. As we are entering into massive cultural shift and art needs to be involved in this cultural shift, as pointed by Ben Twist. Art Can echo, connect, reflect and influence wider culture. Time has come to reveal the climate change, frame it and amplify its cause, effect ands impact to highlight our precarious relationship to it through climate action digital arts

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