



# INTO THE VIRTUAL WORLD

## A GROWING DEMAND FOR CONTENT HAS LED TO SOARING DEMAND FOR MORE PRODUCERS IN VFX AND ANIMATION. HERE, PRODUCERS WHO HAVE MADE THE TRANSITION FROM LIVE ACTION WEIGH IN ON HOW TO UTILIZE EXISTING SKILLS AND BUILD NEW ONES IN A CONSTANTLY EVOLVING INDUSTRY.

WRITTEN BY GRAHAM EDWARDS

It's no secret that Hollywood had already been shifting even before it was upended by a global pandemic. For film producers worldwide, nowhere are the changes more evident than in the realm of visual effects, animation and virtual production, an arm of the industry that is fast growing and providing opportunities for live-action producers to switch.

Over decades, the visual effects industry has evolved beyond tentpole action franchises, as effects-related techniques and virtual production methodologies have been changing workflows across the board. Simultaneously, animated films both long and short are enjoying a renaissance, as creators fulfil the rising demand for content from streaming services. Smaller animation studios now compete with the industry stalwarts, and a growing number of animation providers are partnering with producers to develop projects that could not have been made in any other medium.

Most recently these trends have converged to bring a silver lining to the COVID-19 cloud over the Hollywood industry. When location shooting became impossible, actors uploaded performances shot against homespun green screens, and LED walls allowed productions to shoot on stages under COVID-safe conditions. Meanwhile, the visual effects and animation industry adapted readily to remote working, with legions of artists and production staff continuing to deliver content through lockdown.

But this was never just about helping the entertainment industry through the pandemic. There has never been a better time for live-action producers to dip their toes into the waiting waters of what some might describe as the future of filmmaking. For those ready to take the plunge, what is the best way to make the transition, and what opportunities await them in this brave new world?

"I am a huge proponent of below-the-line producers moving into visual effects and animation producing," says Brooke Breton, visual effects producer and co-producer of *Avatar*. Breton has previously worked below and above the line in both live action and animation. "Having knowledge in all three production paradigms opens doors to many new opportunities and experiences, which in turn keeps the work varied and stimulating. It helps you make more-informed choices, allowing you to determine the best methodologies that would benefit your project aesthetically, and in terms of time and resources."

"There's so much work out there," adds Jinko Gotoh, producer of animated features including *Finding Nemo* and Netflix's *Klaus*, who started her career in commercials. "There's no reason why live-action people can't come into this industry—in fact, most of us at some point started in live action. And it's important that below-the-line producers embrace the new technologies like virtual production and LED screens. You may not want to move into visual effects and animation, but today, you have to live with it just doing live action."

### ONCE A PRODUCER, ALWAYS A PRODUCER

For producers interested in switching tracks, the good news is that the fundamental things still apply. "Producers are used to looking at a script and understanding the various components that need to be satisfied to deliver a final project," Breton explains. "Moving into animation and visual effects, you are using the same analytical skills, but altering them to accept new practices, pipelines and methodologies. It's not difficult if you remain open to learning, because all of your existing skills are transferrable."

A first-time producer on an animated feature will nevertheless encounter some key differences in workflow. The most fundamental of these is the pivotal role played by editorial. "Animation production is a linear, iterative process in which everything centers around editorial," Gotoh says.



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**Jinko Gotoh**

“I think conceptually that’s the biggest difference between animation and live action, where you prep for months, then shoot, and then editorial becomes a post process. Once you get your head wrapped around that, then everything else is the same. You’re taking a script, doing breakdowns, budgeting against labor, and monitoring the usage of that labor.”

The editorial team will typically assemble the first cut of an animated film very early, using storyboards. “In feature animation, the storyboard is a phase of your story development,” says David Prescott, senior vice president of creative animation production at global visual effects and animation company DNEG, who began his career in live-action VFX. “You’ve got your script, but you’re using the boarding process to really work on story. Is this the best way to tell a joke? Is this the best way to move this character development forward? You throw the whole film up in storyboard, and evaluate it, and then go back into it again and again.” Subsequent cuts of the films introduce simple blocking animation. As the iterative process continues, this is gradually superseded by increasingly polished renders.

Concurrent with storyboarding, and before animation can commence in earnest, every aspect of the film must be designed. “Nothing is in camera,” observes Prescott. “If a character walks past a postbox, you have to design that postbox to fit your world. You have to design the entire world, and build it from scratch.”

Designing whole worlds makes for a large art department whose involvement, like that of editorial, continues through production and into post. For the production team managing this process, however, the challenges are consistent with those on a live-action production—even down to scouting locations. “I always ask the question: ‘What piece of detail can we put in here that will make people believe this place exists somewhere?’” says Prescott. “Visiting places allows you to do that. The team may be a little different than what you’d take on a live-action scout—the

production designer and a bunch of artists, say, rather than an assistant director crew—but the goal is the same.”

## MARATHON, NOT A SPRINT

On a live-action set, the production dances to a daily beat: How many script pages today? How many setups? Hurry, we strike tonight! When it comes to the animation, one of the first differences a live-action producer will notice is the unique rhythm of the animator’s calendar.

The animation workflow has its own 24-hour pulse, with shots presented and notes given at dailies. However, this daily turnaround is usually underpinned by a weekly quota system. “You start on a Monday and you have to get so many shots by the end of the week,” says Gotoh. For producers, this means attending dailies and doing regular walkarounds, physically or virtually, to ensure the director is giving enough feedback, and the animators are following the notes. “A day on the set becomes a week in animation.”

Timescales stretch at the macro level, too. Many producers equate the experience of making an animated feature to running a marathon. “Typically we’re in preproduction for about 12 months,” Gotoh says. “Then we go into shot production, which is 12 to 18 months, and we still have post on top of that. It’s hard to make a quality animated feature film in less than 30 months.” Keeping teams united and motivated over such long periods is of paramount importance. “You can be brilliant and talented, but if you’re not a nice person you’re going to alienate your team eventually. Maybe you can get away with not being nice for six months, but not for three years.”

In order to successfully manage an animation team, which might be anywhere from 40 to 120 people, a producer must embrace the fact that animators are actors. For many producers, this represents a welcome opportunity to interact directly with performers. “When you’re on set, the actors are really left to the director and the assistant directors. Working with animators is definitely



something that a production person needs to be able to do,” Gotoh adds.

Farther down the animation pipeline, the performance-driven task of animation segues into more technical creative disciplines such as lighting, rendering and compositing. Managing these requires producers to track multiple assets and versions of shots right through production.

Daunting as these disciplines might seem to a newcomer, they are merely parts of a process that is there to be managed. “Remember, you aren’t required to perform these artistic or technological tasks,” says Breton. “You are simply required to have

an overall understanding of these methods and the time it takes to reasonably perform them. Gaining familiarity with software such as Shotgun will help, but, at some point, you just have to jump in. Take it slow, read trade magazines and books, watch behind-the-scenes pieces, tune in to webinars, talk to friends who have experience in these realms. If you can get on set or into a facility to see this work in person, even better.”

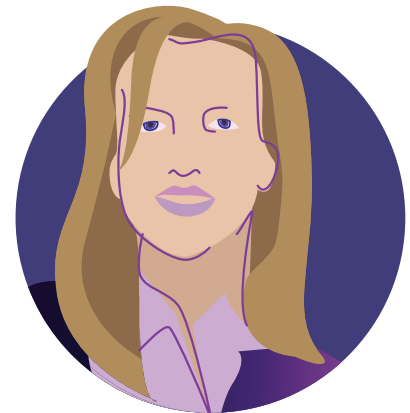
### VFX: BLURRED BOUNDARIES

Turning their attention to visual effects, a producer will find much common



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**Brooke Breton**







COURTESY MARK FELLMAN

James Cameron at the High Camp Bio Lab set built for the sequels to his 2009 hit *Avatar*, which pioneered virtual production techniques and became the highest-grossing film of all time.

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James Cameron



ground with animation, but with one big difference: Visual-effects production is, by its nature, entwined with the live-action production process. As for the precise relationship between the two, new technologies are blurring boundaries, advancing many visual processes toward the front of the schedule and making a lie of the old adage that visual effects is all about ‘fixing it in post.’

“Pipelines are changing rapidly,” says James Cameron, Oscar-winning filmmaker of blockbusters such as *Titanic* and the groundbreaking *Avatar*. “Producers need to stay up to date and get hands-on experience with the new tools. CG environments and characters can be integrated right on the live-action set using real-time composite systems—this makes the live shoot the middle step of the visual-effects process, whereas it used to be the beginning. Those environments and characters need to be created in advance, ready for the director

to work with, and for the live-action cast to react to in real time. This is beyond previs—it’s the actual creation of the CG world, set extensions, character design and near-final animation.”

At the heart of the visual-effects process is the production-side team, which not only maintains the overview in preproduction and during principal photography, but also manages the various vendor companies hired to develop and deliver the finished shots. The visual-effects producer will likely have their own in-house team of artists to manage as well. Each vendor has its own producer, whose job is to manage the shots through the company’s pipeline.

A typical visual-effects pipeline starts with design, as art department concepts are translated into digital assets. On some effects-heavy films, the vendor team may actually take the lead on certain design tasks, though still under the supervision of the project’s production designer.

Asset creation is the digital equivalent of prop building, and layout equates to set construction. Beyond these lie animation, lighting, rendering and more.

The concepts behind visual effects will be familiar to any live-action producer. "There are parallels to most parts of physical production," says Philipp Wolf, executive-in-charge of corporate strategy at DNEG, and visual-effects producer on films including *Ghost in the Shell* and *Godzilla: King of the Monsters*. "The biggest difference is that it's not physical anymore; it's virtual. It's not a carpenter building a set; it's an artist building that set digitally. For a producer, there's a difference between having people running around on set all day fixing stuff to having people sitting in front of a computer fixing stuff. But really, it's just a different energy."

### THE FUTURE LOOKS VIRTUAL

The collision of changing times and new technologies has brought with it an explosion in employment opportunities. The work is out there, in a continent-spanning industry that is ready to open its doors to all. "I've been encouraging representation and diversity for many years as part of Women in Animation," Gotoh reflects. "Now streaming has allowed us to diversify storytelling as well, because there is so much demand for content. And ours is a global industry, which brings so much representation from people working virtually all around the world. This is truly a golden era for animation and visual effects."

For newcomers, the first hurdle is often grasping the terminology. "Whenever I get someone joining the industry, I tell them to take the Visual Effects Society handbook and just read the introductory paragraph to each chapter," Wolf says. "They'll get through the book in a week or two and end up with a basic understanding of what they need to know." With the language learned, focus can return to the producer's familiar core skills. "It's the same in visual

effects as it is on set. You're making sure everything is where it needs to be, and enabling people to do what they need to do, all within the budget, quality and time you have. You're laying the tracks in front of the moving train, without getting overtaken by the train."

Career progression within visual-effects production follows a similar pattern to live-action, with entry-level runners advancing through production assistant and coordinator roles, to production management and upward. In welcoming live-action production staff, many visual-effects vendors will expect a new hire to step down a level. "If you're an on-set production manager or coordinator with no visual-effects experience, you'll likely go in as a production assistant," says Wolf. "But you're not going to be stuck there for a year. As soon as you learn the lingo, and if you have the qualities, you'll move up the ladder."

As the barriers continue to break down between live action, animation and visual effects, the creative opportunities for filmmakers will only increase. Nowhere is this more evident than on a virtual production set. "If everything is teed up correctly," Cameron asserts, "it makes the work incredibly exciting and gives a great deal of creative flexibility to the director of photography and the director on the set, in addition to yielding stunning results. With proper prep of the systems and assets, the workflow on the set is smooth, creative and flexible, with most of the key decisions being pulled forward from the post pipeline into the prep and shooting."

For producers of animated features, virtual technologies are allowing department heads to work together remotely, aligning the animation pipeline more closely to its live-action counterpart. "The director can get into a virtual space with the digital cinematographer, the production designer, the animators," says Gotoh. "We are collaborating more like live action. That's super exciting for me as a producer." ■



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