

The 3D Revolution

Miriam Ross

The revolution is coming. We are in the process of great change. And this revolution will not happen in two dimensions. Never, never will we see the world in the same way again. It may cost a little more, a small tax, an additional subsidy on what we are accustomed to paying for the pleasures of this world. But, believe me, and believe the masters of technicolor wonder, it will be worth it. For the revolution is 3D: big screen, multi-depth, awe inspiring, mind curling, three-dimensional wizardry.

Thus far it may have seemed like child's play to you; a gimmicky primary-colour laden Disney, Pixar and Dreamworks concoction. Bulbous, bouncing animated figures jumped out of the screen and enthralled audiences in heart-warming tales named *Bolt* (2008), *The Polar Express* (2004) *Ice Age: Dawn of the Dinosaur* (2009), *Up* (2009), *Coraline* (2009) and *Monsters VS Aliens* (2009). Children could identify with the little artificial heroes that came so close they could almost be touched whilst adults were enchanted by the stories of good triumphing over bad in stereoscopic vision. Audiences were able to explore the exciting new fantasy worlds posed by these animations – talking dogs and a floating house (*Up*), buttons instead of eyes (*Coraline*), a magical train (*The Polar Express*) – with the great satisfaction brought about by added depth.

Then some of us ventured into the shock-gory-schlock exhibition of this form: *My Bloody Valentine* (2009), *Beowulf* (2007) and *The Final Destination* (2009). How entralling that the knife which penetrates into soft flesh in graphic close-up can now penetrate outwards into that delicate space between our two eyes. What

thrill to duck and dive as explosive elements come flying out the screen. These effects have, of course, been seen before. Over fifty years ago, *House of Wax* (1953) was the first horror film shot in the stereoscopic process and indulged in the ability to throw objects into

auditorium. However, the new wave of horror and brutal action films are digital, relying on the precision and attention to bloodthirsty detail that CGI can add to the 3D effect.

Is this not all a little peripheral you may ask: children's films and late-night horror flicks? Is it not the case that the mainstream is rather untouched by this technological turnaround? Did we

not see this 3D boom and bust before, when we donned our glasses and sat down to the wave of *Jaws 3D* (1983), *Friday the 13th Part III* (1982) and *Amityville 3D* (1983) in the heyday of the 1980s? After watching the slightly fuzzy ghosting of badly set projectors and feeling somewhat motion-sick, we felt it had all been put to rest. Those red and cyan spectacles in their cardboard frames that were the hallmark of 3D were happily consigned to the twentieth century. (Actually, most cinematic 3D of the twentieth century was shown in full colour with polarization but the different coloured lenses used for comic books and television screenings seem to have left a lasting memory). Stereoscopic optical illusions were consigned to the theme park and the IMAX and were not for the normal cinema screen. Heavy drama and heart-thumping blockbusters need clear, unpolluted and gimmick-less scenes for their serious consideration, not to mention the delicate arthouse films that need thought and contemplation rather than the distraction of added depth. Two dimensional viewing was our entertainment experience of choice and the



cannons of great filmmaking had been decided with that factor in mind.

Well, all that is about to change. According to Mr Cameron of *Titanic* (1997) box-office smashing fame, 'We are born seeing in three dimensions. Most animals have two eyes, not one. There is a reason.'¹ Which, following his astute logic, means that there is no reason to restrict contemporary moving-images to the by-gone days of two dimensions. For better or worse, James Cameron changed the movie world with the time and money spent and revenues earned from *Titanic* and he is determined to change it again with his 3D feature *Avatar* (2009). It is not just Cameron and the Hollywood ilk that are putting money into reproducing and updating 3D technology for the new age, a host of directors from the world's cinema industries are rolling out the dual lenses necessary for capturing our stereoscopic vision. The Japanese film *The Shock Labyrinth* (2009) was one of the first foreign language 3D films to gain worldwide distribution and arthouse favourite, Wim Wenders, is set to create *Pina* based on the choreography of the late Pina Bausch. In 2009, the Venice film festival launched its first ever 3D prize. Although it was confined to a very un-festival and all American line-up of films (*Up, The Hole* (2009), *Journey to the Center of the Earth in 3-D* (2008), *Monsters VS Aliens, My Bloody Valentine, Battle for Terra* (2007), *Coraline,*

Jonas Brothers: The 3-D Concert Experience (2009) and *Ice Age: Dawn of the Dinosaurs*) the prize did suggest that 3D is being given serious consideration.

For all that the naysayers talk of limited extraordinary effect – that the film can be equally enjoyed in its cheaper and less technologically proud 2D version – the whole process of going to the cinema has changed. From the moment you reach the ticket desk and hand over the extra cash in exchange for a sealed plastic packet of Blues Brother shades, the attitude is different. It is possible to see couples and groups stumbling around the foyer with the glasses already on, their friend with the standard optician's spectacles trying to work out how to balance the secondary pair on top. Inside the auditorium, the glasses go on then they go off again, they get dropped under the seats and they get retrieved. Finally the lights go off and there is the crackle as all those who haven't already taken their glasses out, pry open the plastic bag. Then the expectation begins. First up, the 2D images: the advertisements and trailers that are plying their goods in the old format. They fade off the screen and, in the majority of the UK's multiplex cinemas, the moment comes when the announcement stretches in front of our eyes in huge letters "Please put on your Real D 3D glasses". Everything changes.





Our eyes adjust. Their ability to simultaneously focus and converge is brought into play as scenes cut from one to the next. Whether we are watching advertisements, trailers, or the main feature, we engage with a variety of spatial planes that are markedly different from the two dimensional vista that we have grown accustomed to.

As much as *Avatar* revels in its CGI creation, it also invites the viewer to participate in a way that is different from the normal process of looking on to a special effects based fantasy world. In the opening scene, there is the extreme close-up on protagonist Jake Sully's face as he lies inside the claustrophobic cabin that takes him through space to the planet Pandora. The scene demands that we explore the face's dimensions as it takes up the entire horizontal and vertical space in front of us. Understanding its depth feels intrinsic to growing familiar with a character that will not only lead us into *Avatar's* fantasy world but will ultimately act as the saviour for Pandora's indigenous Na'vi population and (if you follow the film's logic) our own humanity. Throughout the film, similar scenes, either of Sully or of his blue avatar's face (he inhabits a Na'vi body) are returned to. In each instance, the curves and contours of the head are enhanced by its three dimensional grandeur. The spectator is asked to know and respect this face in both its human and alien (repressed, subjugated, other) form.

Still in the introductory scenes, various security workers on Pandora listen to Colonel Miles Quaritch's safety-brief/pep talk. In the role of formulaic bad-guy, Quaritch embodies all that we are meant to believe is wrong with authoritarian power: blood-thirst and insensitivity to individual experience. Following the format of the army encounter, the colonel barks out harsh words as his listeners look on. The difference from the typical 2D version of this scene is that while the camera positions the viewer at the same height as the workers, the 3D technology puts them on the same spatial plane. There is thus the greater effect of being amongst the workers, and the power position employed by the placement of the colonel outside and above this group is enhanced by the more immersive focus.

When the film enters into its spiritual heart, Sully (in a replicate body of the world's indigenous people) and Neytiri (one of Pandora's tribal princesses) come across an example of the planet's sacred places. As Sully stands on a tree branch, seeds of the sacred tree float around him to eventually land on his body, a moment that according to the inner judgment of the fantasy world makes him special. Because of their luminescent quality, the seeds are particularly successful objects for the 3D effect and they make a gentle connection between audience and character. They appear to float out towards us in the same way that they surround Sully. If we have bought into the divine quality of *Avatar's* world,



this is the moment when we are allowed to spiritually connect with it. Yet regardless of our engagement with Pandora, the luminescent seeds have a tactile quality in their movement between spatial places that bridges the gap between auditorium and on-screen action. In certain ways, moments such as these need to be remembered for their haptic feel as they cannot be rewound and watched again at a later stage. For the moment, this is a cinematic experience.

The end of the twentieth century and the beginning of the twenty-first seemed to be the era of home entertainment. It was not just the shiny glint of the DVD disc but also the time of miniature surround-sound speakers placed artfully above the bookshelves and subtly behind the sofa. It was when the boring ubiquitous mirror was replaced by the gigantic mega-amazing flatscreen and the remote seemed to be able to control everything except the kettle. The cinema was for cheap dates and family excursions to get out of the house. The living room was where real film could be appreciated. But now, as the first decade of the twenty-first century is left behind, the cinema has a new presence. Although there are promises of the first 3D televisions arriving in our homes in 2010, the big screen experience currently has the edge. Sony Electronics, Samsung and LG Electronics have introduced their first 3D-enabled Blu-ray players and high definition sets are ready to play the material. However, Discovery Communications, Sony Corporation and IMAX Corporation are only just preparing to launch a 24/7 dedicated 3D television network in the US and, as such, the content is not there either on television channels or on DVDs to make use of the 3D home technology.

It is these factors that give cinema commerce the edge to monetize entertainment again. While some of the most radical moments in the early twenty-first century were brought about by digital technology – the Twittering of discontent at the Iranian elections; the use of mobile phone footage to bring the police to account following the G20 riots; and the Facebook toppling of the X-Factor monopoly in favour of Rage Against the Machine's anarchist rants; – they have thus far failed to make any money for the capitalist cogs powering them on. Social networks, increasingly small audiovisual technology and user generated content circulate with only the smallest deference to income generators such as advertising or subscription services. 3D, on the

other hand, has reinvigorated revenue in the entertainment industry. Coupled with a worldwide recession that drives audiences into the cinema and away from more expensive leisure activities, the box-office is finally able to make money once again. 3D films gross more than their 2D counterparts even when it is hard to calculate if that is due to inflated ticket prices or greater attendance numbers. Considering the fact that there are far less 3D screens available to distributors than 2D screens, Screen Daily's analysis of 3D revenue in 2009 is pertinent: "*Ice Age: Dawn Of The Dinosaurs*, which from its July 1 opening grossed £34.9m, 52% of which was earned on 3D screens. Released on October 9, Walt Disney/Pixar's *Up* continued the trend with 3D screen providing 60.5% of the film's current £34.2m tally."²

At the 3D Entertainment summit in 2009, Variety reported that the greatest concern for studios was "that the business is growing so fast that 3D pics are cannibalizing each others' release windows and leaving money on the table. The shortage of screens has led to 3D playing times this year that are several weeks shorter per title than last year."³ With market expansion and increased profits being the only solution, it is a problem that is almost too good to be true. Furthermore, as Xan Brooks writing in The Guardian pointed out "You can't pirate a 3D image by smuggling a camcorder into your local multiplex."⁴ This factor covers one of the greatest challenges for Hollywood in the twenty-first century: the fight against piracy. For a number of years, studios and the MPAA (Motion Picture Association of America) have made widely inflated estimates of what they believe their films should be earning were it not for the illegal file sharing, downloads and DVD reproductions taking place across the globe. They now have a system that cannot be reproduced by the unlawful perpetrators of this crime and can thus relish a return to full licencing rights over their product. Forget the democratic potential of new technology, Hollywood has finally found a process that allows it to retain control over its moving images.

All of this distasteful monetizing is, however, ignored in the press releases around the new 3D films, particularly *Avatar*, that claim the real change is in the aesthetic. As audiences, we are sold a new way of experiencing the world rather than a new way to spend our money. Interestingly, when Cameron and other disciples say that they are bringing us closer to





the real world because their extra dimension represents the tangible world as we experience it, they are obscuring a somewhat significant point. Our

world may be perceptible to us in 3D but, significantly, in most circumstances it is also available to our bodies in a 360 degree rotation.



Certain scenes in *Avatar* drive this discrepancy home. At one point, a bestial animal attacks Sully's blue Na'vi body in the forest. As Sully and animal race through the foliage, the spectator seems to be within a hand's distance of their powerful bodies. The beast, with its dark colour, fangs and terrifying gnarls, is from our nightmarish fears.

It comes close to encircling us as it breaks beyond the confines of the cinema screen and reaches out into the auditorium.



However, due to technological considerations, it is always in front of us. The beast may appear to have a three dimensional quality but it cannot take part in the 360 degree experience that conditions are physical life. Even with powerful

surround-sound effects, the beast never gains the most terrifying position for the human psyche, that of being behind us. Later, when the human workers eventually destroy the Na'vi home tree, large numbers of Na'vi

characters look on in shock. The most effective camera angle to show the full force of their anguish is face on, looking into their eyes. Yet because the 3D technology cannot capture the 360 degree experience, we cannot look over our shoulders to see what it is that they are staring in horror at. Instead, as is the norm in 2D film, we have to wait for the camera to shift perspective and reveal to us what it sees. With this camera shift, we do feel that we are following their gaze, but not with the same agency in which we choose to turn our heads and look (or not look) in the real world. In this way, the camera still retains power and although there are greater spatial planes and surface contours for the audience to explore and discover, the camera can still offer us only restricted viewpoints.

Even if the 3D experience cannot be a 360 degree event, there are still other notable facets that make the process of watching 3D different from that of watching 2D films. Mainly, the 3D experience differs from viewer to viewer based on a number of variables. Although different eyesight will affect vision of 2D films, particularly factors such as colour-blindness, or restricted sight, we presume that the majority of viewers experience the visual elements in the same way. With 3D, matters such as these are far more complex. On the one hand, there is the physical placement within the cinema. The central position is paramount. Sit too far to one side and much becomes fuzzy. If you are unlucky enough to sit in the front row, it is also restrictive as the effect of trying to focus and converge your eyes upon such huge images is painfully difficult. Depending on whether or not you are using the IMAX linear polarization glasses or Real 3D's circular polarization glasses, head movement also becomes an issue. With the linear glasses, considering gently tilting your head to rest on a lover's shoulder is impossible as anything other than horizontal placement of the 3D glasses will throw the effects into a terrible blur. On the other hand, some viewers are subject to motion sickness, may find the 3D effect reduced by vision impairment or find the effect is completely lost if they only have vision in one eye.

What this means is that the uniformity of experience that we have relied on in our discussion of film is no longer available to us. Previously it was presumed that the subjective viewing process was based upon taste and cultural assumptions. Now it may simply come down to how susceptible you are to motion



sickness or whether or not you have raced into the auditorium quickly enough to bag the central seats. Films such as *Avatar* are changing our conception of the traditional film experience and it cannot be denied that the very practice of cinema-going is affected in the process. Nonetheless, it may be a while before we fully understand the economic, social and aesthetic impact of the latest 3D revolution.

Notes

- ¹ Brooks, Xan (2009) 'Is James Cameron's 3D movie *Avatar* the shape of cinema to come?' *The Guardian*, 20 August
- ² Warner, Jack (2009) 'UK embraces 3D ahead of *Avatar* release', *Screen Daily* 15 Dec
- ³ Cohen, David S. and Debruge, Peter (2009) '3D traffic jam snarls the studios', *Variety* 16 Sep
- ⁴ Brooks, Xan (2009) 'Is James Cameron's 3D movie *Avatar* the shape of cinema to come?' *The Guardian*, 20 August

