

REFLEXIVE PERPLEXITIES: THE VIRTUAL CAMERA IN 'SHE'S NOT THERE'.

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Abstract

We report on the conception, production and delivery of the live music, live performance, 3D animated project *She's Not There* that opened the CILECT congress in Brisbane November 2016. We discuss the operations of the virtual camera in framing the virtual 3D space within the real space of the theatre stage. We muse on this Mixed Reality mode within the context of Goudal's conception of cinema as fostering in its audience a 'conscious hallucination' (1925); the appeal of our project is contingent upon the audience being able to view outside of the frame while enjoying the fantasy within, to *knowingly* invest in its illusion.

Keywords: Mixed Reality, virtual camera, motion capture, 3D animation.

Background.

We first saw the virtual camera in operation when Motion Capture Director at WETA Mr Benjamin Brenneur was taking a small class at The Griffith Film School through its paces in 2015. As Benjamin stepped through the empty space of the motion capture volume with what looked like an iPad sporting alien antennae, and somehow, miraculously, he was at the same time exploring the imaginary world of the 3D virtual space displayed on a monitor to our left, it was oddly confounding (see Figures 1 and 2). It was hard to reconcile the physical with the digital being played out before us – the same moves, in tight synchronisation. It was as if, so accustomed are we to viewing the digital and its fabrications *OR* the real and its hard truths (in a mutually exclusive proposition) that for our brains to swing between these two realities, which were now somehow related, relating and faithfully replicating via this wormhole of a virtual camera, was too hard to hold in the brain at the same time, to fathom, to logically accommodate. As Benjamin waltzed through the empty space, the virtual camera was picking up on a reality unbeknownst to us, a parallel universe, a nether world, that was clearly there but not apparent to our naked eye. It was exciting, it was refreshingly perplexing.

The virtual camera (Figure 3) is a tool for pre-production in 3D animated films. Allowing the director to frame shots in

the pre-rendered 3D fictional world of the film, the camera provides the director with the same kind of improvisational approach to framing, to camera placement and movement, that the live action director enjoys; in the world of animation where the bulk of creativity and performance is locked off prior to the key production phase of animating, any real-time directorial processes technology can afford are indeed welcome. For the *She's Not There* project, the centrepiece of the CILECT (Centre



Figure 1: The motion capture volume



Figure 2: Correlations in virtual space.

International de Liaison des Ecoles de Cinéma et de Télévision) congress opening ceremony in Brisbane November 2016, Dr Louise Harvey and myself, partners in animated crime at the Griffith Film School, wanted to push the machinations of the virtual camera up front, out of this pre-production realm and into the arena of performance, to showcase the wizardry that Benjamin had introduced to us the year before. We also wanted to work with live music.

A brief aside: each year a selection of our graduate animation films is offered up, stripped of audio, to the Queensland Music Festival for their high schools composing competition *Score It!*; a rich initiative that has our animation students connect with aspiring composers in bringing a fresh musical interpretation to three minute animated fantasies. In hosting the awards for this competition at our film school, it's been my privilege to witness the live performance of the winning senior score, led by conductor Mr Cameron Patrick, as animation films I am well familiar with, come to life under a new orchestral accompaniment. The first time I was present at these performances, was for me, a watershed moment: I was the kid in the candy store. There was nothing to compare with the audience experience of live tightly synchronised orchestral articulation of the animated images. It left pre-recorded sound for, well ... dead. I was surprised that the mode of presentation that

attended the very early presentations of theatrical animation, with piano or organ tinkering along to the animated action of mice, cats and dinosaurs, managed to capture the imagination, even enthral, contemporary audiences (well, at least me) when there has been so much trickery and so many technical treats across this last century of screen experience.

The Project

And so Louise and I were keen to revisit these early modes of animation presentation, these roots in vaudeville, and in taking some of that mixed bill approach, to foreground the spectacle of animation as magic trick, as performance, a spotlight on both animated conceit and its sleight-of-hand delivery. And we wanted to use new technology to do so; it was a proposition that despite the usurping of one technology for another across a century of animated cinema, we argued that the hook, the fun remains the same –the double play of illusion of life alongside the knowledge of its lifelessness constitutes animation as performed trick. We cite Donald Crafton (1979, 1982, 2013) and Norman Klein (1993) in discussing this performance aspect of animation as magic trick, and Alan Cholodenko (2007) in considering the uncanny appeal implicit in machinations of the 'animatic' in the paper 'She's Not There: When New Illusions Meet Ol' Time Real Time; Mo-cap, Virtuality and Live Music Performance' (Moyes, Harvey 2016).

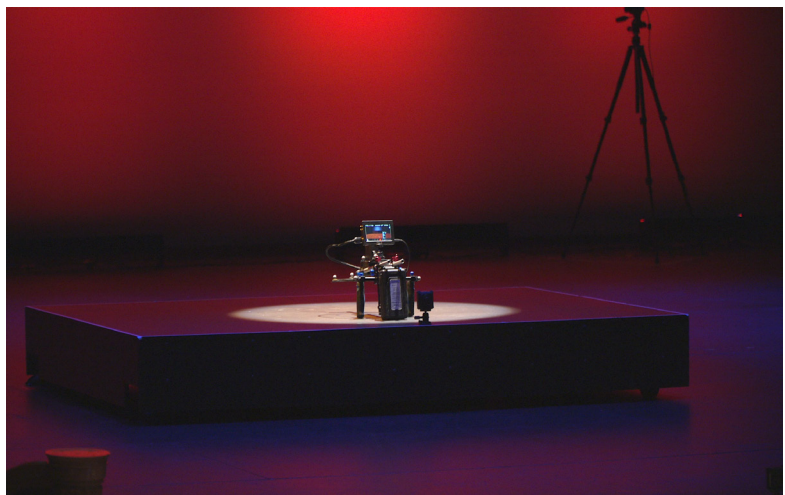


Figure 3: The virtual camera

We chose a song that would be fun to work with, with a refrain that would highlight the trick we were conjuring, namely 'She's Not There' by the Zombies (1965). 'She' would be both our digital character Miss Burly Chassis and our real-life performer Christine Johnston; Burly a trashed-out cabaret performer past her prime, alive in virtual 3D space, and Christine her real-life rival stealing the show in the real space of the theatre stage (see Figure 4). As virtual camera-operator Ashley Burgess circumnavigated the motion capture volume of this theatre stage, training his camera on essentially nothing, 'She' was clearly 'not there', and yet at the same time 'there' – in the 3D animated performance of Burly framed by Ashley and projected on the screen aloft the stage (see Figure 5). To exacerbate this tension between virtual and real, Christine appears on stage towards the end of the song as Burly is clearly struggling with the material. A battle of remote controls ensues and Burly is snuffed out (Figure 6), Christine delivering the last refrain as live performance to the strains of the Queensland Conservatorium Ensemble under the baton of Mr Cameron Patrick (Figure 7). An earlier exchange between Cameron in the orchestra pit and Burly on screen was designed to enhance this illusion of synchronicity between pre-recorded and real-time. Indeed, the accompaniment of live music to 3D animation throughout (facilitated by the essential click track in orchestra's headphones)

was to bring both warmth to animated performance, and importantly to enliven this confluence between real time and pre-recorded, between live space and virtual.

Christine had provided the performance for Burly Chassis in pre-production, her gestures motion-captured, her face filmed for lip-sync reference, her voice: the voice of Chassis (see Figures 8 and 9). Cameron arranged the score of *She's Not There*, working from live capture of the motion capture sessions for timing and inflections. Louise modelled Burly, cleaning up animation further to the motion capture data, and providing full lip sync.



Figure 4: Burly Chassis (left), Christine Johnston (right).



Figure 5: The virtual camera frames 3D animation in real space.



Figure 6: The 'battle of the remotes'.



Figure 7: Cameron Patrick and the Ensemble Orchestra.



Figure 8: Motion capture session with Christine Johnston

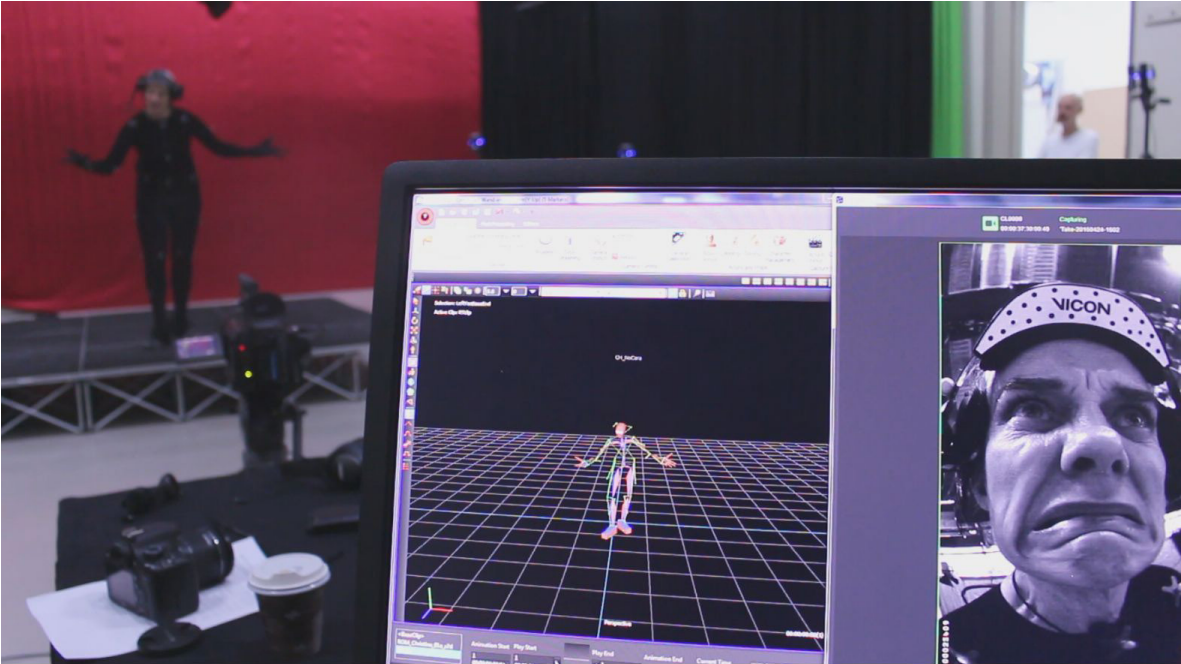


Figure 9: Live action facial reference for lip sync

She's Not There opened the CILECT congress in Brisbane November 2016, and amazingly it all seemed to 'go alright on the night (morning)'. Christine, Cameron and the Ensemble performed beautifully, aided by staff backstage; Burly Chassis' irascibility was in full swing due to the prowess of technical staff sweating in the wings.

Discussion.

In exploring the importance of cinema to surrealism, James M. Magrini (2007) goes to Jean Goudal's 1925 essay and his appraisal of cinema in constituting 'a conscious hallucination'. Goudal suggests that part of the predominance of the medium of cinema over, for example, literature in realising the aims of surrealism, is cinema's possibilities in the 'fusion of dream and consciousness'. Goudal suggests that in our 'temporary depersonalisation', we abandon ourselves and commit to the immediacy of the simulacra on screen, as in a dream when 'the imaginary succession of images monopolises the foreground'. And yet, this succession of images 'has something artificial about it ... we know very well that it's an illusion, a sensory device which does not completely fool us'. Magrini explains that due to the flickering light, the whirring projector, 'the mechanical movements of the actors' and a consciousness of 'the cinematic apparatus', the spectator maintains a 'simultaneous belief in and receptivity

to' the reality of the images, 'as in the dream, while at once maintaining the conscious ability to discern their status as cinematic illusion.'

It is perhaps this conscious dreaming that best explains our ongoing pleasure in the trick of animation. Even as we understand the mechanics of animation, especially after all these years, there is joy in experiencing its illusions unfold. This was our objective and our premise in the *She's Not There* project. Even as we expose the 'backstage' machinations of our presentation —our camera operator negotiating the arc of motion capture sensors positioning his virtual camera in theatrical space, its digital duplicity on the screen above, the ham-fisted exchanges between virtual performers and real— for both those in the audience cognisant of the workings, and for those still intrigued by the trick, the pleasure remains the same in taking part knowingly in the deception, impressed by craft as much as entertained by illusion.

Ours was not an immersive Virtual Reality experience locked off by goggles inside a 720 degree view; ours was more akin to Mixed Reality — the appeal is in being able to view outside of the frame while enjoying the fantasy within, the audience having recourse to the reality check of periphery. We required of our audience a wide view: of Burly's performance on screen, of Ashley's manoeuvres with the virtual camera (in framing that performance), of Cameron's and

Christine's antics in mock exchange with Burly, and the conservatorium ensemble playing throughout, the tips of their bows periodically entering bottom of frame.

All Art has been nourished by the perennial tension between illusionism and reflexivity. All artistic representation can pass itself off as 'reality' or straightforwardly admit its status as representation. Illusionism pretends to be something more than mere artistic production; it presents its characters as real people, its sequence of words or images as real time, and its representations as substantiated fact. Reflexivity, on the other hand, points to its own mask and invites the public to examine its design and texture (Stam, 1985).

The real time, real performance, real flesh aspects of our presentation book-end and frame the virtual 3D world in ways which both authenticate and problematize its illusion. On the one hand, the operations of the virtual camera bring an immediacy and real time effect to the animation playthrough —the conceit is one of live broadcast of an albeit pre-rendered animated scene. Further,



Figure 10: Mock exchanges between Cameron and Burly.



Figures 11 and 12: Stills from Jean Cocteau's *The Blood of the Poet* (1926).

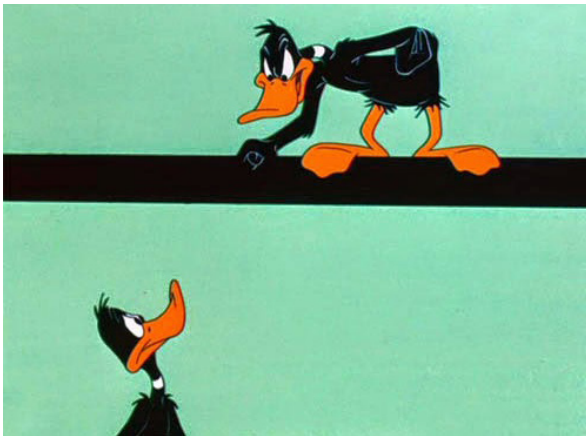


Figure 13: Still from Chuck Jones' *Duck Amuck* (1953)



Figure 14: Still from Tex Avery's *Northwest Hounded Police* (1946)

the live performance interchanges of Christine and Cameron with Burlly Chassis confer their reality onto the responses of the animated character —she shares the same timeline, she responds as if real (Figure 10). Meanwhile, the live music throughout keeps time, that is real time, grounding all in the reality of sound waves bouncing around the physicality of a concert hall. And yet on the other hand, all the while, we know this entertainment as illusion, as artifice; Burlly remains contained within the frame overhead, her virtual reality subject to the whim and pan of a virtual camera circling the motion capture volume front of stage.

Tex Avery's characters were barely contained within the frame, sometimes Chuck Jones' too, as they busted out of the analogue frame (or at least appeared to), poking at its sides and pushing the envelope of the fourth wall (Figures 13 and 14).

Enjoyment was had in feeling as if these characters were indeed talking to us, provoking our reactions, letting us into their conspiracy through shared jokes and mocking asides —often at the expense of the medium itself: 'a cartoon like this ...', 'this is silly isn't?'. And yet we knew they didn't know us from Adam, they were graphic lines for heaven's sake —the cognitive samba we allow ourselves to indulge in as we swing between fantasy and fact is liberating. So too, *She's Not There* foregrounds its artifice, the project provides for its audience a reflexive distance, via the machinations of the virtual camera, as interface between real space and virtual, between pre-rendered digital animation and real time theatrical performance, such that theirs is a conscious hallucination, one eye open, one eye shut, an enjoyment in cinema as performance, as fun, as a reflexive perplexity.



Figure 15: View from backstage (virtual theatre).

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