

WHEN HOLLYWOOD MET VR THE RISING IMPACT OF VIRTUAL REALITY ON THE MOVIE INDUSTRY



Produced by
(VR) Intelligence

In Conjunction with
(VRX)
2017

Hollywood meets VR - The rising impact of virtual reality on film

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Over twenty-five years ago, Hollywood predicted the virtual reality revolution that we're beginning to witness today. A recent wave of VR technology has already started to disrupt both the home cinema and movie theatre experience, while true evangelists predict a reinvigoration of Hollywood – just as 3D screening has boosted cinema revenue in recent years.

With VR as a whole reporting revenue of \$2.7 billion in 2016, projected by some to increase to up to \$25 billion by 2021, practically every industry is looking to take advantage of the new technology and media in some way. Within film, creatives in Hollywood and beyond are taking a leading role in experimenting and testing the limits of VR and other immersive technologies, revealing the potential for huge transformations in film production, consumption and promotion.

In this industry paper, we provide a lens on the future of VR in film, as seen through the eyes of three of the industry's most prominent thought leaders.



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1.0 THE STATE OF PLAY TODAY - HOW VR IS BEING USED IN FILM IN 2017

1.1 360 DEGREE VIDEO VERSUS MORE ROBUST VR EXPERIENCES

Some wouldn't consider 360 video to really be virtual reality at all; however, there is clear crossover and for the purposes of this paper, we are including it - see below for clarification.

360 degree video includes any experience that allows users to turn in any direction to view the content. However, the viewer lacks the ability to interact - instead, they can be considered a passenger, watching as the content plays out before (or behind, or below) them.

Live events such as festivals have seen incredible uptake for this type of VR because of the low technical overhead associated with delivering such experiences to smartphones.

The massive variety of content being produced in this way has resulted in the rise of VR Cinemas all over the world, from Amsterdam to Melbourne. Here, customers pay to watch content through a VR headset, in a shared physical space, and dive into a world of immersive content, from hard hitting documentaries to short films and travelogues.

Many more robust VR experiences, on the other hand, are currently built within game engines, granting the user a much more immersive experience and the ability to move within, and often interact with, their environment. Users can be the drivers in this scenario and it is these more interactive experiences that are set to disrupt traditional film most markedly as VR headsets and content become more widespread.

1.2 MARKETING FOR MAINSTREAM MOVIE TITLES

The mainstream buzz of VR has led some traditional filmmakers and studios to create content that sits alongside their main titles. Most of this either takes the form of short-form interactive content built for screens or location-based experiences. The primary goal of this content is to drive VR enthusiasts towards the film it accompanies. It is where many of the early experimentations are taking place and investment is coming across a whole swathe of film genres.

Early examples of this style of content include *The Martian VR Experience*, *Ghostbusters: Dimension*, *The Lego Batman VR Experience* and *Alien Covenant: In Utero*.

1.3 STAND-ALONE SHORT FILMS

As a new technology, the major HMDs all suffer a major problem: spending a lengthy period within VR becomes uncomfortable. Consequently, shorter, story-driven films or episodic content pieces, either delivered as 360 degree video or with limited interactivity, have come to the fore.

Some strong examples of this content type include *Allumette*, *Notes on Blindness*, *Invisible*, *Miyubi* and *Dear Angelica*.



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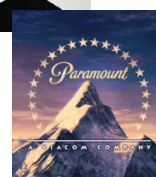
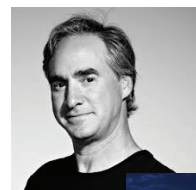
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2.0 MEET THOSE SHAPING THE FUTURE

We've brought together three of the brightest minds working in VR and film today to cover some of the most pressing topics arising, as the medium becomes more recognised across the film industry.

2.1 TED SCHILOWITZ

Ted is the newly appointed Futurist in Residence at Paramount Pictures. Previously a Futurist at 20th Century Fox, he spent much of his time within development laboratories exploring and testing new technologies. Recent projects include *Alien Covenant: In Utero* and *The Martian VR Experience* – two immersive experiences that support the cinematic releases of *Alien Covenant* and *The Martian* respectively, as mentioned above.



[You can read the unabridged interview with Ted here.](#)

2.2 BRETT LEONARD

Brett is the visionary film director behind '90s classics *The Lawnmower Man* and *Virtuosity* – both of which envisioned advanced VR technology. He currently serves as the Chief Creative Officer at Virtuosity VR, a VR/AR platform and content studio based in Los Angeles.



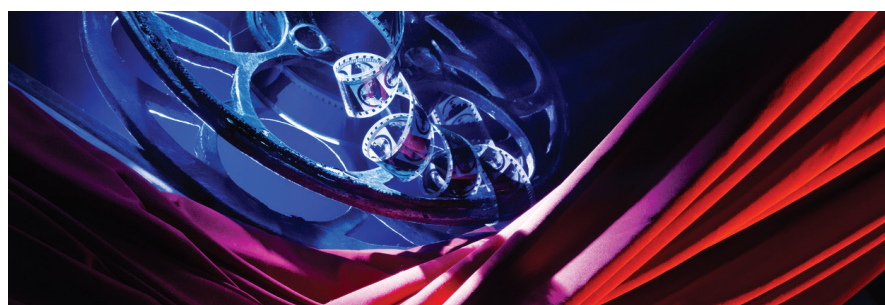
[Take a look at our complete interview with Brett here.](#)

2.3 MAUREEN FAN

Maureen is the co-founder and CEO of Baobab Studios, a VR animation company that creates story and character driven cinematic experiences. Their recent projects, *Invasion* and *Rainbow Crow* have garnered accolades including a Daytime Emmy, and Official Selection of the 2017 Tribeca Film Festival.



[Check out our full interview with Maureen here.](#)



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“I don’t believe that virtual reality and augmented reality are a supplement to our existing media and entertainment landscape. I actually think that it’s a new form of mainstream entertainment that is yet to truly hit the mainstream”

*Ted Schilowitz,
Futurist in Residence,
Paramount Pictures*

3.0 THE TALKING POINTS

With so many burning topics concerning the future course of VR in film, we’ve narrowed the field to three of the most talked about concerns and opportunities as the medium takes hold across the industry.

3.1 A SCREEN (R)EVOLUTION

More and more we rely on screens to view the huge variety of content being delivered to us. But current screens have, what Ted Schilowitz calls, “restricted real estate”. No-one wants to carry around a high-end PC or laptop and there is only so much we can do with our phones or tablets.

Virtual reality could provide the answer to the limited real estate offered by flatscreens and Ted believes the future lies in wearable goggles or glasses. “In the future”, he claims, “I’ll be able to wear [my screen], and I’ll be able to walk around the world and handle [communication] using advanced video. Ultimately, the older stuff will get relegated.”

Brett Leonard thinks along similar lines and goes further by stressing the shared worlds that VR offers, saying “There are going to be more and more immersive screens that will be all kinds of shapes and sizes. We are literally months away from that. The ability to create immersive spaces with next-level screen technology is going to be one of the things that will create the communal aspect for virtual experience”.

3.2 VR TECHNOLOGY AND CONTENT LIMITATIONS

Fresh and innovative content continues to push the boundaries of what VR can accomplish, but every new example also highlights the limitations of both the technology and the experience creation. These limitations can broadly be divided into two categories: hardware and creativity.

HARDWARE LIMITATIONS

The birth of VR has meant that, for the first time, we can actually be ‘in’ whatever content we consume. Where flatscreens have attempted to deliver an approximation of this experience through the use of Point-of-View (POV) techniques, it pales in comparison to the feeling of presence brought about by VR.

360 video is the natural extension to this. But the difficulty arrives when we think about user expectations with such technology. As Brett Leonard says, “looking around is not enough”. He continues, “Millennials and Gen Z require agency and interactivity... 360 degree video – it’s not that it’s not a valid step or thing to do, it’s just not enough to really create what we think of as true virtual experience.”

With 360 degree video in particular, looking around without the ability to move or interact can work against the intended feeling of immersion; a constant reminder that the user actually isn’t ‘in’ the content, but merely an abstracted consumer.



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“Baobab’s vision is to create experiences with the empathy of film, the agency of games, and ultimately the motivation of real life.”

*Maureen Fan,
CEO,
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Ted Schilowitz agrees, “the tools being used – from a camera standpoint – to create 360 degree video content, won’t really carry us into the future.”

However, a potential solution to this lack of agency for 360 degree video is on the horizon (as we will find out in section 3.3).

More broadly, there is also the question of what constitutes VR and what constitutes AR (augmented reality) and whether that’s putting an unnecessary obstacle in front of the creative community. Brett Leonard’s perspective on this is clear: “I see VR and AR as pieces of the same pie. Segmenting them – thinking of them as silos – has been, and continues to be, one of the big barriers to reaching true mass market adoption. With VR we haven’t focused on what humans want to do, we’ve focused on what the tech can do, and that’s a problem”.

CREATIVITY LIMITATIONS

Even more pressing a problem than hardware is the issue of creativity. As Brett Leonard comments, “Everyone is currently waiting for the tech to be perfect. It’s not going to be perfect. Do you think cinematic technology was perfect at the birth of cinema?”

Many VR content creators have approached the medium with a background in gaming or filmmaking. Instinctively they have carried across the rules they have learnt through content creation for other media, with results – albeit interesting at times – with results which, many claim, fail to truly capitalise on the promise of VR.

Ted Schilowitz says, “People... haven’t really given the time to understand the capabilities of the medium when they go in and try to create something. They tend to rely too much on their existing knowledge of what an experience should be, based on a flat screen world.”

Maureen Fan states her company’s mission for the VR content they create with an interesting example; “Imagine a crying girl on a bench. In a movie, you would just feel sorry for her but wouldn’t expect to do anything about it. In a game, you’d talk to her to fulfill a quest or get some information from her to get to the next level. In real life, you’d talk to her, because you care about her and you want to help her. Baobab’s vision is to create experiences with the empathy of film, the agency of games, and ultimately the motivation of real life.”

Whatever form VR content takes, it can essentially be boiled down to one thing: storytelling. Since the birth of cinema, filmmakers have honed their skill at telling stories using the limited real estate of the screen. VR turns that on its head, as users don’t necessarily have to look at what you want them to (and fixing perspective within VR has proven to be a terrible idea). So while VR creators have experimented with clever tricks to steer users towards key moments within the content, they are too often merely translating their story into the VR format, rather than reimagining what storytelling means within the context of VR.

In order to smash out of any creative rut, creators need to throw away the rulebooks of other media. As Brett Leonard says. “This new medium really necessitates thinking

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*Brett Leonard,
Film Director,
The Lawnmower Man*

outside the box significantly... You have to think like a filmmaker, but without the film language of cinema because ultimately you don't have the frame". Maureen Fan agrees, "We need to break all the rules, and stop trying to create rules: experiment instead."

On top of this, one of the biggest factors exacerbating the problem of limited creativity in VR is arguably the Hollywood studios themselves. At the VRX Europe conference in London in May this year, Tim Webber, Oscar Winning Creative Director of Framestore, said, "[the big studios are] not clear what they want or why they want it, and it's not clear who is driving [VR] within most studios". With VR creation in large studios often falling between multiple departments, it's a challenge to create the structure necessary to make decisions and push the medium forward.

In terms of investment, Brett Leonard is forthright in his view that not enough is being provided to take the content to the level it needs to be, when he says, "It's funny that a lot of the virtual projects – with some exceptions – have been very low cost things that have the budget of a 1970s corporate video. How do you define a whole new medium of human interaction with virtual worlds with those kind of budgets? It can't be done. Billions of dollars have gone into the tech, and very little has actually gone into the content".

Maureen Fan concurs, stressing that ultimately the growth of the market will be dictated by the quality and quantity of content coming through, proclaiming that "consumers need killer content to justify their headset purchase and a constant stream of new content to repeatedly put on that headset. It all starts with funding".

3.3 CREATING BELIEVABLE CHARACTERS IN VR

Volumetric capture allows users to move around 3D virtual spaces and interact with other characters. It's created by using a technique called photogrammetry to convert images into three-dimensional objects. To many, this doesn't sound that revolutionary, as video game engines have allowed this to a certain extent for some time now. However, the brilliance of the new wave of volumetric capture is that the same user movement is now made possible using live-captured subjects within a photorealistic environment.

8i have been leading the way in volumetric capture, with huge investment from the likes of Time Warner. And big tech companies are taking notice with the technology accelerating at a fantastic rate. At Facebook's annual conference in April 2017, F8, the company announced that they are working with partners to bring a camera system capable of volumetric capture to market. Ted Schilowitz notes, "This is becoming a major discussion point, where a year ago it was pretty radical when I first mentioned it."

Brett Leonard agrees, "the big players like Facebook and Google [have] a high awareness... and [are] starting to build the tools that will enable [spatial VR] to come to fruition."

Whilst it's clear we are still in the experimental or development stage of widespread volumetric capture, the technology to bring this into the mainstream could be nearer than we'd have imagined even a year or so ago.



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*Ted Schilowitz,
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4.0 PREPARING YOURSELF FOR VR

The advent of entertainment VR represents a massive opportunity for creatives from across disciplines. As Ted Schilowitz notes, “People who live a kind of blended life; where they love movies and love video games and understand the storytelling value of each of those mediums, those are the ones I always encourage to move into VR.”

When it comes to preparing yourself for creating VR content, there are three primary interdependent factors:

4.1 UNDERSTAND THE MEDIUM

It's clear that VR presents a massive fiscal opportunity. And as a direct result, many are already rushing at VR – viewing it as a cash cow – without properly taking the time to research and discover the many pitfalls that could arise.

Approaching VR in this way will not only deliver poor quality content, but could actively damage the medium as a whole. One only has to look at the video game market crash of 1983-85; brought about in part due to the market being flooded with terrible games for relatively new hardware.

4.2 SHED THE PAST

The talent creating VR content today is drawn from a multitude of places. However VR represents such an evolutionary and revolutionary step that the vast majority of rules brought from old media need to be thrown out. As Maureen Fan comments, “Each medium has its own toolbox for telling stories. By thinking about VR as its own medium, we can approach it in a fresh way, which I think it deserves.”

VR film and content creation needs to be treated as a completely new art. Ted Schilowitz is equally passionate in his view that “there are a myriad of challenges, but there are equally as many opportunities. What I see time and again are people that haven't really given the time to understand the capabilities of the medium when they go in and try to create something. They tend to rely too much on their existing knowledge of what an experience should be, based on a flatscreen world”

4.3 KEEP INFORMED

VR technology is developing at such a pace that if you want to succeed, you cannot create in isolation. Innovative uses of VR are being introduced to market on a frequent basis, which is why the very best in the industry are taking every opportunity to research as much as possible and interact with their fellow creators. Experimentation is the key to driving the content forward and the final word goes to Ted on this who unequivocally states that “the greatest opportunity for people that are involved and are looking to get involved in this medium is to embrace change.”



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5.0 WHAT NEXT?

VR is here to stay and there's a huge optimism across the film industry on what it and broader immersive content can bring. Ted is bullish when he says “I don't believe that virtual reality and augmented reality are a supplement to our existing media and entertainment landscape. I actually think that it's a new form of mainstream entertainment that is yet to truly hit the mainstream”. And Maureen agrees when she adds “We look at VR as its own medium that would live side-by-side with movie-going experiences... By thinking about VR as its own medium, we can approach it in a fresh way, which I think it deserves”.

The future of VR is still being decided, and with major hardware offerings beginning to establish themselves and drive towards mass-market adoption, the time is ripe for those leading the charge with content.

VR will live or die by the quality of content and experiences that are made available. Next to nothing can be accomplished without investment, and fully-realised and diverse content is going to be needed if we are to see VR truly reach the mass market.



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