ENHANCING VISUAL STORYTELLING: AN APPRAISAL OF DIGITAL TECHNOLOGY IN THE PRODUCTION DESIGN OF HALF OF A YELLOW SUN

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Abstract

The integration of digital technology in production design has developed over time into a formidable narrative tool with the ability to facilitate effective communication and interpretation in modern film and theatrical productions. Production design shapes perception and emotional response, making it a powerful medium for storytelling. However, most Nollywood productions underutilize digital technology in production design, often reducing it to decorative elements that serve primarily aesthetic purposes. This study examines how digital technology enhances visual storytelling through production design in Biyi Bandele's 2013 film Half of a Yellow Sun. It emphasizes the potential of integrating digital technology with traditional design elements such as costume, set, props, lighting, and sound to strengthen narrative communication beyond dialogue. The study employs a qualitative methodology, relying primarily on data generated from content analysis of the production. It is anchored on André Bazin's theory of Mise-en-scène, which frames production design as a critical communication tool. The findings demonstrate that effective integration of digital technology with traditional design elements enhances seamless visual storytelling and deepens narrative engagement without overreliance on dialogue. The study recommends encouraging Nollywood filmmakers to adopt digital technology in production design, not only to enrich aesthetics but also to consciously employ production design as a tool for communication and narrative advancement.

Keywords: Visual Storytelling, Digital Technology, Production Design, Design Elements, Projection, Automated Fixtures.

I.   Introduction

Traditionally, communication in film, television, and theatrical productions has been dominated by spoken words delivered by characters inhabiting the fictional world. Early productions relied largely on the ingenuity of talented actors who assumed specific characters to highlight issues embedded within the performance. Effective communication was achieved through dialogue interspersed with gestures. Audiences relied heavily on the actor's words and tone to visualize the world of the play. This explains why great playwrights such as William Shakespeare employed vivid and poetic dialogue to describe settings, emotions, and actions in his plays. Vincent Lobrutto (2002) notes that "early art direction was not realistic in approach or result, but rather a mannered, generic representation that indicated where the story took place. It functioned as an accessory to the screen story, not an interpretative or expressive craft" (p. 2).

Over time, the development of realistic production design has become an effective complement to dialogue as a reliable communication tool. Lobrutto (2002) defines production design as "the visual art and craft of cinematic storytelling" (p. 1). Production design, which encompasses the creative use of set design, lighting, costume, sound, and props, has the ability to shape how theatrical and cinematic worlds are perceived and interpreted by audiences. Realistic production design influences perception, engages audiences emotionally, and enhances narrative clarity. It situates performances within recognizable and believable contexts, thereby increasing immersion and the acceptance of fictional situations

as authentic. Detailed and realistic designs that constitute the production environment evoke emotions and establish specific moods, drawing audiences into the action. Ida (2017) affirms that realistic production design seeks to create a natural environment aligned with the production's context, thereby enhancing storytelling and audience connection (p. 128). He further emphasizes that:

> Realistic scenery does not only provide a tangible context to enhance narrative but also enriches the emotional and psychological experience of the perceivers, leading to a more impactful production experience (p. 128).

Nebo (2020), a distinguished Nigerian production designer, similarly stresses that meticulous attention to detail in manipulating design elements such as set, props, costume, and sound is essential to achieving authenticity. He emphasizes the importance of extensive research and planning in producing believable designs. This philosophy is evident in his work on October 1st, where historically accurate sets, costumes, props, and sounds convincingly recreated 1960s Nigeria, thereby enhancing audience interpretation. Teju Kareem also highlights the need for production design to reflect cultural and historical contexts. In Saro the Musical, Kareem employed realistic simulations of settings, lighting, costumes, and sound to produce immersive designs that complemented the narrative. He is a notable advocate of blending traditional design elements with modern technology, and much of his work incorporates digital tools alongside conventional methods to achieve striking results (cited in Agha, 2021, p. 238).

This study focuses specifically on the integration of digital technology with traditional design elements in enhancing production design. Modern approaches in film, theatre, and television increasingly rely on this combination to achieve flexible, seamless, and creative results. Digital technology, defined here as computer-based tools, software, and equipment employed alongside traditional design elements, enables designers to conceptualize and simulate visual environments prior to production. It enhances efficiency, aesthetics, speed, realism, and sound quality while facilitating the creation of immersive atmospheres and moods. Agha (2021) notes:

> The quality of aesthetics derived in modern theatre and film production is driven by technology and art—art being the quality of the dramatist's input, and technology the sophistication of the technicalities that aid the act. There is no doubt that digital technology has dominated twenty-first century theatre culture. This advancement is evident in the evolution of theatre architecture, the sophistication of design tools, and the expressive possibilities enabled by projections and automated light fixtures, which rank among the wonders of the digital revolution (p. 1).

From this perspective, the creative combination of technology and traditional design elements not only enhances aesthetics but also facilitates interpretation in film and theatre. This study therefore emphasizes the importance of integrating modern technology into production design as a means of improving aesthetics, communication, and narrative interpretation. Despite its proven effectiveness, the blending of digital tools with traditional design elements remains underexplored in most Nollywood productions. Only a few designers employ digital technology consistently, and this has limited the aesthetic and technical growth of Nigerian film. Accordingly, this study argues for the necessity of adopting digital technology in Nollywood production design as a key driver of narrative sophistication and international competitiveness. To illustrate this, the paper appraises Biyi Bandele's 2013 film Half of a Yellow Sun, an adaptation of Chimamanda Ngozi Adichie's 2006 novel, focusing on how the director and design team used digital technology to communicate historical realities and enhance narrative depth.

The Theory of Mise-en-scène

The concept of Mise-en-scène was developed and formalized by André Bazin, a French film critic and theorist, in the 1940s. It became particularly influential in the 1960s through the work of scholars such as David Bordwell and Kristin Thompson. Mise-en-scène is a French term that refers to the visual arrangement of all elements that constitute the

performance environment in theatre and film, including actors, props, setting, lighting, and costumes. According to Bazin, these elements work together to create meaning, mood, and atmosphere, thereby enhancing narrative communication. The theory emphasizes that visual storytelling is as important as dialogue and that it has the power to guide audience perception and evoke emotions. Mise-en-scène can shape perception through the symbolic use of color, spatial relationships between characters, or deliberate design choices that drive narrative meaning. By encouraging viewers to interpret meaning visually, rather than being directed solely by dialogue, Mise-en-scène highlights the communicative capacity of design. Cook (2005) notes that early filmmakers such as Georges Méliès and D.W. Griffith experimented with Mise-en-scène by using elaborate sets, costumes, and special effects to create immersive scenes. This study employs Mise-en-scène theory as its primary framework for exploring the communicative role of production design in Half of a Yellow Sun. Specifically, it analyzes how design elements such as set, costume, props, sound, and lighting convey meaning and enable audiences to engage with the film's historical, emotional, and social realities without overdependence on dialogue.

Production Design as a Tool for Communication

Beyond its aesthetic contributions, production design has over time developed into a vital non-verbal tool for effective communication in film, television, and theatrical productions. Modern directors have strategically utilized production design as a support mechanism in advancing storytelling. Production design entails the deliberate crafting and arrangement of sets, props, costumes, lighting, sound, colour, spatial composition to appeal to the psyche of the audience, enhance narrative, and deepen engagement. Production design plays a significant role in shaping the entire visual environment of a production; it has the ability to communicate geographical location, time, mood, social status, and cultural context without the use of dialogue. Theorists such as Jane Barnwell (2004) and Bruce Block (2008) argue that production design conveys narrative tones, character psychology, cultural context, and historical settings through the creative arrangement of space, color, texture, lighting, and location. Production design thus functions as a visual code that supports and enhances the director's vision. Barnwell stresses that production design is a narrative device in itself, capable of visually articulating subtext, mood, and socio-political context without dialogue. She notes:

Production design is a narrative device in itself, capable of visually articulating subtext, mood, and socio-political context without the use of dialogue. Production design is a key contributor to the visual concept of a film, shaping the way story and meaning are conveyed to the audience (2004, p. 14).

Similarly, Block maintains that "visual structures, space, line, and contrast guide audience perception and emotional response. These elements, when coordinated thoughtfully, make production design an active agent of meaning-making in film" (2008, p. 26). These assertions underscore the communicative power of production design beyond its aesthetic role. In practice, visual compositions are deliberately crafted to generate meaning, direct audience attention, and elicit emotion. Every component within a visual environment is intentionally structured to complement others in communicating subtext, evoking emotion, and reinforcing the thematic and emotional dimensions of the production. A well-crafted visual environment can reveal multiple layers of information without dialogue. Olufemi (2011) highlights this point:

The design elements—lighting, costume, make-up, sound, property, and set—are important in any production because they dictate the mood, atmosphere, time, period, environment or locale, setting, profession, tribe, culture, feeling, emotion and the likes even without the spoken words in dialogue (p. 174).

This underscores the sensitive role of production design in complementing characters and narrative without necessarily relying on speech. Contemporary directors increasingly integrate production design as a central creative tool to enhance communication and actualize seamless storytelling. It is no longer perceived as mere background; rather, it

is central to the emotional and thematic depth of a production. Designers employ imagination, techniques, and illusions to create functional images that extend beyond physical appearance. When carefully articulated, the visual environment reinforces narrative themes and guides audience perception through choices of color, texture, architecture, and spatial arrangement.

Digital Technology in Production Design

The integration of digital technology with traditional design elements has reshaped how stories are visually conceptualized and executed. While traditional design elements ensure historical accuracy and realism, digital tools provide flexibility, speed, and expanded creative potential. Modern production design employs a wide array of digital tools, including Computer-Generated Imagery (CGI), 3D modeling, color grading, augmented reality (AR), virtual reality (VR), LED video walls, green/blue screens, stabilization devices, drones, underwater cameras, and automated lighting systems. Their creative use has resulted in innovative designs that transcend physical limitations. Bordwell and Thompson (2013) observe:

> Digital tools allow filmmakers to manipulate space and time with greater precision, enabling production designers to create settings that may be too expensive, dangerous, or impossible to build physically (p. 714).

This highlights the power of digital technology to either complement or substitute natural environments, particularly in simulating designs impossible to achieve physically. For example, VR enables the creation of entirely new environments that integrate characters within digitally simulated worlds. Similarly, green screen technology allows recorded environments to be digitally replaced, an approach particularly useful in historical films where authenticity is paramount. Lessig (2008) underscores the creative blending of digital and traditional methods: "Remixing is an essential act of creativity, where the old and the new are combined to produce something both familiar and fresh" (p. 56). Kress (2003) adds that: "The screen has become the dominant site of representation, altering the balance between image and text in communication" (p. 9). Digital set extensions exemplify this integration. As Rickitt (2006) explains:

> Traditionally, a production might build only those sections of set which actors are to interact with. Today, computer technology allows real physical environments to be supplemented with 3D digital set extensions, allowing the camera to move freely within. The key to digital set extensions is camera match-moving…When rendered; these computer-generated images can be composited into the footages of the partially built live-action environment (p. 206).

Finance and Zwerman (2018) corroborate: "Digital set extension constitutes the blending of real, physical sets with computer-generated environments, allowing filmmakers to extend the visible world beyond what was built on the stage" (p. 215). Thus, digital tools expand the scope of production design by offering new possibilities in texture, depth, and tone, supported by applications such as Adobe after Effects, Autodesk Maya, and DaVinci Resolve.

Synopsis of Half of a Yellow Sun

The film Half of a Yellow Sun (2013) is a feature film produced by Andrea Calderwood and directed by Biyi Bandele. The story is an adaptation from Chimamanda Ngozi Adichie's novel of the same title. The production crew is constituted by the following: Production Designer: Andrew McAlphine, Lighting Designer: John Conroy, Costume Designer: Jo Katsaras, Sound Designer: Nigel Heath, Makeup Design: Sharon Martin, Music: Ben Onono and Paul Thompson, Director of Photography: John de Borman, and Prop Designer: David Hindle.

The story explores the complexities of the Nigerian civil war between 1967 and 1970 shortly after Nigeria gained independence from the British colonial masters in 1960. The story delves into culture, identity, and history. The title, Half of a Yellow Sun, refers to the

flag of Biafra, which was a powerful symbol of the Igbo's struggle for independence. The story revolves around the lives of two sisters, Olanna and Kainene Ozobia, from a wealthy Nigerian family. The narrative is intertwined with the turbulent history of the Nigerian civil war; it also explores themes of love, family and identity. Olanna, the beautiful and strong-willed older sister among the twins, is a sociology lecturer at the University of Nigeria, Nsukka. She falls in love with Odenigbo, a charismatic and radical professor of the University of Nigeria, Nsukka, who is passionate about the Biafran cause.

Kainene, the youngest of the two sisters is more pragmatic and a successful business woman who also falls in love with Richard, a British expatriate and a journalist passionate about African culture. Kainene's relationship with Richard is complicated, as she struggles to reconcile her Nigerian heritage with her desire for independence and modernity. As the Biafran war escalates, the sisters' lives are torn apart. Olanna and Odenigbo's relationship is threatened severally by the war, while Kainene's business and personal life are disrupted. The family is forced to flee their homes and navigate the dangers of the war-torn Nigeria.

The Role of Digital Technology in Half of a Yellow Sun

The integration of digital technology in the production of Half of a yellow Sun, apart from its enormous in advancing the narrative, also was creatively utilized as a viable complementing tool for communication. Digital technology no doubt, contributed significantly across different areas in the production, and some of these include:

Sound Design

Sound design played a crucial role in the production of Half of a Yellow Sun, the creative choice of sound was able to transport the audience to the 1960s Nigeria and immerse them in the story. The creative use of traditional Nigerian indigenous music such as Highlife and Afrobeat as envisioned in the independence celebration party, contributed effectively in evoking the era's vibrant cultural heritage. Other sounds creatively utilized to enhance the production narrative include: creative market ambiance, the design team incorporated sounds of vendors, customers, and traditional instruments to enhance narrative. Bomb blast was interspersed with screaming, to actualize this; the design team used a combination of field recordings and a computer generated sound to enhance the blast, creating an effective convincing bomb blast. Car sound, driving in and zooming out were creatively enhanced digitally for effective narrative.

The creative utilization of digital audio tools with traditional design elements significantly enhanced the sound design all through the production of Half of a Yellow Sun; sensitive directional microphones were used to pick detailed sounds during recording offering clean and clear sound which contributed significantly to drive the narrative. During post production, the clean and effective recorded sound enabled the editor to edit, mix, and master audio with precision and flexibility.

Props Design

Props design played a vital role in the production of Half of a Yellow Sun, adding depth, authenticity, and visual interest to each scene. In the production, props were used to recreate the 1960s Nigerian environment, and this no doubt helped to transport the audience to the post-independence era. Some of the visible props creatively utilized to enhance the production narrative include: Traditional Nigerian clothing such as Adire and Ankara prints, the use of trunk boxes. The creative use of vintage cars, classic cars, like the Mercedes-Benz 190SL, 1948 model of Land Rover jeep,1904 model of Rolls Royce were featured to evoke the era's luxury and modernity. Other props utilized in the production include: Traditional Nigerian furniture, like wooden stools and carved chairs, added authenticity to indoor scenes.

Radio and Turntable Player

Vintage radios and Turntable players were used to showcase the characters' love for music and news and radio and newspaper were the major source of news and information for the character that inhabit the world of the production. Traditional musical instruments like the Djembe drum and the Oja flute were featured to highlight Nigerian musical heritage. Traditional Jewelries like beads and cowry shells were worn by characters to showcase the Nigerian cultural heritage.

Digital technology played a significant role in prop making for the production of Half of a Yellow Sun, enabling the creation of accurate, detailed, and realistic props that transports the audience to the 1960s Nigeria.

Makeup Design

Makeup design also played a crucial role in the production of Half of a Yellow Sun, the designer was able to creatively transform actors into characters that embodied the spirit of the 1960s Nigerian civil war. Make-up design was aimed to accurately represent the natural beauty and cultural practices of 1960s Nigeria. It helped reveal character traits, personalities, and cultural backgrounds, adding depth to the story. Make-up contributes to the overall visual narrative of the production, creating a rich and immersive cinematic experience. There is no doubt that the make-up designers conducted extensive research on 1960s Nigerian beauty practices, cultural traditions, and historical events. Digital technology enabled the creation of precise, prosthetic make-up pieces, such as scars, wounds, and aging effects.

Digital technology significantly enhanced the makeup design process in Half of a Yellow Sun, offering increased precision, efficiency and creativity. The effective integration of digital tools and traditional make-up design techniques resulted in a visually stunning and culturally authentic cinematic experience.

Costume Design

Just like every other aspect of design, costume design played a vital role in bringing the characters in the production of Half of a Yellow Sun to life, transporting the audience to 1960s Nigeria. The designer selected fabrics that accurately represent the textures, patterns, and colors of 1960s Nigerian clothing. Costume was also utilized to adequately represent the cultural backgrounds of the major geographical zone represented in the production; a good example is when Olanna visited her uncle in Kano, there was a massive transformation in costume, differentiating the western Nigerian traditional costume from the core northern Nigerian traditional costume as envisioned in most of the crowd scenes.

Costume design played a significant role in enhancing the narrative in the production of Half of a Yellow Sun, offering a good attempt in historical accuracy. The effective role of costume design techniques in the production results to a visually stunning and culturally authentic cinematic experience.

Lighting Design

Lighting was a key element in recreating the turbulent 1960s Nigerian environment in the production of Half of a Yellow Sun. Lighting was consistently used all through the production to set the tone, establish mood and atmosphere. Lighting helped create an immersive atmosphere, drawing the audience into the world of 1960s Nigeria. Lighting was also used to reveal character traits, emotions, relationships and add depth to the narrative. Lighting consistently was used to direct audience's attention, emphasize key elements, and create visual interest. The designers employed the use of both realistic and naturalistic lighting design to recreate the look and feel of the 1960s Nigeria. High-contrast lighting was used to create dramatic effects, emphasizing the harsh realities of the Nigerian civil war.

Warm colours were used to evoke emotions, buttress comfort, love, and calmness, while deep colors enhance tension, fear, and uncertainty. The choice of the LEDs lights enabled the lighting team to achieve a wide range of mood and atmosphere giving its abilities in projecting colours. The final colour tone of the production was a product of digital color grading, which allowed for subtle adjustments of color palette to enhance the mood

and atmosphere of individual scenes. The production of Half of a Yellow Sun effectively utilized lighting to recreate the turbulent 1960s Nigerian environment.

Digital Technology

Digital technology effectively was a key element in recreating the turbulent 1960s Nigerian visual environment in the production of Half of a Yellow Sun. Through the creative use of visual effects, digital compositing, color grading and the integration of digital equipment, the production design in the production was enhanced to reflect adequately the environment of the pre-war environment and the aftermath as a result of the devastation of the Biafran war. The digital input in the production, was not just the integration of technical tools to enhance the production design, but also the creative utilization of conceptual narrative tools that contributed to the emotional and symbolic power of the production.

II.   Summary

This article demonstrates how the integration of digital technology with traditional design elements enhanced the production of Half of a Yellow Sun as directed by Biyi Bandele. The film is an authentic reconstruction of 1960s Nigeria during the Biafran War through digital visually aids. The production design relied heavily on digital tools and workflows to achieve this goal.

Key areas examined include the use of digital cinematography, which enabled the capture of high-resolution visual of specific Nigerian locations utilized in the production. Digital revisualization and reference sourcing was essential for recreating accurate set pieces, props, and environments true to the period that the production reflect. The production also benefited from digital color grading, which distinguished the tonal shift from pre-war elegance to the grim realities of conflict.

Digital technology also supported efficient collaboration between the UK and Nigerian production teams, with cloud-based sharing and non-linear editing tools like Avid and Adobe Premiere Pro design elements were coordinated remotely. The production also employed subtle digital visual effects to enhance historical realism.

In conclusion, the integration of digital technology with traditional design elements in the production of Half of a Yellow Sun played a crucial role, helping bridge the gap between historical storytelling and practical production limitations. It allowed the production to achieve a level of visual details and historical authenticity that would have been very difficult to actualize employing only the traditional methodology of design.

This article demonstrates how the integration of digital technology with traditional design elements enhanced the production of Half of a Yellow Sun. The film required authentic reconstruction of 1960s Nigeria, and digital tools enabled efficient collaboration, accurate historical representation, and creative expansion of environments. Digital cinematography, revisualization, and color grading elevated authenticity, while visual effects supported narrative depth.

Ultimately, the synergy of digital and traditional design approaches allowed the production to achieve visual detail and historical realism that would have been difficult to accomplish otherwise.

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