Special Focus: The New 3D Cinema

The New 3D Cinema

by Ben Walters

In 2005, a young company called RealD demonstrated to Walt Disney Pictures its new digital 3D projection system, which used a single projector, rather than two, and glasses with polarised grey lenses rather than the two-colour anaglyph technique. Disney were so impressed that they reconfigured their latest computer-animated feature, Chicken Little, which was already in production, as a stereoscopic film. Since then, a fully fledged boom has developed that, unlike earlier 3D crazes, shows no sign of being a flash in the pan. The sky will not fall on this trend any time soon – but a number of chicken-and-egg questions about the technology's commercial and artistic uses remain unresolved.

Although various kinds of stereoscopic filmmaking have been in existence for as long as motion pictures themselves – Eadweard Muybridge, William Friese-Greene and Abel Gance were among early experimenters – the technology only attained widespread traction in the 1950s. The 3D craze that began in November 1952 with the release of Bwana Devil yielded around 50 feature films and numerous supporting items, from cartoons to newsreels. But, hobbled by unreliable technology and over-reliance on novelty effects, it lasted barely a year and few mourned its passing. The early 1980s saw another spate of 3D pictures but similar problems applied: mediocre content relying on shock-value application of stereo space exhibited via technology that was prone to errors and could even cause discomfort for viewers. Following this short-lived resurgence, the format lingered on largely in IMAX documentaries and bespoke programming for theme parks.

The new wave of digital 3D films has already proven more sustainable than the crazes of the 1950s and 1980s in longevity and profitability, and the number of titles looks likely to overtake those produced in the 1950s within a year or two. Since Chicken Little, more than two dozen films have been released in RealD's digital 3D format and at least 17 more are scheduled for release in 2010 from major Hollywood studios, which, like audiences, have been convinced by the reliability and user-friendliness of the digital system in comparison to its analogue predecessors. These titles include Shrek Forever After from DreamWorks Animation, which now produces all its films in 3D, and Tim Burton's Alice in Wonderland from Disney. European productions include the children's animations, Animals United and The Little Medic from Germany and, in the UK, a Postman Pat feature and Streetdance 3D, starring Charlotte Rampling and George

Chicken Little

Tim Burton's **Alice in Wonderland**

Sampson, the young dancer featured on ITV's Britain's Got Talent. New entries in the Hellraiser, Tron and Spy Kids franchises, as well as the debut feature from the Blue Man Group of performers, will also use the format.

The bottom line also seems sound. Monsters vs Aliens more or less single handedly boosted DreamWorks Animation to strong profits in the third quarter of 2009; it was shown in 3D on only 20% of screens but these accounted for more than 40% of the film's takings. Stereoscopic showings of Ice Age 3 and Cloudy with a Chance of Meatballs were comparably more profitable than 'flat', or two-dimensional, screenings, and Disney's A Christmas Carol opened at the top of the US chart in November 2009. Some analysts at September's 3D Entertainment Summit in Los Angeles last September even maintained that 3D films could take the credit for American box-office returns being in profit for the summer 2009 period. Multiplex owners reported that a screen showing a 3D film could be expected to generate up to nine times the profit of a screen showing a 'flat' programme. Some of the delegates, whose number had doubled to 500 since 2008, had vested interests in the success of the technology but many more were simply interested in what was best for the industry. Even so, reported Variety, 'No one at the summit voices suspicions that the current 3D wave is a passing fad.'

Ice Age 3

Cloudy with a Chance of Meatballs

In fact, the problem was not whether audiences were willing to pay a premium to watch films in stereo but whether cinemas were able to meet the demand: limited screen availability was leading to cannibalisation of profits as a thriving picture was booted out mid-run to make way for the next 3D film that required its screen. Indeed, the renovation of cinema screens to allow for digital 3D projection remains one of the major stumbling blocks to wider entrenchment of the technology and the subject of a protracted debate between distributors and exhibitors over who should bear the costs. The economic collapse of autumn 2008 put paid to a hard-won billion-dollar deal between studios and US cinema chains that would have greatly expanded the number of screens; the resulting lag between 3D films produced and 3D screens available to show them partly accounts for the bottleneck effect reported above.

But even if screen pick-up has been slower than the industry had hoped, it has still been considerable: between January and November 2009, the number of 3D-viable American screens rose from 900 to nearly 2,000, and was expected to reach 2,500 for the December release by Twentieth Century Fox of James Cameron's long-gestating 3D epic Avatar – fewer than the 3,000 Fox and

Disney had hoped to see by year's end but of the same order of magnitude. Internationally, the number rose over the same period from around 1,000 to around 3,200, with the UK and China each boasting 400 screens and other European nations not far off. Russia and Mexico saw significant growth and Egypt's first 15 3D screens were being installed in time to show Avatar.

There are other encouraging signs. Prime Focus, an Indian post-production conglomerate with substantial Hollywood connections, recently announced the launch of View-D, a high-profile 2D-to-3D conversion service that could be used to reconfigure a host of features if the releases of retroactively 3D-rendered 'flat' pictures – such as the first two Toy Story films, released in 2009, and Beauty and the Beast, scheduled for release in 2011 – prove successful. And, in another sign of entrenchment, the University of Southern California announced an interdisciplinary programme at the School of Cinematic Arts to start in 2010, focusing on technological and aesthetic concerns in 3D filmmaking. 'We're getting so many requests from industry to provide them with this kind of background in stereoscopic imaging,' said USC professor Perry Hoberman.

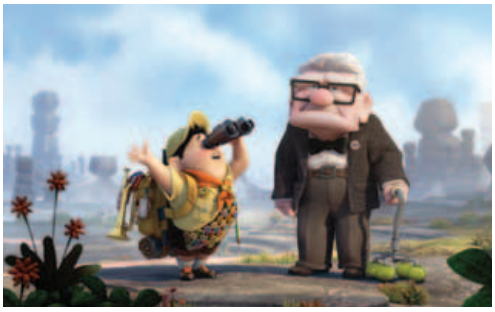
Nor is such engagement restricted to content: the technology is also undergoing dynamic development. Presently, RealD dominates the digital 3D imaging market with their polarised-lens system. (Disney Digital 3D is a variation on the system.) Another company, Trioscopics, has developed a new green-and-magenta anaglyph system, which could be adapted for use with current digital-projection formats, perhaps at a lower price than polarised imaging. And, partly in response to the slower-than-expected conversion of digital screens, Technicolor has developed a new celluloid 3D system compatible with conventional projectors. Intended as a stopgap solution, it has angered major cheerleaders for digital 3D, including Disney and Fox, but has the support of Paramount, Universal, Warner Bros and other large studios and unquestionably has potential application in parts of the world where large-scale digital take-up is not likely in the foreseeable future.

The Hollywood studios' new enthusiasm for 3D has been characterised by some as representing a bulwark against piracy and 3D films certainly constitute a relatively novel form of spectacle presently unavailable on home-entertainment platforms. But, as the studios know very well, this distinction might not persist much longer. The technology for domestic 3D broadcasting already exists (and has been on sale in Japan for some years) and is being actively developed. In November, Sony, a major player in both feature production and home entertainment, announced plans yoking the corporation's future success to 3D technology across a variety of platforms, including TV, PlayStation and Blu-ray content as well as films. While Sony expects a billion-dollar loss over the 2009–10 business year, it anticipates making $11 billion dollars in 2012–13 from 3D-related products alone. Disney has also been exploring home 3D, through its sports channel, ESPN. In September, a test broadcast of an American football match was hailed as a technological success within the industry and, although not widely seen by general audiences, garnered positive responses from test viewers.

It has also been suggested that the gaming sector would be a prominent force in driving domestic 3D but challenges to that assumption have already appeared. Tests of

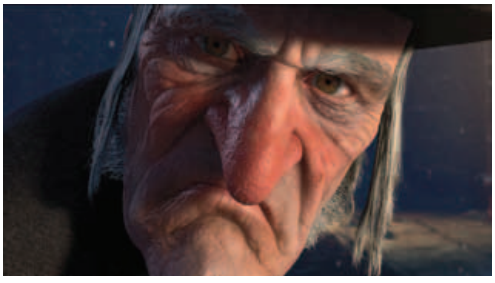
James Cameron's **Avatar**

the 3D functions included in James Cameron's Avatar: The Game, released in November 2009, prompted complaints about image quality and processing speed. It remains to be seen whether these are teething problems or insurmountable obstacles.



Up!

More than a decade in development, Avatar has acquired the status of standard-bearer for the new 3D revolution, even the picture on whose fortunes the technology's future depends. In fact, there would now seem to be sufficient entrenchment of 3D in mainstream film exhibition that even its box-office failure would not scupper the format. It might, however, have repercussions for its artistic development. To date, 3D has acquired a solid toehold in certain genres – horror and music or dance films – and is on the way to dominating others, such as computer-animated features. Filmmakers working in these areas have not simply exploited the potential for coming-at-you! shocks but have also proven adept at utilising deep cinematic space for expressive purposes. Animated features like Up! and A Christmas Carol have used aerial



A Christmas Carol

compositions with multiple shifting planes to good effect, while deep space can also enhance suspense for horror films. Cameron's Avatar demonstrated a confident grasp of stereoscopic space, eschewing novelty effects for impressive aerial vistas and compellingly shot alien dogfights.

What remains open to question is whether 3D will remain a niche area associated with certain genres or be embraced by big-name studio directors and art-house auteurs. As we saw above, Tim Burton has taken the plunge and Steven Soderbergh has announced plans for a stereoscopic rock-opera version of Cleopatra, though these seem to have been shelved. If Avatar – which at the time of writing had enjoyed a strong opening weekend at the global box office – proves a great success, it could encourage other established directors to take the technology seriously; even if it does not, Steven Spielberg's Tintin: Secret of the Unicorn, due for release in December 2011, will be another test case. In principle, there is no reason the technology shouldn't be put to creative, imaginative use by talented directors interested in the expressive use of space. Experimental filmmaker Ken Jacobs has already got stuck in, following in the footsteps of Norman McLaren, who produced 3D work in the 1950s, creating beguiling and discombobulating effects.

3D is not going anywhere for the foreseeable future. The questions that remain – whether it will remain in cinemas or migrate to the home, and whether its use will remain restricted to particular genres or be seriously explored as a means of artistic expression – will be determined by a number of factors, of which, as so often in filmmaking, the most important will be the bottom line.

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