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Semiotic Analysis on The Interpretation of The Dark Ages in Anime Orb: on The Movements of The Earth

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Abstract: Nowadays, the most popular form of animation media is anime, a form of animation media with a unique style that popularized by Japan. This research of semiotic analysis on the interpretation of the Dark Ages in anime Orb: On the Movements Of The Earth aims to find connotative and denotative signs from the anime "Orb: On the Movement of The Earth" related to the interpretation of "The Dark Ages" or the Dark Ages that occurred in Europe around the 15th century. This research using the qualitative research design with Roland Barthes' semiotic analysis approach through the paradigm of social constructivism. As the result, the representation of the Dark Ages in anime Orb mostly revolves around the rising of science among the common ideology made by the Church. The selected scenes for this research collectively construct a mythologized narrative of the Dark Ages as a period of intellectual repression, gender inequality, and epistemological conflict. The Barthes' semiotic approach itself helps the researcher revealing how the anime Orb used historical allegory and visual representation to align the meanings beyond the entrenched narratives of power, introducing science as both a rational and moral act of emancipation.

Keyword: semiotic, analysis, anime, medieval, interpretation

INTRODUCTION

As the entertainment industry began to spread and developing further, the form of entertainment itself has been transforming into many forms of media, especially animation. Nowadays, the most popular form of animation media is anime, a form of animation media with a unique style that popularized by Japan. Not only delivering a decent story plot and stunning animation visuals, Japanese animation studio has been improving their technique in both animation and story plotting to remarks a deeper meaning and interpretations through the history and social issues upon the society. The hidden meanings and specific interpretation behind the storytelling could be defined and outlined by using a semiotic analysis.

Semiotics is the study of signs, symbols, and the ways in which they convey meaning, is essential for forming and comprehending human civilization. Language, visual images, and

gestures- all of which are utilized in diverse situations to communicate ideas, beliefs, and values, can all be analyzed and interpreted using the semiotics framework (Behera, 2024)

Semiotics allows us to understand the link between image and society in a new way, using language and framework. It is also a method for exposing photos, studying mass media, literary texts, and systematically analyzing a variety of other aspects of popular culture.

Rooted in the foundational works of Ferdinand de Saussure and Charles Sanders Peirce, semiotics offers a framework for understanding how meaning is constructed and interpreted through various sign systems. Roland Barthes later expanded this framework by introducing concepts such as denotation, connotation, and myth, which have played a significant role in analyzing cultural texts.

Anime, as a multifaceted medium combining visual artistry, narrative depth, and cultural symbolism, serves as a rich site for semiotic exploration. Scholars have applied semiotic analysis to various aspects of anime to uncover underlying themes and societal critiques.

As example, in one of Hayao Miyazaki's films, it is explained how recurring images and representations convey nuanced meanings related to female characters and gender norms (Hossain and Fu, 2014). Same with previous example, an analyzation approached regarding the movie posters of "Kimetsu no Yaiba", identifying the types of semiotic signs and symbols used to convey denotative and connotative meanings (Andriani and Anti, 2022).

Representations of historical periods, such as "The Dark Ages," in anime have also been the subject of scholarly research. There are another analysis that explains how European films depict the "Black Death" and other aspects of "The Dark Ages," providing insight into cinematic depictions of historical themes (Vercruysse, 2013). In the realm of anime, the "Attack on Titan" series has been studied for its depiction of war and ethics, while in another research, there is an exploration of how anime influences Generation Z's moral perspectives through its representation of conflict and societal structures (Sumarlan and Rizky, 2024).

The anime film "Suzume" (2022) has been analyzed by researchers for its use of semiotic elements to represent natural disasters and collective trauma (Maneewan and Jongsuksomsakul, 2024). This is in line with a broader trend of using semiotic analysis to understand how anime reflects and critiques real-world events and ideologies.

In addition, the application of semiotic analysis extends to understanding the depiction of fear and transformation in animated films. For example, the film "Orion and the Dark" has been studied for its use of signs and symbols to depict the transformation of fear into a real entity, which invites the audience to reconsider their perception of darkness and fear (Rasool et al., 2024).

Orb: On The Movement Of The Earth is one of quite popular anime of this year with its main theme resolving around one of historical events which close to the setting of the Dark Ages, where common civilian prohibited on accessing further education or sciences which only able to be accessed by noble people who connected within the control of church, as church is an icon of power that controls everything back in that era.

The story itself told by many point-of-view (PoV) of various character, first started through the perspective of a young boy named Rafal. Rafal is an adopted kid by one of higher-ups that connected with the church, as so he grew up with learning advanced knowledge more than the commoners. One day, an encounter between him and a suspect brought by the church due to his illegal research enlighten Rafal about the hidden truth that has been controlled by the church, and the founding of a new discovery that oppose the highly-revered geocentric theory: heliocentrism. Later, this discovery begin to lead Rafal into a journey of establishing a new theory that will change the whole world of scientific research.

What makes the researcher find it interesting from this anime is the way this story delivered through variative perspectives: from a well-taught and curious young boy, a relative of church who oppose the church ideology and a common guy who has lost his idealism of

living his own life, and then connected to an orphan girl who invested in money and business. All main character in each arc were connected within each other by one viewpoint of a discovery, the heliocentrism theory. With its setting narrated in a time when the deepening of more advanced scientific knowledge was hampered by power, or commonly known as the Dark Ages, this anime series told the story by a fiction narrative that interpret how tough it was to learn the advanced sciences that opposing the society's norm that constructed by the church community who controlled everything back in the past. And how it conveys the beauty of science through its visual on each scene, makes it more appealing for the watcher to stay still and learn about historical events through intense narrative.

This study aims to find connotative and denotative signs from the anime "Orb: On the Movement of The Earth" related to the interpretation of "The Dark Ages" or the Dark Ages that occurred in Europe around the 15th century.

The formulation of the problem to be studied in this study is; 1. Is the interpretation in the anime "Orb: On The Movement Of The Earth" in accordance with or close to the conditions described in the history of "The Dark Ages" in Europe? 2. How is the interpretation described in the anime "Orb: On The Movement Of The Earth"?

With this study, researchers are expected to be able to determine the denotation and connotation of the anime "Orb: On The Movement Of The Earth" and find a correlation or continuity between "The Dark Ages" and the scenes depicted in the anime.

METHOD

This research using the qualitative research design with Roland Barthes' semiotic analysis approach through the paradigm of social constructivism. The subject of this research is media text (the Orb anime series), focusing on correlation of scenes in the Orb anime series that interprets the Dark Ages among the anime's narrative.

In qualitative research, particularly in a research that using semiotic analysis, a population is not defined numerically but defined in a bounded set of cultural texts that serve as the source of data (Denzin & Lincoln, 2011; Creswell, 2013). Anime series is considered as cultural artifacts that embody and reproduce social ideologies, myths, and values (Barthes, 1977; Hall, 1980). In semiotic analysis, these artifacts are appropriate units which focuses on the symbolic meaning attached in narratives, images, and character representations (Eco, 1979).

Based on the explanation above, the population that will be the subject of this research is a set of media text artifacts, which are all episodes of anime series "Orb: On The Movement Of The Earth", while the sample of this research will be a set of selected scenes in the anime, such as symbolic visuals or narratives that interprets the theme of the Dark Ages. The unit of analysis is the set of symbolic elements such as visual signs, dialogue, plot structures, and representations of power, identity, or cultures that are found in the sampled episodes (Neuendorf, 2017). The unit analysis of this research including recurring symbols, characters, dialogue, plot events, or scenes that are correlating with the theme of the Dark Ages. The sampling method is Purposive Sampling, that is choosing scenes intentionally based on their relevance to the research objectives which is scenes that related within the theme of the Dark Ages.

The primary data will be collected from the visual and audio elements from selected scenes (e.g., dialogue, color, setting, costume, symbols) and transcription of key dialogue or narration. In accordance of primary data, a secondary data will be included to support the evidence that is collected from the primary data, including background on historical figures or events (e.g., Galileo, heliocentrism origin, the Dark Ages), scholarly articles on anime symbolism, cultural studies, and historical parallels.

The analytical framework will be started by defining the selected scenes from the anime episodes of "Orb: On The Movement Of The Earth" that gives a hint or sign that related

within the theme of the Dark Ages through sampling. After collecting all scenes that has fulfilled requirements, the researcher will start to identify the literal signs or denotation signs that embedded in selected scenes from the anime episodes (e.g., visual signs, narrative motifs, sound or music or dialogue, then analyzing founded signs in the denotative level. Through the denotative sign, researcher will proceed into analyzing through the connotative level, to seek the underlying meaning behind the denotative signs (e.g., emotions evoked, cultural associations, genre conventions). If necessary, researcher will also conduct a third-layer decoding or the Myth of the related signs to construct an ideology or naturalized cultural message that may be attaches within selected scenes. When the decoding finished, researcher will synthesize and interpret findings within a discussion on how the anime constructs meaning at multiple levels: by literal, symbolic, and ideological level. A contextual review will be conducted through the selected scenes regarding on the historical or cultural context within the anime, the creator's background and political or historical positioning, and the audience reception or genre conventions. This will only become the optional supporting or secondary data that will give a depth reading through the connotative decoding of selected scenes if necessary.

RESULTS AND DISCUSSION

In this section, the analysis will be split into each specific themes that represent the element that related to the Dark Ages.

Suppression of Scientific Truth



Figure 1. People That Accused as The Blasphemer of The Church Burned Alive in Front of The Residents
Source: Research Results

We will conduct the denotation sign first from this scene. This scene appeared in the episode one where the first protagonist, Rafal, walking towards a bunch of crowds that watching over the Blasphemers who opposed the side of the Church and did such illegal research restricted by the Church. As in literal meaning, Blasphemer refers to a person who speaks irreverently of God or sacred things, which is opposing the Church's teachings (*Dictionary.Com*, 2025).

The connotation meaning of fire can be interpreted as a purification or destruction, while the crowd's silence may indicate fear, complicity, or helplessness. The protagonist standing in the center observing the situation can be interpreted as a figure that implemented the critical distance or impending transformation.

The myth that can be interpreted from this scene is how much influence the Church has on the control and power that limits access to science and scientific research that is considered taboo to be done in general. In common sense, pursuing knowledge is dangerous when it challenges dominant ideologies. They do not hesitate to punish anyone who opposes the power over science by burning them alive. This act itself can be interpreted through the flame of fire as the form of hatred towards the Blasphemers who the Church thought were did such anomaly behavior, while they the accused Blasphemers only seek beyond the truth of the science.

As for an evidence that this is also happening in the past, The Italian philosopher Giordano Bruno, a proponent of infinite worlds and early heliocentric ideas, was tried for heresy by the Roman Inquisition and, refusing to recant, was stripped, tied to a stake, and burned alive in Rome's Campo de' Fiori on February 17, 1600 (Martinez, 2018).

Individual Enlightenment Under the Oppression



Figure 2. Rafal Realizing That the Sky Is Clearer Than Before He Learns About Heliocentrism Source: Research Results

The denotation of this scene shows Rafal that was prisoned due to the accusation of him conducting illegal research that oppose the Church's ideology. In the night, where moon and stars are shining bright through a small window that installed in the prison, emitting a bright beam of light that shines on Rafal. Making the dimmed and dark prison feels brighter.

In connotation meaning, the cosmos projected in the scene can be interpreted as a symbol of vast knowledge, the moon and stars symbolized mystery and wonder, the beam of light itself can be revealed as divine or rational illumination, something that similar like a revelation. This illumination can be interpreted as a previously unseen connections, often bringing emotional satisfaction that reinforces learning (Kounios & Beeman, 2014). The rectangular frame that shaped from the window isn't specifically meant to, but may echo the monolith from 2001: A Space Odyssey, which can be the symbol of evolution, awakening, and contact with a higher truth. This moment can be aligned within figures like Copernicus, Kepler, and Galileo.

Gender and Power in Scientific Spaces



Figure 3. Jolenta Receiving a Situation of Rejection of Her Existence in the Academic Field From Other Male Researcher

Source: Research Results

This scene showing Jolenta, one of the main characters in the story, standing alone distanced from the group of male researchers which is working at the same academic field as

her. They cleared out that there is a contrast difference between them and Jolenta, where a female researcher like Jolenta can't have an equal position with them male researchers.

In metaphorical meaning, this can be the symbol of exclusion, hierarchy, and institutionalized sexism. The dark atmosphere drawn in the scene signifies emotional suppression, oppression, and social isolation. While Jolenta's solitary platform bathed in dim light becomes a stage of symbolic resistance, which explains that she is not silent, but has not yet be heard by everyone and the world itself.

The illusion of her being apart with the male researchers illustrate that scientific discourse has been excluding women's voices since long ago and framing the masculinity as the norm of reason. The perception of science itself has been historically shaped by gendered power structures, privileging male perspectives under the guise of objectivity (Harding, 1986).

In reality, some of female scientists like Lise Meitner, Rosalind Franklin, and Jocelyn Bell Burnell has been experiencing such an unpleasant treatment in scientific research field themselves (e.g., excluded from authorship, denied Nobel Prizes, made invisible behind male colleagues). Their contribution as a female researcher in science are systematically minimized or misattributed to male colleagues (Rossiter, 1993).

The Decline of Ecclesiastical Epistemic Control



Figure 4. A Member of the Orthodox Church Explained That the Power of the Orthodox Church is Weakening

Source: Research Results

In this scene, a somber-looking priest saying that the Orthodox Church is weakening. The character's grim expression seems contrast with the serene sky and distant mountains. This illustration visually framing a moment of existential reflection on the loss of institutional control. This can be aligned to a rupture in epistemic power, which going from theocratic to empirical.

The sky spread in the background symbolized the opening of intellectual possibility, where a new horizon of thought where the heavens are no longer fixed, spiritual realms but mechanical systems open to inquiry. The priest that shown standing alone and his figure got dwarfed by the cosmos, visually illustrated the loss of anthropocentric and ecclesiastical centrality.

In historical records, the Church was given the role as the sole legitimizer of knowledge, squared divine authority as eternal and natural. This would be considered as bourgeois myth by Barthes, which is a constructed narrative that presents power structures as eternal and ordained. This myth begins to collapse when confronted with heliocentric models, which is able to challenge the geocentric models developed by the Church. The Copernican revolution not only restructured the cosmos, but dislocated humanity from its theological center (Cohen, 2010).

The dialogue said by the priest reflects the epistemological displacement that occurred between the late medieval period and the scientific revolution. The natural philosophy that has been gripped long by the Church, which is now commonly called as science, was undermined constantly by observational methods, instrumentation, and repeatable evidence. This weakening of ecclesiastical dominance is explained within the church's influence over cosmological doctrine declined as heliocentric models gained credibility through astronomical data and technological advances like the telescope (Lattis, 1994). Brooke (1991) also stated that as science began to establish an independent identity, the church's monopoly on explanatory power visibly eroded.

The Dawn of Scientific Liberation



Figure 5. Draka Sat Leaning Back in Her Dying State While Looking at the Light of Dawn Shining on Her

Source: Research Results

This scene shows Draka, one of the main characters that appears in the latest arc of the story, sat down leaning to the stone near her enveloped in the warm rays of dawn, while she's facing her crucial state to death due to the blood loss caused by the attack from the Church union who aimed her and the Heretic Liberation Force. After escaped from the chain of chaos that happened in front of her, she released the dove she brought who bringing the message she attached on the dove's feet. The dove will be delivering the message that contains an order to publish a book authorized by the Heretic Liberation Force to share the knowledge about heliocentrism.

The sunrise symbolized as divine rebirth which represent the dawn of scientific enlightenment. This also has been long co-opted in Christian iconography. The dove itself symbolizes the Holy Spirit in Christian theology, and can be interpreted as a messenger who delivered divine messages. But in here, it can also be interpreted as the carrier of human discovery and empirical truth. The form of the re-encoding can be transformed into an emblem of rebellion and intellectual liberation, severing its prior religious associations.

The value of the light and shadow which looks contrast visually encodes her pain and peace. Even though she bleeds into the earth, she yet gazes at a future illuminated by knowledge. This also being noted by Shapin (1996) where the birth of modern science is as much about bodies resisting domination as it is about minds discovering laws.

CONCLUSION

The representation of the Dark Ages in anime Orb mostly revolves around the rising of science among the common ideology made by the Church. The selected scenes for this research collectively construct a mythologized narrative of the Dark Ages as a period of intellectual repression, gender inequality, and epistemological conflict.

The framework introduced by Roland Barthes provides an ability to decode the denotative and connotative meanings that underlying behind the visual illustration served in the anime, moving beyond literal depictions to reveal deeper ideological tensions between institutional power and the pursuit of knowledge.

The scene where the public execution of the Blasphemers, Rafal's enlightenment moment of the founding of new truth, Jolenta's exclusion from academic discourse, the weakening of the Orthodox Church, and Draka's symbolization of freedom and liberation showed as a signifier of resistance against hegemonic forces that suppressed heliocentric truth and scientific rationalism. These scenes were indeed showing a parallel recognition to the historical figures like Giodarno Bruno and Galileo Galilei who connected within the evolution of sciences and knowledge in the Dark Ages, which empowering the myth of science as a path towards liberation from ecclesiastical and patriarchal domination.

The Barthes' semiotic approach itself helps the researcher revealing how the anime *Orb* used historical allegory and visual representation to align the meanings beyond the entrenched narratives of power, introducing science as both a rational and moral act of emancipation.

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