Techno-scientific Innovations in Nollywood Films: A Textual Analyses of Kunle Afolayan's *Aníkúlápó* and Xtly Bazzey's *Afíábóm*

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Abstract
This paper textual-analysed two Nollywood films produced in 2022. Precisely, Kunle Afolayan's *Aníkúlápó* and Xtly Bazzy's *Afíabóm*. Emphasized are the films practical benefits from adopted techno-scientific methods, principles, practice and outcomes, aided by camera angle, lighting, audio, mis-en-scene, scenic effects and algorithmic video editing technology. The paper relied on *Cognitivism* and *Realism Theories* and derived its data from the analysed films' texts and reviewed literature. It traced Nigeria's "techno-scientific film history" to late 1950s, when her pioneer "cinema-theatre" by Ogunde *et al* modelled after [then] Western "analogue movies types" used to produce and advertise Christian, racial, colonial and Eurocentric films. Evidence revealed that analysed films benefitted greatly from aforementioned techno-scientific methods, used mainly to create, structure, embellish, edit, frame, evaluate and exhibit their contents. Findings affirmed that used techno-scientific methods adhered the films to the "3-step course" (exposition, confrontation and resolution) recommended to guide realism production. Thus, the generalized conclusion that techno-scientific innovations aid efficiency, acceptability and quality outcomes in Nigerian films.

Keywords: Nollywood, Film, Techno-Scientific, Realism, Cognitivism, *Aníkúlápó, Afíábóm,*

Introduction

Techno-scientific innovations have always been the spine for all empirical, cultural, historical, intellectual, auditory, textual, semiotic and aesthetic feats in Nigerian films. As Africa's giant films producer, exporter and advertiser that is next only to India's Bollywood in terms of annual released films, Nollywood, Nigeria's official film industry, employs latest science and technology innovations to attain quality outcomes in local realism, formalism and classicism movies. While science offers deep research insights on how to modernize cinematography as an aspect of media infotainment practices/mass communication experience on/offline, technology practically gives life, elegance and better understanding of science innovations in the creation, evaluation, distribution and marketing of cutting-age Nollywood films as Kunle Afolayan's *Aníkúlápó* (2022) and Xtly Bassey's *Afíábóm* (2022). This, along with the cognitive roles and

accomplishments of Nollywood films, asserts the imports of techno-scientific innovations in the professional, artistic, cultural and socioeconomic developments of modern filmmaking in Nigeria.

Experientially, since the advent of Nigerian cinema/ "broad screen theatre" in the colonial era/late1950s, science and technology innovations have played key methodical, empirical, procedural and ethical roles in the inventive composition, structuring, perfection and efficacy of Nigerian films. As a perfect "synergistic duo" that symbiotically operate to achieve "osmotic feats" in the Nigerian cinema industry, the imports of science and technology innovations in now "Nollywood films" are well evident in modern Nollywood epics as Kunle Afolayan's *Aníkúlápó* (2022) and Xtly Bazzy's *Afíabóm* (2022). Thus, they are selected and textual-analysed on merit in order to accentuate their techno-scientific benefits via deployed methods, principles and practice.

Historically, from the first Lumière brothers' projections in 1895 to the birth of modern computerised films in the early 1900s, the global films industry championed by the West has remained inundated with techno-scientific innovations that revolutionized it over time. Jolima Andrea Daiz, a journalist, dates science and technology innovations in global filmmaking to the 16th and 17th centuries inventions of the *Camera Obscurer*, *Magic Lantern* and Marey's *portable chronophotography* that respectively "projected images in dark rooms, showed still transparent pictures, or moved bands that delayed twelve images per second" (Grigas, cited by Weisenberger, in Hogan, 2022). Daiz informed that science fiction originated in 1902 through George Méliès (a French filmmaker)'s use of the techniques of superimposition of images, fading, double exposures and scale model to crash a spaceship at the surface of the moon. Also, experimental films as science fiction mainly thrive by artificial intelligence (AI) /computer graphics manipulations and other advanced film-making technology that are collectively deployed as techno-scientific innovations to improve Nollywood cinematography processes and outcomes

Definitively, film is a motion picture created with film/video camera. It is broadly divided into narrative, descriptive and experimental films as epics, documentary and science fiction. Every film's depends largely on the quality of its overall content, character, method or production, distribution and exhibition technology. For instance, science fiction mainly thrive by artificial intelligence (AI) /computer graphics manipulations and other advanced film-making technology that collectively portray techno-scientific innovations gains in cinematography. Implicitly, without techno-scientific innovations to constantly upgrade/update global cinematography, filmmaking would be manually stressful, energy and time consuming.

In effect, Nollywood cinematography would broadly be technically-deficient, unattractive/ globally limited without the aid/adoption of latest professional tools for elegance, embellishments or illusions provided by modern techno-scientific innovations as evident in analyzed epics. It obviously would be difficult to plan, direct, produce, evaluate or market both films with the original analogue system that later transformed with digitization introduction to suit current global filmmaking requirements. Comparatively, Nigerian films would hardly compete favourably with its Western and Asian contemporaries as Hollywood and Nollywood films if they failed to develop with modern science and technology inventions, practice or expectations in cinematography. This infers that no film making is "faster", inventive, "sharper" or revolutionary without relevant science and technology aids, particularly recommended methodology, principles and practice that

determine merits/efficiency in produced movies quality, outcomes, accessibility and patronage worldwide.

Implicitly, film successes go beyond funding to the effective blend of all relevant techno-scientific and artistic resources (personnel, equipment and machines) employed. This infers the expert use of requisite production materials, technology or tools to produce, edit, review and deliver quality films. Examples are blockbusters, science fictions, ads videos and Nollywood movies uploaded/downloaded at their respective official websites /dedicated stream-channels as the analysed films. This is often possible and easy with Internet smartphones technology that can equally be used for private videography purposes. Obviously, the ability to make, share or evaluate Internet videos with digital cameras, smartphones, computers and specialised drones are all credits to advances in science and technology. Private videos, selfies and screenshots keep memories alive in celluloid and printed forms. Yet, not enough publicity is received by Nollywood's techno-scientific improvements and quality outcomes compared to their Bollywood and Hollywood equals. This, again, justifies the significance of this paper designed to address observed issue/gap.

Therefore, this paper content-analyses the aforementioned Nollywood films in order to emphasize/ascertain the various technical, aesthetic, economic, cultural and digital benefits they gained through their effective utilization of modern techno-scientific innovations/tools in their respective production, marketing, exhibition/ global distributions processes. Specifically, the paper is designed to;

1. Identify selected films techno-scientific elements.
2. Ascertain how analysed films developed/ benefited through techno-scientific innovations aids.

Conceptual Clarifications

Techno-scientific innovations (TSI) are broadly conceived/contextualized as ethically approved/generally accepted science and technology inventions that technically, physically or commercially aid global developments in cinematography. TSI mainly involves but not limited to the methodical use of advanced filmmaking equipment/technology (digital movie camera, editing technology) to ensure quality content outcome(s) from pre-to post production stages. It (TSI) encourages the use of artificial intelligence (AI)/computer generated image technology to emphasizes the scientific, artistic, technological, cultural or physical synergy between human and machines inventiveness, revolutions and pedagogy in the making of animations, illusions, special (scenic, audio and visual-aesthetic) effects in [Nollywood] cinema.

Also, TSI naturally serves motivational, efficiency and increased patronage purposes by sparking healthy competitions amongst cinematographers, critics and investors around the globe. It, in doing so, changes the way the world views or embraces film as science and technology supported reality imitator, story teller, visual infotainment/educational art. Technically, it is important to note that films would not rightly be further nicknamed "motion pictures"/ "broad screen theatre" if there were no techno-scientific innovations that justified such sobriquets in the first instance.

Indeed, aside natural creativity, experience, talent /inspiration, everything cinematography is aided to success by technology, conceived as the practical application of scientific knowledge to meet all basic human development needs in life. These contextually include scientifically

produced materials (tools, equipment or techniques) used expertly to copy, reinvent, criticize or advertise the reality/abstracts that cinematically explain man's systemic relationship to nature, arts and society as seen in analyzed films. For instance, it is easily asserted [by logic] that since technology includes even the pen, paper, ink or computer system used in creating desired movie scripts; including the costumes, make-up; digital camera; drones; props; microphones and/or editing software packages employed to alter reality in films, it follows that Nollywood epics, like all their global counterparts benefit from techno-scientific innovations in cinematography.

Nigerian Film/Video Industry

Nigerian film industry (a.k.a. Nollywood) is the official umbrella name for all indigenous films produced by Nigerians at home and abroad. Pioneer Nigerian films production fraught with analogue methods, racial, cultural and colonial issues. They consumed much time and energy and birthed now Nollywood movies from the Western prototypes used to propagate colonial ideals and Christianity (Hogan, 2022). Eyengo (2012) asserts that "the historical trajectory of Nollywood started since pre and post independent Nigeria, with the theatrical (stage) and cinematic (celluloid) effort of Chief Hubert Ogunde. Omini (2014) corroborates that "postcolonial Nigeria emerged as a child of British experiment, toddling, fumbling and groping for a definite political destiny".

Reviewing Nollywood history, Agba (2012) opines that early Nollywood films thematically emphasized history and culture and to some extent morality and politics, but contemporary social realities were left out. To Agba, "the success of Nollywood could be attributed to the ability of the present day film makers to emphasize contemporary realities which many Africans and Nigerians can relate to". Though Agba's view appears critically ignorant that culture is dynamic, transcendental and ever present/recurrent in human history, his conclusion that "the cultural aspect is still present though", absolves him of criticism.

Guided by *Dictionary.Com*, Iji (2016, p.2) ossifies culture as the quality in a person or society that arises from a concern for what is regarded as excellent in arts, letters, manners, scholar and creative industry pursuits etc. Similarly, Nigeria's *Cultural Policy* (2002), cited in Omini (2014, p.265) emphasizes culture as the totality of a people's way of life evolved to meet their basic needs, to order and give meanings to society's social, political, economic, aesthetic and religious norms and modes of organisation, thus, distinguish a people from their neighbours. Implicitly, since culture is perceived as everything human and society, including advancements made in arts and creative industries, it is certain that Nigerian films progressed is equally cultural.

Scholars also attribute Nollywood successes to its committed use of latest cinematography technology and methodology to enhance production quality, accessibility and patronage than ever before. This also explains why Nollywood, rated then as low cost film industry is now globally regarded on merit as Africa's best, most famous and lucrative of all continental equals. This is mainly based on applied techno-scientific methods and earned benefits. Certainly, techno-scientific innovations create sufficient [mis-en-scene] awareness that affirms Nollywood cinemas as reflectors of Nigeria's daily existence in visual arts (Esebameh, Otimeyin & Osariyekemwen, 2012, p.136).

Nollywood's Techno-scientific Developments

As inferred above, Nollywood Techno-scientific development dates from late 1950s, when the country's pioneer cinemas evolved with Ogunde et al as pioneers. What differs present and past Nigerian films are changes in their production methods, principles, practice and products. Study (Hogan, 2022) asserts that "time-dynamism" and "techno-scientific advancements" hitherto altered Nollywood processes and results to suit latest audience infotainment demands and expectations from the industry. Evidence revealed that the time and energy-consuming analogue equipment used in the past, had long been replaced with modern digital technology that easily guarantees efficiency, quality and increased global access and patronage for now Nollywood films.

Perhaps, it is all credits to the industry's competitive move and practical compliant to current digitization processes, revolutions and avant-garde innovations. *Encarta Dictionary* (2008) defines digitization as the conversion of analogue information as images, graphs or other data captured by the movie camera into digital information for computer processing. Certainly, the recent introduction of digital video cameras (4K and 3D technology), drones, smartphones videos, and computer graphics asserts "techno-scientific" feat in Nollywood history. This further proves how techno-scientific innovations aid Nollywood's experimental, narrative and descriptive films productions.

Comparing Nigeria's past and present film history, Nnamele and Nnalue (2020, p.152) observe that "the earliest forms of film were created using still images spun rapidly through a wheel, but today, moving objects can now be recorded for film purposes due to technological breakthroughs". Source expatiates that "these inventions have not only increased the pleasure of the film experience, but have also increased critical questions, interpretations, concept, analyses, and judgments. Every aspect of film, from pre to post production is now being analyzed.

Undoubtedly, through techno-scientific processes, Nollywood cinematographers regularly develop critical thinking skills/cognitive ability to make informed decisions about the type of movies that best capture realities/abstracts in target audience' interest. Science helps Nigerian filmmakers to predetermine production cost (budget), cause (method) and effects (outcomes) by research/feasibility studies. In effect, science and technology innovations make it easy for Nigerian filmmakers to methodically, historically or cultural study, assemble, experiment, relive or narrate observed reality or phenomena in motion pictures.

Science intuitively opens Nigerian' psyche to the highest level of consciousness/sacredness required to shape society's behaviour via films. It helps to unveil existence wellbeing through cultural heritage expression in material objects that can be scientifically tested or verified as reality, abstract or fantasies in Nollywood films. Implicitly, Science offers Nollywood cinematographers the muse to originate and methodical exemplify Nigeria's multiculturalism as Africa's most populated and endowed nation. It affords Nollywood critical stakeholders the basic cosmological, mythological and anthropological insights to the natural secrets of Nigeria's pluralism.

Professionally, spectacle is one of the six (6) basic elements recommended by Aristotle as pivotal to the success of arts designed to be performed by actors before theatre or film audience. Spectacles comprise every visual communication element that physically, mentally or subliminally adds to the "psycho-emotional effects" that audience experienced while watching stage or screen-play/film. These include all stage/set movements created by "the 5Cs of Cinematography",

aesthetic, light, colours, audio and scenic effects in theatre/cinema (Wilson, 1998; Branston & Stafford, 2007).

Creating spectacles in [Nollywood] films often requires the combined expertise/team approach of all involved artistic and technical components. This entails that technical and artistic directors must have requisite scientific knowledge and experience to employ and perfectly synergize or complement materials in Nollywood cinematography. For instance, it usually takes scientific research methods to empirically select and adapt latest film technology to assigned movie environment and characters. Science helps to systematically test, balance or differentiate between reality and abstract in Nollywood films. Scientific knowledge and experience predetermine "film materials' strengths" against misuse, abuse or injurious/excess application and negative outcomes.

Science and Myth, "Film Tricks"/ "African Magic" in Nollywood Films

Despite being inferred from Greek *mythos* as "traditional stories about the divine, heroes or legends", Sigmund Freud (1856-1939) defined myth as *primitive science*. Freud emphasized the importance of the unconscious in determining human behaviour and beliefs in life (Carpenter, 2005). He later used his psychoanalysis method of therapeutic analysis to liken myth to the combined force of imagery from observed reality that typically relives as familiar objects, routines and persons in dreams or fantasies that subliminally affect the human "psyche"; the Greek word for "soul" or "centre of consciousness" (Harry & Platzner, 2001, p.41). Similarly, Leo Tolstoy (1828-1910), a famous Russian writer, arts critic and moral philosopher, known for his mastery of psychological realism, combined "realistic description with penetrating insights into characters' motivations" to assert how "primitive science" affects characters' attitude, behaviour, thoughts, history and environment in [Nollywood] cinemas (*Encarta Dictionary, 2008*). This contextually infers that science enables myths to explain etiology (origin of cause-effect actions) in Nigerian films.

"Film Tricks", on the other hand, is an indigenous colloquialism /sobriquet for the "visual deceptions" created by camera movements and algorithmic editing as illusions or "movie magic". Rightly called "Film technology", film trick often combines superimposed images, double exposure, fading, and "computer-modelled techniques" to create apparitions, fantasies, art mystiques or theophany in Nollywood films. Nollywood "film tricks" or "African magic" (implied as juju", witchcraft, sorcery) are mostly inexplicable, paranormal or mysterious occurrences. Typical examples of science-innovated and facilitated film tricks in Nollywood movies include objects, people or things flying and [dis]appearing by algorithmic video editing technology (AVET) aid.

In effect, Nollywood "film tricks" is the manipulative use of technology science, creativity, reality and abstract in cinematography. In doing so, Nigerian filmmakers methodically and technologically heighten tensions and intensify suspense through audience' empathy, suspense, subliminal and modelling effects of scary film exposures (Hogan, 2022).

Science, Technology and Nollywood Animations/Science Fictions

Though not fully developed in Nigeria, in comparison to the Western world, animation delivers important ads videos in Nollywood films. Experts view it as a "scientific plus" to the industry. As a visible experimental film innovation with psychic effects, critics fear animation

addiction may lead to animatism /belief that everything has consciousness. However, despite feared adverse effect, animation in experimental films/ science fictions advertises, predicts/accentuates latest accomplishments in science and technology.

Eileen (2001, p.332), cited in Agba, Ndoma & Ellah (2014, p.2) assert that cartoon as animated film uses techno-scientific movement of originally inanimate/stationary objects of slightly varied paintings, drawings or models that are sequentially filmed to present the artist (cinematographer)'s viewpoint and perceived audience discernment by cognitivism. According to Agba et al, keeping cartoon (in Nollywood ads) seamless, makes the cartoonist/filmmaker eager to convince the audience that his thought is a reality. Science fiction causes fear that robots used as computer aided artificial intelligence may replace humans in future Nollywood films. This infers that Nollywood "film is a potent vehicle of cultural transfer because it relies on sight and sound. Its emotional appeal elicits immediate response by processed information" (Mgbemere, 2016, p.42).

As hitherto established, technology is the "spine" of science innovations in global cinematography. Technology physically promotes science in Nigerian films. Weisenberger (2022) identify algorithm video editing, 3D printing, 3D visualization, real time rendering, the Internet of things, Volume technology and the Camera as very relevant to film production success. Colour, sound, lighting, aesthetic and other unseen "behind the camera technology" as tripods, trolleys, smart TV monitors, cables, microphones, prompting machines, iPhones, computers and mixers add to the list (Wrapbook, 2023a).

Theoretical Framework

This paper relied on cognitivism and realism theories. *Encarta Dictionary* (2008) defines cognitivism as the theory that moral judgements are statements of fact and can therefore be classed as true or false. The theory equally infers a field of science concerned with cognition, cognitive psychology, linguistics, computer, neuroscience, communication and philosophy of the mind. As such, it offers penetrating insights to the plot, structure and characterization of analysed films. It helps to identify and evaluate selected films contents by genre, production methods, imagery, sound, light, mis-en-scene, camera angle and editing outcomes, based on how they chronologically define or develop the characters around the two films narrations, sequences, environments and motif. Leo Tolstoy, Albert Bandura and Sigmund Freud are commonly associated with this theory.

Similarly, *Realism Theory* is "the philosophical doctrine that physical objects (as often observed, studied and methodically applied in cinematography) continue to exist as reality/literal truth in practicality when not perceived". It is equally conceived as the lifelike representation of people and the world in arts without any idealization (*Encarta Dictionary, 2008*). The theories are relevant because they collectively favour the subject and significantly help to accentuate observed relationship between reality, art and cognition in selected films. Besides, they combine to assert that both films can be studied or read as cultural texts.

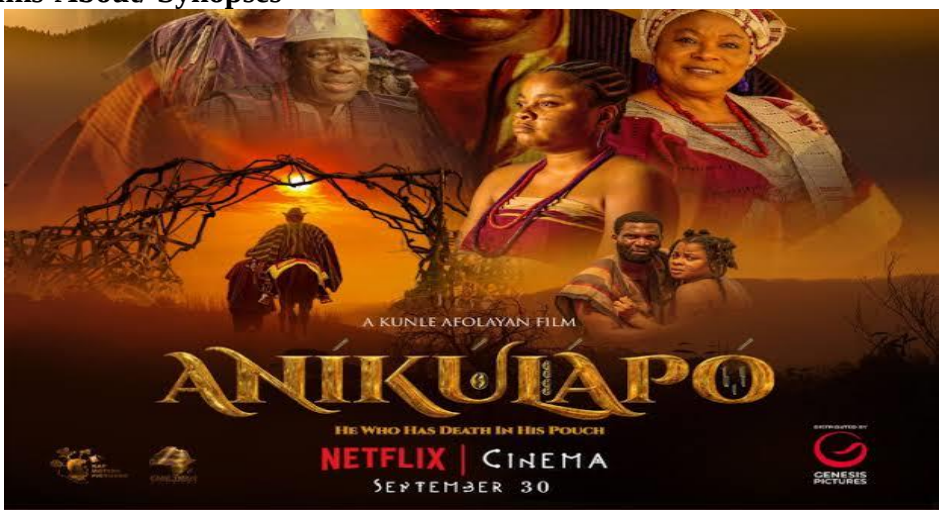
Method

The paper adopted textual analysis method, otherwise called "narrative method" to textual-analyse Nollywood's Kunle Afolayan's *Aníkúlápó* (2022) and Xtly Bazzy's *Afíabóm* (2022), in order to ascertain how their contents, structures, characterization, spectacles, audio, lighting and

cinema outcomes benefitted from techno-scientific methods, principles and practice. The method is relevant by the technicalities it offers to read both films as texts.

Accordingly, the aforementioned films were carefully selected by genre, theme, culture, beliefs and production methods similitude. They were repeatedly and attentively watched, with relevant notes taken about their entire structure, plot and character in relation to applied technology and production results. The motif was mainly to establish synergies in how both films unfolded /likened each other in exposition, confrontation and resolution, otherwise inferred by Aristotle as "the 3-act structure" in fiction. Also, to identify, inter-textualize or read through their directors' perspective, mis-en-scene, camera angle, lighting and algorithmic editing similitude. Particularly, how they collectively revolve, define or develop the films stereotype characters personality by culture, chronology, environment or embellishments. Noted details served as primary data. They were supported with secondary data accessed and reviewed as related literature on/offline. Collated data were presented and learnedly analysed. Discussed findings led to the paper's relevant conclusion.

Data Presentation and Analysis
Selected Films-About/ Synopses



Aníkúlápó (2022) is a Nigerian epic film directed and produced by Kunle Afolayan and KAP FIlm Production. The film is an hour eleven minutes classic set in the past in Oyo and Ojumo. It has stereotype characters and chronologically revolves around the fate of Saro (Kunle Remi) and Arolake (Bimbo Ademoye) as starred actors. Its central theme is culture, with hubris, greed, religion, envy, love and betrayal as perceived subthemes. The film contains imageries that are techno-scientifically embellished as auteur, mis-en-scene, lighting, colour and algorithmic video editing effects. These precisely include imagery/ symbols as "Akala-the mythical bird", "the magic gourd", idols, totems, relics, pictures, props, costume and artefacts used to define the film's contents, structure, locales and characters attitude, culture, beliefs and reasons behind their acts.

Synoptically, the film begins with the arrival of Saro as a stranger/traditional textile weaver who uses the "aso-oke" loom and technique to Oyo. Similarly, Arolake appears within an embellished palace as a young queen who despite disinterest in marrying the king is favoured and authorized to spend her nights with the king. That automatically forces her senior queens to see

her as a serious rival, hence, they hate, abuse and constantly sadden her in envy and displeasure for being the king's favourite against them as senior queens. The plot sequentially develops with intrigues and interest conflicts as Arolake and Saro secretly indulge in illicit relationship.

Soon the king gets wind of Arolake and Saro's illicit affairs and their plans to elope. He orders Saro's immediate death as a penalty for his errant act. Saro is mysteriously resurrected by Akala, the mythical bird and is assisted by Arolake to gain spiritual power to resurrect the dead by a stolen magic gourd that enables him become Aníkúlápó ("one that holds death in his purse."). Saro, now popular in their new village-Ojumo, begins to exhibit excess pride and sets amorous eyes on other women. He betrays Arolake by impregnating and marrying her maid because she is barren. His hubris begins to make him make inordinate demands from the villagers before he can raise the dead. Saro's demand for the princess as a price to resurrect the king's heir, angers Arolake to weaken his power source and desert him. Consequently, Saro fails to resurrect the prince and discovers he no longer has the power to tame death. Hence falls by his greed, infidelity and hubris (Asagha, 2022, cited in Hogan, 2022).

A FILM BY PANDA MOVIES LTD. Directed By Xtly Bazzy
[Photo credit: Iji, 2016]

Afíabóm (2022) is equally a Nigerian classic set within the remote past in a locale called Idum. The film is respectively produced and directed by Panda Movies and Xtly Bazzy. It stars Bella Benson (queen mother) and Laurel Ido (King Mbamba) as lead actors, with tradition and retribution as central themes. It contains imageries, scenic effects and embellished beauties that are techno-scientifically created and manipulated as mythical, iconic or theophanic creatures by the use of advanced cinema production technologies as 3D visualization, volume technology, camera angle and algorithm editing to establish and define its settings, structure, tensions, content and character.

Synoptically, the film in one and half hour tells how a certain "Lion King", Mbamba, who ascended the throne against customs idolized himself above tradition. Despite being severally cautioned by Ofum, the kingdom's chief priest (acted by Ekpe Ekpe), Mbamba, who equally

claimed immortality, threatened to fight Afíabóm (the supreme deity) if she does not steer clear of his reign. Angered by his excesses/errant behaviour, Afíabóm first appeared as a mysterious eagle to strike Mbamba's head queen to dead. Later she appeared as anaconda and swallowed Mbamaba's private shrine and totems imported by his ancestors from abroad.

Next, Afíabóm killed Mbamba's royal household, including his only prince/heir-apparent to the throne. Still, Mbamba remained unrepentant and tried to avenge his lost family by ordering Obuma (thunder) to go and kill Ofum and destroy every sacred tree, idols, shrines or objects of veneration of the gods in the land. Paradoxically, Afiabom reversed the fortune and destroyed him with the Obuma he sent. Sad though it was to lose an entire generation by the sacrilege of one haughty, evil king, the entire land rejoiced at the triumph of the immortal over mortal.

Comparison of Both Films

Comparatively, both films are similar by nature. They belong to the same epic genre by composition, narration, structure, theme and function. They use similar techno-scientific and artistic means to plot a "3-course structure chronology". Both revolve around stereotype characters, with heroes that hubristically end in anti-heroism for errant acts. They use purely local contents, have embellished scenes, flashbacks and imageries that epitomize African culture and spiritism. They intertextuality marry the past and the present while instructing the future-techno-scientifically through camera movements, aesthetic, lighting and sound.

For instance, *Aníkúlapó* opened with an exterior long shot that gradually established a forest in a village. Emphasized by camera angle, mis-en-scene, audio, lighting and algorithmic editing effects is a dead man and an ancient mighty black bird that hovers over and shortly stands beside the corpse. Shortly, an off screen voice recalls an ancient Yoruba belief in which the dead was never buried but dumped in the evil forest. It tells how the great black bird, Akala, resurrected the dead if it occurred untimely. The film makes perfect use of "the 5Cs of Cinematography" and other film elements as aesthetic, volume technology, spectacles, audio, and light effects to achieve its motif.

Similarly, *Afíábóm's* lead extreme long shot established an Old Calabar town with typical village settings. Within this locale is an embellished palace, a central shrine, a market and a village square. An off screen narration is intermittently used with flashbacks, music, lighting, sound effect and computer generated images (CGI) of the gods' symbolic presence as eagle, anaconda, strong wind, thunder/lightning. The flashback narrations, sequences and images connect viewers to the past and present cause-effect actions and how their unfolding confrontations and resolutions define the film's structure, character, function, language and culture in relation to its thematic focus and locale.

In summary, both films make use of flashbacks, insert editing, shot composition, special effects, narrative, sound, lighting and camera movements that tell their stories in sequences that techno-scientifically reveal their typical African nature, culture, oral heritage and beliefs.

Results

Presence of Techno-scientific elements in analysed film

The result generally showed that analysed films attained aesthetic merits through the aid of the high definition [digital] camera, computer generated images, algorithm editing and volume technology used to produce/attain their respective aesthetic, technical and/or cinematic merits as broad-screen theatre.

Digital Enhancement of Content Composition/Quality

Result also showed that applied techno-scientific knowledge (equipment, materials/ method) synergized with creativity to develop analyzed films narratives/shots composition from pre to post-production stages. This enhanced the films quality and patronage through audience captivation with chronological shots that digitally portray the contexts and perspectives of narrated stories. Thus, makes it easy to read, appreciate or evaluate both films as [cultural/historical] texts.

Discussion

Result (1) justifies the paper's objective (1). It precisely identified selected films techno-scientific elements and their benefits to both films. Also, it portrays that analysed films succeeded by the techno-scientific methods, principles and practice deployed by their respective directors. Wilson (2000, p.129) asserts that a [movie] director is the master artist that works closely with actors and crew to guide and shape their acts during production. For instance, it is selected films directors that assembled and manipulated all production elements to harmoniously achieve desired chronological, thematic, aural and visual outcomes in both films.

According to Wilson, a [film] director "develops a production concept, explains it to the performers, helps the performers with their roles and shapes ensemble playing" based on structured camera eye, angle and movements, guided by the 5Cs of Cinematography and basic film elements. To affirm camera imports in cinematography, Weisenberger (2022) opined that camera as the oldest technology in movie history, is also the most dynamic of technological advances that constantly push the once-simple (filmmaking) device beyond its pre-conceived limitations. Source expatiates that cameras like the upcoming DJI Ronin 4D are combining features and capabilities in ways that many would have once thought impossible. Machine vision lenses and extreme micro cameras are but few examples of new film technology expected to improve global cinematography quality in general. Weisenberger noted that from the earliest days of sequential photography to the introductions of sound and color to the birth of CGI, the intersection of technology and film innovations has propelled the moving picture from non-existent to existing everywhere all the time in less than 200 years.

Akpan (2014) agrees that camera as an essential film production tool constantly evolves in various forms and types to shape the way specialised film industries, experts, critics and audiences presently think about the future of cinematography in Nigeria. This infers that camera technology helps to shape filmmakers' awareness, perspectives / perceptions about the techno-scientific advancements recorded in the methodic design, production and improvement of films in Nigeria.

Given the evidence of computer generated images (CGI) in both movies, as seen in the appearance/disappearance, and resurrection of the dead by Akala, the mythical black bird in *Aníkúlapó*, including the theophanic exploits of Afíabóm as Eagle and anaconda in *Afíabóm* etc., it is obvious that such scenes would not be possible without algorithmic video editing technology (AVET). AVET is actually not new to cinematography. However, latest upgrades in computer graphics/computer software innovations have methodically affected the way modern [Nollywood] filmmakers/ editors utilize it to attain set goals and merits in post-production. AVET is computer's in-built logical, methodical or mathematical problem solving programs/ procedures. It is usually written as flow chart/ binary numbers and designed to scientifically aid film editing processes by set rules that are meant to be followed step-by-step (Anderson, 2000).

Weisenberger (2022) avows that while most new technology in the film industry is disruptive by nature, algorithmic editing technology as the process of editing according to a set of well-defined [computer] rules, like many advances in film editing technology before it, represents a marriage between modern science and historical principles that intimately link the future of post-production to its past. Algorithm video editing can be used automatically to cut and match a particular style. It can be used to organise the mountain of materials shot during documentary production by visual identifiers, like faces or landscapes. In some cases, it can even be used to change a performer's dialogue after it has been recorded (Wrapbook, 2023b). These, we regularly perceive in modern Nollywood films where a typical Nigerian actor's voice recorded in the original form changes to purely English or Americana accent. Same thing happens in most popular Bollywood and Native American films.

Undoubtedly, volume technology is one of the vital film elements inferred by the finding about background images created and projected as drop-shadows/imageries by CGI/AVETS in both films. It precisely refers to the usage of massive LED walls to display pre-recorded images in the background of a shot while live-action elements are filmed in the foreground— a process designed to achieve a seamless, in-camera composition of physical and digital components. It works on the same basic principle as the old-school film technology that is rear projection except on digital steroids and without any of the major drawbacks. With the aid of real-time rendering, the Internet of Things, virtual production tools, and the latest advances in camera technology, the Volume's LED wall technology offers an easily customizable and highly immersive digital filmmaking solution, speeding up production times and amplifying the reality of VFX (Weiseberger, 2022).

Iji, Enendu & Okome (2000), cited in Hogan (2022) corroborated film as being mainly about sound and visual elements ensemble when they noted that theatre, like film, depends almost entirely on sound and visual components for meaningful entertainment and communication; each one, to an extent, complementing the other, This also means that sound, broadly seen as all live or recorded audio production aids (e.g. actors' voices, traditional music, drumming and any other sound effect etc.); and visual elements (seen generally as everything physical, material or seeable), as exhibited by both films, are fundamental to perception and form the underlying basis in cinematography,

Result (2) fulfils objective (2). It ascertained that techno-scientific innovations aided the films development from pre-to post production stages by making it easy to be read/analyzed them as texts. This aligns with Aristotle's *Poetics* chronology (i.e. the orderly, logical, procedural or sequential arrangement of events in drama) to offer better insights that their techno-scientific and artistic elements were properly synergized to produce desired sequential outcomes.

Bear in mind that every film is a cultural product of its origin, society and age. Thus, it is implicit that both films literarily exhibited their original culture in language, imagery, spectacles, forms and orders. Hence, their contents can be mentally textualized, read or analyzed as cultural text by critical viewers. Mainly because even the mind has figurative eyes, ears and mouth to see, perceive and instruct the soul about what it visually learned through the eyes. Similarly, the ear

has unseen eye and mouth to see and report to the mind, what it heard as sound, oral heritage or language in selected films. Thus, initiates viewers' lasting cognition and memory retention effects.

Recall that both films have "a 3-step course plot structure" that tells how each began, set and resolve conflicts around "make-believe" stereotyped characters. Thus since films are usually first written or conceived as fables, they can equally be read by their dictions, costumes, colours, artefacts, audio, mood, tempo, scene design, lighting effects, aesthetics and camera movements.

For instance, both films' palace artefacts, idols, embellished beauties, and poetic symbols can be broadly read, evaluated or understood as visual exemplifiers of the films cultures, age, origins, fashions, religion, arts, customs and tradition. Also, the flashback scenes in both films, where the past is linked to the future about Saro and Mbamba's lives can be mentally textualized as historical reflection on reality. While the letters used as lyrics in the various traditional songs, proverbs and dialogue in both films are equally readable as tone, mood/ climate-setters (Iji, 2014). Obviously, the films characters mindset, beliefs, ego and hates could be read through their speeches, actions, body languages, costumes, makeups and settings aided by other requisite film elements as previously mentioned.

Conclusion

Results of analysed selected films clearly showed that techno-scientific innovations (as modern filmmaking equipment, method, principles and practice) aided their respective production merits attainments in terms of the positive cinematic, aesthetic, technical and economic developments enjoyed via improved quality and audience patronage outcomes. Thus, more science and technology inventions, revolutions and/or interventions are needed to efficiently modernize/ globalize Nollywood cinema as Nigeria's local contents (cultural heritage, talents, history, experience and achievements) exemplifier, advertiser, preserver, employer and income earner.

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