THE IMPACT OF PLASTIC USE ON MARINE LIFE AS A SOURCE OF INSPIRATION FOR THE CREATION OF INSTALLATION ARTWORKS USING VIDEO MAPPING AND LASER TECHNOLOGY

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ABSTRACT
Art is basically created through experience, whether personal experience, other people's, socio-cultural environment, politics or religion. Art becomes a medium for artists to express ideas, concepts, from experiences felt, which are manifested in a beautiful and meaningful work of art. Along with the development of the times, art also develops. This means that the development of art is something that cannot be avoided. Likewise in the Jagratara installation artwork, with the use of technology, this Jagratara installation artwork is present as a new color in the world of art. This installation artwork is inseparable from the results of several methods carried out by the creator, including the recycle method and the exploration method. The Recycle method is a process of turning used materials into new materials with the aim of preventing waste that can actually be something of artistic value, while the media exploration method is a method as a medium to express the potential and creativity of the compiler. Basically, this method is used as an ability to find, create, redesign, and combine new or old things or ideas into new combinations of various mediums, techniques, ideas and personal interpretations in depicting the reality chosen to be visualized. Jagratara comes from Sanskrit which means always alert. The word always be alert is often heard when signs of danger begin to appear. Always be alert is a reminder sentence that is often said when danger is coming. This installation artwork is present with the aim of being a reminder and reflection on the negative impacts of plastic use, especially for marine ecosystems.

1. INTRODUCTION

Art fundamentally emerges from experience, whether it's personal, from others, or influenced by socio-cultural contexts, politics, or religion. It serves as a medium for artists to convey ideas and concepts derived from their experiences, resulting in works that are both beautiful and meaningful. In this sense, art functions as an expressive outlet for artists, often reflecting their emotions and concerns tied to their experiences. A work of art created without emotional involvement will not have the same impact as one

that is infused with feeling. As time progresses, art also evolves, adapting to contemporary contexts. From the modern era onwards, art has developed alongside its artistic principles. Sucitra states that modern art seeks universalism, with the West defining global art standards and moving away from the past to foster individual innovation [1]. This principle drives modern artists to explore and establish their unique identities to gain recognition in the art world.

Color is a form of light and energy that becomes visible when reflected off various particles, molecules, and objects. There are different wavelengths that can be categorized as light. Each color has unique frequencies and vibrations that are believed to influence specific properties and contribute to energy within the human body. Cells in the body respond to light, which can affect physical, emotional, mental, and spiritual stability. The color wheel includes primary colors (red, yellow, and blue), secondary colors (orange, green, and purple), and mixing these colors produces tertiary colors. Additionally, color is often used as signs, symbols, icons, and tools for visual communication [2]. Sculpture is a form of three-dimensional art created based on the materials employed. Various materials can be utilized for sculpting, such as clay, stone, wood, plaster, cement, fiber, and metal [3].

According to [4], sculpture is a three-dimensional art form created using either subtractive methods (like cutting or chiseling materials) or additive methods (such as casting and molding). It is defined as a visual art form that exists in three dimensions, resulting from the harmonious arrangement of various artistic elements to create a unique beauty, allowing it to be viewed from multiple perspectives. Therefore, sculpture is an essential aspect of fine art that produces three-dimensional works using a variety of materials through subtractive or additive processes.

Sculpture also plays a role in installation art, which involves arranging, assembling, and combining different artistic media—both two-dimensional and three-dimensional—to create a cohesive work with new meaning. The term "installation" comes from English, meaning "to set up" or "to place," which relates to the exhibition of these artworks. Installation art emerged from advancements in sculptural techniques, particularly assemblage, which evolved from the Cubist movement (pioneered by Picasso and Braque) and was further influenced by Dadaism, Surrealism, and Conceptual Art. In *Art Speak*, Robert A. (1990:90) notes that installation art first appeared during the pop art era (1950s-1970s), with artists like Judy Pfaff creating works such as an underwater garden made from various types of waste in an impressive manner. Thus, installation art involves the installation, unification, combination, and construction of objects that convey specific contextual meanings. In the creation of this installation work, the author also incorporates technology as a key element.

In the creation of the independent project work Merdeka Belajar Kurikulum Merdeka (MBKM), the compiler created an installation work entitled "Jagratara". Jagratara comes from Sanskrit which means always alert. The word always alert is often heard when signs of danger begin to appear. Always alert is a reminder sentence that is often said when danger is about to come. In this Jagratara work, it raises a warning of the dangers that will come in the future. This danger not only befalls underwater creatures but this danger threatens all creatures on earth. Jagratara raises the elements of cause and effect of plastic use, these elements are made as if talking about the current conditions in the surrounding environment, especially the condition of the sea.

In making this installation artwork, the creator uses materials in the form of plastic waste and net waste. In this work, the compiler uses plastic waste that is processed by melting it and applying it to the surface of the frame that has been coated with wire netting. The use of plastic waste as a medium in making this work is a message about the current environmental conditions which can be said to be getting closer to

danger. The use of plastic waste as a medium is also a form of responsibility for the plastic waste produced. In addition to using waste as a medium for making works, the compiler also uses new media in the form of video mapping and lasers. Projectors that are usually used for presentations, film screenings, and so on, now the use of projectors in the field of fine arts provides a new color in the development of art.

One concept that is considered a new vision is the use of lighting-based media or video mapping. This technique is done by processing lighting that creates optical illusions. Starting from moving images, to interactive cinematic forms on a gigantic scale. The digital manipulation program makes it difficult to distinguish between real and illusory images. Video mapping is an interesting new technique in visual development. The video mapping method uses lighting and projection techniques from a tool in the form of an LCD that is able to create optical illusions on objects. In making this installation artwork, the author uses video mapping as an element of the work.

2. METHODS

2.1. Method of Creation

The Creation Method is a systematic way of realizing artwork. The stages of creating artwork that describe the design of the artwork creation process according to the stages of creation from getting inspiration (ideas), designing, to realizing the artwork. In the Jagratara installation artwork, the creator uses several methods in the process of creating the artwork. The Recycle Method is a method that the author created, where this method is a method of creating a work. This method is one of the strategies that the author uses in carrying out the process of managing solid waste which consists of sorting, collecting, processing into a work of art.

The Recycle Method is a process of turning used materials into new materials with the aim of preventing waste that can actually be something of artistic value. In addition, this method also functions to reduce the use of new raw materials, reduce energy use, reduce pollution, land damage, and greenhouse gas emissions. It is important to reduce environmental impacts and utilize existing resources efficiently.

The media exploration method is a method as a medium to express the potential and creativity of the author. Basically, this method is used as an ability to find, create, redesign, and combine new or old things or ideas into new combinations of various mediums, techniques, ideas and personal interpretations in depicting the reality chosen to be visualized. This media exploration method aims as one of the steps to gain new knowledge and experience using the main material in creating a work of art.

2.2. Medium and Media

Fine art media is a type of artwork. Its form can vary, from 2 dimensions, 3 dimensions, to mixed media. Although according to TATE's explanation, media can also be interpreted as the material and technical process of a work, this term is more often associated with the term final form of a work. In 2-dimensional works, there are various media such as paintings, graphic prints, and drawings. While in 3-dimensional media, there are forms of sculpture, to installation art.

The media used by the composer in his work include:

a. Projector
    In the Jagratara installation artwork, the creator uses a projector as a tool to display video mapping works in the space provided. The use of this projector is arranged in its placement and then set using Resolume Software for space mapping to produce satisfying video mapping works.

Figure 1. Projector
[Google, 2024]

b. Laser
    In the Jagratara installation artwork, the creator uses laser as one of the media in the work. The use of this laser aims to add impression and ambience to the work so that when the work is displayed and the use of this laser also aims so that the audience can directly feel the atmosphere of this Jagratara installation artwork.
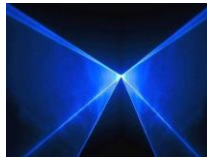
Figure 2. Laser
[Google, 2024]

c. Iron Frame
    In this Jagratara installation art work, the creator used an iron frame as a foundation to create the shape of the turtle object. This iron frame is assembled and connected using welding tools to produce a solid foundation.

Figure 3. Iron Frame
[Google, 2024]

d. Wire Mesh
    In this Jagratara installation art work, the creator used wire mesh as a coating after the foundation frame was completed. The purpose of using this mesh wire is also to create shapes and apart from that, the mesh wire is also used to add effects to this installation art work.

Figure 4. Wire Mesh
[Google, 2024]

e. Plastic Bottles
    In this Jagratara installation art work, the creator used plastic bottles as the main medium in making
    the work. The creator processes plastic bottles by melting them through a burning process. The use
    of plastic bottles with such processing produces an interesting and unique texture effect.

Figure 5. Plastic Bottles
[Google, 2024]

f. Gas Torches
    In the Jagratara installation art work, the creator uses a Gas Torch as a tool to melt the plastic bottle
    medium. The choice to use the Gas Torch tool really helped the creator in making this Jagratara
    installation art work.

Figure 6. Gas Torcher
[Google, 2024]

g. Beach Sand
    In the Jagratara installation art work, the creator used beach sand as a mixed medium for melted
    plastic, the use of this media adds to the uniqueness of the resulting texture. Apart from that, the
    creator also used sand mixed with glue to form one part of the turtle object in the Jagratara
    installation artwork.

Figure 7. Beach Sand
[Google, 2024]

h. Wood glue
    In the Jagratara installation art work, the creator used wood glue as a mixture of beach sand in making one part of the turtle object.

Figure 8. Wood glue
[Google, 2024]

i. Organdy Fabric
    In the Jagrtara installation art work, the creator used organdy fabric as one of the work media. The choice of using organdy cloth as a medium is because organdy cloth has a unique texture and effect, making it suitable for use as a medium in Jagarata installation art works.

Figure 9. Organdy Fabric
[Google, 2024]

3. RESULTS AND DISCUSSION

3.1. The Concept of Creation

Jagratara comes from the Sanskrit language, meaning "always vigilant." The phrase "always vigilant" is often heard when signs of danger begin to. "Always vigilant" serves as a reminder commonly expressed when danger is imminent. The work Jagratara raises awareness of the dangers that may come in the future. These dangers do not only affect marine creatures but threaten all beings on Earth. Jagratara addresses the causes and effects of plastic use, presenting these elements as if they are speaking about the current environmental conditions, particularly in the oceans.

The concept of this installation art involves the use of various elements such as space, objects, sound, light, movement, and even interaction with the audience. The Jagratara installation serves as a medium

for dialogue and reflection on social issues present in society, particularly the impact of plastic on the environment. The author employs the technique of installing physical objects in a specific space, using video projections and sound to create an immersive atmosphere. In this work, the creator designs a harmonious and meaningful integration of various elements, resulting in a strong impression and conveying aspirations regarding the raised issues. It represents a form of contemporary art that uses space as a medium of expression, exploring textures and materials, such as melted plastic mixed with beach sand, mesh wire, and organza fabric.

By processing plastic waste into a liquid form, this melted plastic is then applied to the structure of a turtle sculpture that has been layered with mesh wire. This method results in sculptures that have a melting effect. The created turtle sculptures are arranged in a circular formation, symbolizing eternity, as a circle has no beginning or end. The arrangement of sculptures in the Jagratara artwork symbolizes impermanence because a circle, representing eternity, does not possess a definitive start or finish.

The use of video mapping, lasers, and other elements in the Jagratara installation will feature videos showcasing the ambience of the deep sea and themes of vigilance, aiming to enhance the atmosphere of the installation. This allows the audience to directly experience the environment that the creator wishes to convey through the Jagratara installation.

Figure 10. Performance work
[Personal documentation, 2024]

3.2. Stages of Creation

The creation stage is a crucial phase in developing the design of an artwork, where the process of making the artwork takes place. During this stage, the creator engages in several activities from the beginning to the end of the creation process, including:

a. Analyzing
   The author conducts an analysis process, where the creator observes current issues in detail by breaking down the components or assembling several elements to form a central idea for the independent project. The creator focuses on the issue of the impact of plastic waste on nature, particularly the oceans. From this analysis process, the creator gathers information related to the effects of plastic waste usage, especially concerning the seas.

Figure 11. Documentation of the Analysis Process
[Personal documentation, 2024]

b. Designing
    The design creation stage involves activities that the creator undertakes to plan and design an installation artwork in the form of images, where the ideas or concepts are derived from the results of their own analysis activities. This stage encompasses not just the process of making the artwork, but also includes the development of frameworks, patterns, motifs, shapes, sizes, colors, and textures within the artwork. Additionally, this activity serves as a means to represent the appearance of the artwork's objects, depicting their actual conditions. From the design creation process, the creator produces four designs related to the impact of plastic usage, from which they then select one design to be realized as an installation artwork.

Figure 12. Documentation of the Designing Process
[Personal documentation, 2024]

c. Realization of the Artwork
    The creation process is a transformation of raw materials into an installation artwork, which is divided into several stages. The following outlines the process of realizing the artwork carried out by the creator:

    1. Component Creation
        In the realization stage of the Jagratara installation artwork, the first thing the creator does is to create the components of the artwork, specifically a turtle-shaped sculpture. First, the creator constructs a frame using iron. This frame construction involves cutting, assembling, and welding independently, using the tools provided in the sculpture laboratory of the Fine Arts Program at the Indonesian Institute of Arts, Denpasar.

Figure 13. Documentation of the Welding Process
[Personal documentation, 2024]

After constructing the frame, the creator continues the process by covering the frame with mesh wire. The purpose of this step is to clarify the shape before moving on to the casting stage.

Figure 14. Documentation of the Frame Coating Process
[Personal documentation, 2024]

After completing the coating stage with mesh wire, the creator performs surface casting using melted plastic bottles. Before casting, the plastic bottles are processed by burning them with a gas torch. The creator then directly applies the melted plastic to the frame that has been made. This application of melted plastic is done while the plastic is still in liquid form. During this casting stage with melted plastic, the creator experiments by mixing the melted plastic with beach sand to achieve a unique textural effect.

Figure 15. Documentation of the Plastic Casting Process
[Personal documentation, 2024]

After completing the casting stage using melted plastic bottles, the creator constructs the bottom part of the turtle using a mixture of beach sand and wood glue. This combination produces a unique effect, and it aligns with the context of the installation artwork Jagratara.

Figure 16. Documentation of the Casting Process Using Beach Sand
[Personal documentation, 2024]

In creating this turtle sculpture, the creator produced three turtle sculptures that will later be displayed by hanging them in a prearranged formation.

2. Creation of the Video Mapping Scheme
   Video mapping is one of the media used in the installation artwork Jagratara. The creator develops the video mapping scheme using Resolume software. In this video mapping, the creator presents visuals that align with the theme of the artwork, enhancing the atmosphere and allowing viewers to experience it directly during the artwork.

Figure 17. Documentation of the Video Mapping Scheme Creation Process
[Personal documentation, 2024]

3. Creation of Music
   Music is an essential supporting component in the installation artwork Jagratara. The creator plays a significant role in enhancing the atmosphere during the presentation of the installation. Therefore, the creator uses music as a key element in the artwork. The music is created independently using FL Studio software. The creator composes music that aligns with the theme of the installation artwork, ensuring that it shares a cohesive theme with the other components.

Figure 18. Documentation of the Music Creation Process
[Personal documentation, 2024]

4. Creation of the Performance Artwork
   In the installation artwork Jagratara, the creator incorporates a performance art piece that aligns with the theme of the installation. This performance art aims to serve as an additional component that strengthens the concept of the Jagratara installation. The performance features five dancers, consisting of three female dancers and two male dancers. The performance takes the form of contemporary dance, with a storyline that reflects the concept of the Jagratara installation.

Figure 18. Documentation of the Performance Artwork Creation Process
[Personal documentation, 2024]

3.3. Description of the Artwork

This installation artwork consists of a series of elements arranged symbolically to stimulate contemplation and reflection. The artwork titled "Jagratara," derived from Sanskrit meaning "always vigilant," serves as a reminder of the need for awareness when signs of danger arise. This phrase is often invoked when threats loom, warning not just marine life but all beings on Earth about impending dangers.

Jagratara addresses the causes and effects of plastic usage, creating a dialogue about the current environmental conditions, particularly concerning the oceans. The installation aims not only to raise awareness about critical situations that require extra attention but also to invite viewers to respond personally to the impacts of plastic waste. Thus, it becomes a visual and introspective experience, emphasizing the importance of vigilance in everyday life.

The installation serves as the creator's medium to express concern over the deteriorating situation caused by plastic waste. From this unease, the creator developed the artwork using recycled materials transformed into art, conveying warnings about plastic's impact and the need for conscious handling and usage. This piece also addresses how to manage the plastic waste generated in daily life.

Jagratara brilliantly combines video mapping and laser technology to create a profound and evocative visual experience. The installation offers a multisensory experience, encouraging visitors to immerse themselves in the concept of Jagratara with full awareness.

At the center of the exhibition space stands the main structure, symbolizing the flow of energy and consciousness. This structure, made from transparent materials, allows video projections and laser effects to adhere to and interact with its surface.

The video mapping projection fills the transparent structure with symbolic visualizations of spiritual journeys or reflections on the state of Jagratara. These images can include symbols of the universe, meditation, or deep soul journeys, inviting visitors to contemplate and absorb the meaning of this state of awareness. Ambient sounds are also an essential part of this experience, enhancing the spiritual atmosphere and providing a deep emotional touch. Natural sounds, harmonious tones, or gentle mantras may be incorporated to enrich the auditory experience of the audience.

The interaction between video mapping and laser technology in the installation "Jagratara" creates a captivating and soul-stirring experience. Through this combination, the artwork not only presents visual beauty but also invites viewers to experience a higher, deeper state of awareness and reflect on the meaning of vigilance in their lives.

3.4. Aesthetics of the Artwork

The term aesthetics originates from the Greek word *aisthetikos*, meaning understanding through sensory observation. In English, it's often spelled "aesthetics" or "esthetics," derived from *aisthesis*, which signifies feelings and perceptions. Aesthetic value serves as a measure for individuals to assess beauty or ugliness, and attraction or aversion to an object. The emotional responses to aesthetic objects can differ among individuals or communities due to varying aesthetic values.

The aesthetics of installation art reflect a unique blend of space, materials, and concepts, creating visual, sensory, and often interactive experiences for the audience. This aesthetic can be explained as follows:

a. Interaction with Space
    Installation art frequently utilizes the entirety of a space—be it a gallery, outdoor area, or public space. This aesthetic emphasizes the use of space as a medium for conveying artistic messages. Installations can transform traditional perceptions of space by creatively employing dimensions, scale, and orientation.
b. Materials and Textures
    Installation artworks often use diverse materials and textures to create profound visual effects. From natural materials like wood and stone to modern substances like plastic and metal, the choice of materials supports the artistic concept while adding tactile and visual dimensions. For instance, in "Jagratara," the use of melted plastic creates unique shapes and textures, drawing the creator to use this medium as the primary material.
c. Conceptual Messages
    Every installation carries a message or concept that the artist seeks to convey. The aesthetics often invite viewers to think more deeply about social, political, or philosophical issues through unconventional visual approaches.
d. Change and Time
    Some installations integrate elements of change and time into their aesthetics. This may involve variations in light, sound, or even physical changes in the materials used, creating a dynamic experience that engages viewers further.
e. Audience Reaction
    A critical aspect of the aesthetics of installation art is the interaction and reactions elicited from the audience. Art is not solely about what is visible but also about how viewers feel and respond to it. Aesthetic installations often encourage active engagement from the audience—emotionally, intellectually, or physically.

Overall, the aesthetics of installation art provide an innovative and often provocative approach to contemporary visual art creation and experience, allowing for personal interpretation and deep reflection on the surrounding world.

In the "Jagratara" installation, the exploration of media and techniques is particularly prominent. The creator explores melted plastic bottles, which have undergone extensive processing, resulting in unique textures and shapes. The addition of beach sand enhances the distinctiveness of the installation.

Aesthetic qualities are also evident in the performance art component, where movements symbolize themes from the installation. These movements are meticulously arranged to reinforce the aesthetic aspects of the "Jagratara" artwork, enhancing its overall impact.

3.5. Authenticity of the Artwork

Authenticity in the context of artwork refers to the originality or truth of a piece within a specific context. This concept applies to various forms of work, including art, literature, music, and scientific research. Generally, the authenticity of a work is defined by several factors:

a. Provenance
    A work is considered authentic if its origins can be clearly traced back to its creator or a legitimate source. For instance, a painting with a clear ownership history from the original artist is viewed as more authentic than one lacking such provenance.

b. Consistency
    An authentic work must be consistent with the style, technique, or characteristics of its creator or the period during which it was made. This consistency can manifest in the style of painting, musical technique, or specific artistic movement that aligns with the original work.

c. Physical Evidence and Documentation
    Physical evidence such as signatures, fingerprints, or manufacturer labels can verify authenticity. Additionally, documentation like ownership records, licensing agreements, or certificates of authenticity can help ensure a work's legitimacy.

d. Research and Analysis
    For more complex or ancient works, scientific research or expert analysis is often necessary to verify authenticity. This may involve techniques such as carbon dating or in-depth historical research.

In the case of "Jagratara," the authenticity of the artwork is evident in the experimental use of media and the creation methods employed. The independent exploration of melted plastic as a medium showcases the creator's original approach, serving as a testament to the work's authenticity.

The importance of authenticity lies in the economic and cultural value associated with it. Authentic works not only command higher monetary values in the art market or collections but also preserve the historical and cultural integrity of the creator and the context of their creation. Therefore, research and care regarding the authenticity of works are crucial in the realms of art, cultural heritage, and academia.

4. CONCLUSION

Installation art is a form of artistic expression that involves assembling, constructing, and combining various media, both two-dimensional and three-dimensional, to create a cohesive unit with new meaning. The term "installation," derived from the English word for "placing," highlights the significance of displaying the artwork. The emergence of installation art is rooted in the development of assemblage techniques in visual arts, particularly sculpture.

In the independent project titled "Jagratara," created as part of the Merdeka Learning Curriculum (MBKM), the artist draws on the Sanskrit term meaning "always vigilant." This phrase serves as a reminder of the dangers that may arise, impacting not only marine life but all beings on Earth. "Jagratara" addresses the causes and effects of plastic usage, reflecting current environmental conditions, especially in oceans.

The method of media exploration used in this work allows the creator to express potential and creativity. This approach facilitates the discovery, creation, redesign, and combination of new and existing ideas, resulting in a unique blend of techniques, mediums, and personal interpretations that depict chosen realities.

The conceptual framework of "Jagratara" employs various elements, including space, objects, sound, light, movement, and audience interaction. This installation serves as a platform for dialogue and reflection on pressing social issues, particularly the impact of plastic on the environment.

The creation process is essential in developing the artwork's design, encompassing everything from initial analysis to final realization. Throughout this stage, the artist engages in various activities to transform ideas into a tangible form, ultimately resulting in an installation that invites viewers to reflect and engage meaningfully with the themes presented.

5. REFERENCES

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