Nick Hurt
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3-D Cinema: Triumph of the Image

In November of 1952, three-dimensional film appeared in mainstream cinema with intensions to rescue the American movie industry from a threatening post-war crisis. Every studio, major or minor, hurried to harness the power of 3-D technology (stereoscopy as it is officially known) to create the illusion of throwing objects from spears to lamps directly into the audience, as in such classics as *Creature from the Black Lagoon* (1954) and *It Came from Outer Space* (1953). However, 3-D experienced only a short-lived period of prosperity, coming to a gradual end in the summer of 1954. Returning twice in the remainder of the twentieth century, stereoscopic cinema has currently increased in popularity to surpass even that of its "glory days" in the fifties. This paper will explore the basis of 3-D cinema's dramatic fluctuation in popularity with mainstream audiences by considering the 3-D production and exhibition processes, public reception, as well as 3-D's aesthetic role in film. Closer examination of stereoscopic cinema's first feature film, *Bwana Devil* (1952), will reveal how 3-D movies quickly became associated with exploitation genres in the 50's, a reputation which survived into later revival periods of the 70's and 80's. The 1950's mode of spectatorship reflects a *visuo-centrism*, which I will define as a fascination with the image as image to the extent that it supplants concerns with the film's narrative element. In discussion of 1950's audiences, this paper will draw from Tom Gunning's writings of early film spectatorship, noting key parallels between 3-D cinema and what he calls the "cinema of attractions," specifically how spectators are dazzled by a novel cinematic technique rather than by a film's substance. The aesthetic role that 3-D plays in films of the 1950's perpetuates the notion that the technology is linked to unclassy, unconventional cinema. However, this attitude lies in disjunction with 3-D's current place in high-budget, dominant cinema of the digital era. Stereoscopic 3-D's current affiliation with "classy" films of conventional Hollywood cinema requires that we rethink our perspective of the medium in the context of its early appearances and applications in exploitation genres of the twentieth century, where image triumphed over the considerations of story.

The Product of a Crisis

In the early 1950's, the United States witnessed the convergence of multiple factors that posited a devastating effect on the film industry as a whole. Hollywood studios faced changing recreational interests, national court battles that weakened their foothold on the market, and the most notorious enemy of motion pictures: television. Data from the U.S. Census Bureau, the Theatre Owners of America, and the U.S. Department of Commerce all show the average estimated weekly motion-picture attendance to peak in 1946 around 80-85 million and experience a steady decline until reaching 45 million at the end of 1952, uncoincidentally when the first 3-D movie was released (Lev, 8). Explanations for this precipitate decline in movie attendance point to TV as the main culprit. One poll released by Paramount in 1950 estimated that families that owned a television decreased their movie theatre attendance by 20 to 30 percent (Lev, 9). However, movie studios also had to compete with the socioeconomic factor of suburbanization; post-war families were moving out of the city and away from urban first-run theatres (Lev, 7). Audiences who were once loyal wartime moviegoers turned to new leisure activities like sports and motor trips and became more selective of the pictures that they did venture to see (MacGowan, 111). To make things worse, the results of legal battles in the late forties had the effect of loosening the control that large Hollywood studios had over the movie industry. The Paramount anti-trust Consent Decree of 1948 required the eight largest studios to abandon their system of vertical integration by separating film exhibition from production and distribution (Lev, 7). In addition, the government outlawed the practice of block booking that many studios relied on to gain leverage over exhibitors. The mounting pressure from the Supreme Court decision only added to the difficulties of an already strained film industry, which also had to deal with an investigation on communist involvement in Hollywood held by the House Un-American Activities Committee and the establishment of the Hollywood blacklist (Lev, 65). The combination of television, suburbanization, and vertical de-integration launched the movie industry into crisis in the early 1950's that set the stage for significant change and innovation of the production and exhibition processes.

The threatening economic climate in the fifties led Hollywood studios to seek new prospects that might vitalize the motion picture industry. Without affiliated exhibition

outlets, production companies faced riskier investments because no film was guaranteed to earn a profit. In the more competitive environment after the Paramount Decree, Hollywood turned to new technologies that could give it an edge over TV. Early fifties audiences saw the advent of Cinerama and CinemaScope (which attempted to use curved screens to achieve the illusion of depth), the widespread use of color film, stereophonic sound, and wider standard aspect ratios. Stereoscopic 3-D was given its spotlight at the Telecinema of the 1951 Festival of Britain, where it was met by enthusiastic audiences (Zone, 220). The technology, which had been available for decades without receiving much attention, utilized a dual-camera system to capture two slightly different images; one corresponding to the right eye and another to the left. When both images are projected simultaneously using polarized filters, the spectator, who is wearing polarized glasses, perceives the image to have the illusion of depth (a process similar but different from the "anaglyphic" method which utilized red-and-blue shaded glasses). In his 1953 article "Perspective on 3-D," Richard Hawkins points out, "the techniques, and even the very instruments employed are, in most cases, ancient rejects which have been gathering dust on the studio shelves for at least fifteen to twenty years" (326). Studios did not employ previously unused technologies simply to test their viability in the market; rather the financial pressures detailed above were the sources of their (desperate) inspiration. In his article *The Aesthetics of Emergence*, William Paul clarifies, "The innovations weren't new; the economic situation was" (323).

The man who brought 3-D to the American public was Arch Oboler, writer, producer, and director of the first feature-length, color film in stereoscopic 3-D. The film was *Bwana Devil*, and it is celebrated for igniting Hollywood's first 3-D boom ('52-'54) after its November 30, 1952 release (Hayes, 146). What is remarkable about *Bwana Devil* is that both its story and its stereoscopic effects were widely accepted to be poor, yet the movie enjoyed a record-breaking box office success, grossing $100,000 in its opening week at a single theatre in Los Angeles (Lipton, 38) and going on to gross around $15 million in the US (Sterritt). The film centers around a crew of railroad workers in Africa being terrorized by a pack of man-eating lions; accordingly, advertisement posters promoted its three-dimensionality with the tagline: "A Lion in Your Lap! A Lover in Your Arms!" (Hayes, 147). Film historian Peter Lev notes, "The center of interest in

Bwana Devil was the delight in a new kind of motion-picture vision; the mediocre plot was beside the point" (110). Despite terrible reviews, the box-office success of *Bwana Devil* convinced the industry of 3-D's viability in the face of waning motion picture attendance. The majors and minors responded in a scramble to put together their own stereoscopic camera systems and even to convert current productions into 3-D (*Sangaree* (1953) was already half completed in 2-D when Paramount decided to start over in 3-D (Mitchell, 210)). The February 16th, 1953 issue of *Life* magazine announced in a headline, "The whole film industry turns to third dimension in its most frenzied boom since birth of sound" (LIFE, 27). Harry Warner even speculated that all movies would be shot in 3-D within two years (The aesthetics, 329). However, this feverish race to the third dimension eventually proved self-destructive, as stereoscopic 3-D film faded away in less than 12 months after its debut with *Bwana Devil*.

Of the technologies that movie studios turned to in response to the 1950's crisis, stereoscopic 3-D was the most short-lived, despite its explosive reception. Reasons given for 3-D's demise range from aesthetic to economic concerns, and they are debated emphatically by film historians. The first reason originates from the method used to achieve the three-dimensional effect: the two-camera system employed produced two film reels that had to be projected in frame-for-frame coordination. If the two projectors became unsynchronized or misaligned, this created a ghosting effect that caused eye strain and headaches (Long, 74), which was not uncommon at lower budget movie houses with inexperienced or inattentive projectionists. Perhaps the most commonly cited drawback to 3-D film is the nuisance of uncomfortable glasses, a necessary ingredient in the stereoscopic process. However, esteemed stereoscopic film historian R.M. Hayes insists in his book "3-D Movies" that this argument is merely a "Hollywood myth" perpetrated by the popular press, and points instead to the economic side of 3-D's rise and fall (51). In the midst of a technological metamorphosis, exhibitors were pressured to buy and install new, expensive equipment in order to keep up with a rapidly evolving industry. Showing stereoscopic films required double the film reels, dual projection equipment, and experienced technical personnel, which compounded with the costs of stereophonic sound systems and color film (53). The expenses carried by exhibitors for stereoscopic, widescreen, and other technologies translated into an increase in average

ticket price from 53 cents to 60 cents in 1952 (Lev, 305). To make matters worse, independent exhibitors were unsure which technology (CinemaScope, 3-D, etc.) would emerge on top once the novelty effect wore off, so the most cost-effective investment was never an obvious one. Beyond the financial dilemmas facing independent theatres laid a problem with the films themselves and how they were made. Within a week of *Bwana Devil*'s release, every studio in the industry was racing to release their own films that would pop out of the screen when the spectator donned a pair of glasses. Stereoscopic films were rushed to the market so quickly, production companies cared only that the movies had a third dimension, not that they were decent films with quality stories (Lev, 110). The result was an onslaught of 3-D "quickies" with poor stories and lousy effects. One observer noted, "the puerile stories of almost all the thirty-eight 3-D films made in 1953-54 killed the goose that had laid a few golden eggs" (MacGowan, 117). The very man who started the craze, Oboler, lamented in an interview twenty years later that many of the films were "bad pictures, badly done stereo-wise, badly produced to make a fast dollar… and the public suffered. Suffered enough to kill 3-D for 14-some odd years" (Koszarski, 19). Whether it fell victim to negligent projection practices, unpleasant glasses, expensive new equipment, or downright bad films, in the span of a year 3-D passed right through the American culture industry with the lucidity of a Hollywood producer's daydream. Or a projectionist's nightmare.

3-D Spectatorship

The 1950's 3-D boom delivered a wave of enigmatic films that were widely accepted as bad films, yet they enjoyed stunning popularity during their short life. This seemingly contradictory spectatorship is epitomized by Kenneth MacGowan's reaction to *Bwana Devil* in his article "The Screen's New Look:" "The story was miserable, but lions and spears jumped out of the screen in an astonishing fashion" (117). This response to illusionary depth reflects a visuo-centric mode of viewership that characterizes film audiences in the early fifties. Paul considers 3-D to be "an atavism" of Tom Gunning's 'cinema of attractions,' which he summarizes as "films in which the fascination of the images as image supersedes the demands of the narrative" (The aesthetics, 321). This section will supplement our understanding of stereoscopic film spectatorship by

considering Gunning's 'cinema of attractions' in order to theorize the aesthetic appeal of the screen's third dimension.

In "An Aesthetic of Astonishment," Gunning writes about the reactions of early spectators viewing some of the first publicly exhibited films like Lumière's *Arrival of a Train at the Station*. The sight of a moving image—a train charging towards the audience—allegedly elicits a response of hysteria stemming from the unfamiliar illusion of reality. Cinema's first audiences were met with a curiosity that derived from visual shock—what Gunning calls the aesthetic of attraction—which at this time arose simply from seeing the moving image; "the imaginary perceived as real" (737). If the aesthetic of attraction is a novelty achieved through the reproduction of reality, then stereoscopic film aims to offer a more compelling illusion by adding depth in a way that simulates an individual's visual perception. However, Paul argues that the obtrusive nature of 3-D obstructs its intentions: "far from extending the illusion of reality and the realism of the illusion, it somehow manages to disturb this fit" (The aesthetics, 336). Because of 3-D's tendency of displaying 'negative parallax' (what he calls the 'emergence effect'), where the image appears to extend outward towards the spectator, Paul, in another article, describes stereoscopy as "a technology that constantly foregrounds itself" (Breaking, 229). Herein lies 3-D cinema's correspondence to the cinema of attractions. By presenting a series of 'visual shocks,' 3-D movies set out to dazzle spectators with a novel cinematic technique rather than with the film's substance. The image supersedes the narrative. In a statement directly applicable to stereoscopic film, Gunning describes the cinema of attractions as promoting "exhibitionist confrontation rather than diegetic absorption" (The aesthetics, 321). Paradoxically, while representing an advancement in film production technologies, 1950's 3-D cinema is a retrogression of the spectator-screen relationship because it employs early cinema's aesthetic of attraction. Gunning highlights that the aesthetic of attraction engages directly with the audience, occasionally "exaggerating this confrontation in an experience of assault" (Gunning, 743). So, while early films may depict a train rushing straight towards the spectator, a 1950's stereoscopic movie like *Bwana Devil* will include an African native hurling a spear directly at the audience. It became typical of 3-D to use the movie's story as a facilitator of the emergence effect, to orchestrate a series of visual shocks that became recognized

as gimmicks. The emergence effect broke down the illusion that it set out to create by directly acknowledging the spectator in the manner of the cinema of attractions, representing a triumph of gimmick over story; shock over substance.

Arising from a fascination in the image over narrative structure, stereoscopic 3-D film was regarded as an unclassy, exploitation cinema characterized by clumsy emergence tricks, and this reputation was strengthened by the many low-quality, gimmicky B-movies that abused the technology. Upon its inception, the 3-D fad of the fifties quickly evolved into a frenzied development Oboler referred to as "Three-Dementia," distinguished by the "over-gimmicked" films he specifically warned against (Zone, 223). Despite a few high budget features like *Kiss me Kate* (1953), *Hondo* (1953), and Hitchcock's *Dial M for Murder* (1954) (which had a primarily 'flat' 2-D release),

the majority of stereoscopic releases associated 3-D movies with cheap, unclassy exploitation films (Lev, 111). Examples include three movies of fittingly inelegant titles: *Robot Monster* (1953), *Cat Women of the Moon* (1954), and *Gorilla at Large* (1954). However, beyond the degrading content of the films was the manner in which studios marketed their products. Paul points out that even *Bwana Devil*'s tagline essentially shouted 'TERROR! and SEX!' which are for Hollywood the "prime props of exploitation movies" (The aesthetics, 328). What was intended to be an exciting attraction for 1950's audiences turned into the central drawback of a perverse new technology. In contrast, other new forms of exhibition, like the enormous Cinerama, were presented as a higher-culture, 'legitimate' theatre (The aesthetics, 337). Paul contends that such a level of legitimacy was unachievable by 3-D cinema at the time; 3-D was unsuitable for prestige films because the emergence effect could not escape being the primary attraction of a feature: "So long as the emergence effect remained central to the experience of 3-D, the process inevitably became tied… to exploitation fare" (Breaking, 229). Three-dimensionality was a film production technique commandeered by Hollywood studios as a desperate self-preservationary effort that through its exploitative, unrefined application became associated with the low-class film of the mid-twentieth century.

Stereoscopic movies experienced prompt resurgences in popularity in the early 70's and 80's that were followed by equally swift declines reminiscent of their 'Golden Age.' This paper will not cover these two intermediary periods with the level of detail

afforded to the earlier 1950's Hollywood boom. However, the reader will be encouraged to note that stereoscopic 3-D faced comparable difficulty in distancing itself from its fundamental association with low-budget exploitation genres that based their appeal on the emergence effect. Where these periods slightly differed from the 50s was a greater emphasis on the SEX! side of exploitation. For example, the film that rebooted 3-D in the 70's was *The Stewardesses* (1970), an X-rated sexploitation flick that Hayes reviews as "pure junk and not at all well made… a very sleazy sex yarn," yet it remained a top grossing film for two years (331). The horror genre also amplified its corresponding TERROR! aspect in such films as Andy Warhol's *Frankenstein* (1974), making the inevitable decision of throwing dismembered body parts at the audience (The aesthetics, 329). These two 3-D revivals in the later twentieth century merely reflect an exaggerated 1950's attitude towards the role of 3-D in films, relying on the novelty of the three-dimensional image and preventing the technology's affiliation with a classier, conventional cinema.

3-D in the Digital Era

"The only hope for 3-D is that someone will come along with taste and understanding, and do a good story without regard for the extremes of 3-D, using it in terms of the story itself"

-Arch Oboler

Stereoscopic movies have found their most recent resurgence in popularity in the digital age of cinema, yet 3-D has endeavored to adopt a role in the American culture industry that lies in sharp contrast to its assumed function since its earliest appearances in film. Unlike the previous three chapters of 3-D's Hollywood life, the current public image of three-dimensional movies is one that relates the technology to high-budget, quality features. While many movies of the current 3-D boom are still evocative of the primordial 3-D exploitation films, such as the 2010 horror flick *Piranha 3D*, some films demonstrate an attempt to assimilate the third dimension into conventional Hollywood cinema, to "normalize the novelty" (Breaking, 229). The archetypal example of the classy 3-D film is James Cameron's science fiction epic, *Avatar* (2009), a high-budget Hollywood blockbuster that effectively substitutes gimmick with spectacle, dwarfing the scale of any previous decades' 3-D counterparts. *Avatar* follows the story of an ex-marine who travels to the distant moon-planet of Pandora, where he becomes involved in a brutal

conflict between a human mining corporation and a native civilization of nine-foot-tall humanoid creatures called the Na'vi. While there are numerous different readings of *Avatar*, ranging from a liberal environmentalist rant to an anti-imperialist diatribe against American militarism, none of these interpretations would classify the film as exploitation fare. In the fully-digital technology employed by Cameron, stereoscopy is used not to generate emergence or a series of visual shocks but rather to achieve an aesthetic visual depth. *Avatar*, which audiences celebrated for its magnificent visual style, employs 3-D in a manner that enhances the illusion of reality instead of shattering it. For example, when the film's main character Jake Sully is flying atop a dragonlike 'mountain banshee' or hurdling through the jungles of Pandora, the 3-D effect does not foreground itself by throwing a Na'vi spear into the audience; the third dimension is presented with a subtlety that makes it invisible. According to Cameron, "The technology should wave its own wand and make itself disappear" (Lane). The implication of a film like *Avatar* is that 3-D has been adopted by the high-budget Hollywood blockbuster, severing its inherent ties to Gunning's cinema of attractions. In the twenty-first century, stereoscopy has managed to root itself alongside classier and prestigious films, suggesting that 3-D in the digital era has normalized to adhere to demands of the narrative and to attain a lasting role in dominant Hollywood cinema.

Hollywood turned to 3-D filmmaking in a time of crisis, like a carnival owner installing a cheap new attraction to entice a bigger crowd. In the race to produce stereoscopic films, studios sacrificed decent stories for low-budget gimmick flicks, indirectly tethering the medium, in the public's eyes, to the unclassy exploitation genres. As we have seen through discussion of 1950's films like *Bwana Devil*, early applications of stereoscopic technology foregrounded the 3-D process in a visuo-centric rejection of classic Hollywood conventions, effectively limiting 3-D to be a short-lived production technique that the industry resorted to every 10-15 years. Paul characterizes 3-D as "an aberration that the mainstream turns to in almost periodic fashion" (The aesthetic, 321). However, in the digital era of cinema, some 3-D films have shown evidence of abandoning this visuo-centrism that had been accepted as a predisposition of the medium in earlier periods. Products of the current 3-D boom like *Avatar* cultivate a new spectator-to-(3-D)-screen relationship that is no longer relatable to audiences of early cinema

productions like *Arrival of a Train at the Station* because the aesthetic of attraction, or curiosity derived from visual shock, is no longer applicable. The image no longer dominates over the story. Thus the contemporary approach to evaluating 3-D cinema suggests that stereoscopy is appropriate when applied discriminately to high-budget prestige films, yet audiences of earlier 3-D boom periods would relate it to unclassy exploitation genres. Such a disparity between old and new conceptions of stereoscopic films demands that we reevaluate our perspective of 3-D as a filmmaking technique and as an indicator of film content. The contemporary notion of 3-D as an indicator of class is now only partially valid in the context of twenty-first century 3-D films. Drawing from Gunning's assessment of the cinema of attractions, we can determine that 3-D's (still observable) use of the emergence effect must be fully abandoned in order for 3-D technology to be incorporated into dominant cinema, a key development which films of the digital age have initiated. Without the image bursting through the screen to acknowledge the spectator, the enhanced illusion of three-dimensional realism is allowed to persist alongside, promoting conventional "diegetic absorption." The new public perception of 3-D will only be fully acceptable when the technology has been normalized throughout the industry, the effect made invisible such that narrative remains uninterrupted by image.

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