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ParaNorman images provided with permission by Focus Features.

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Letter from the Editor:

This latest issue of SMM is one that I’ve been dreaming of making for some time. For years we’ve been hearing whispers and rumors about LAIKA’s latest film ParaNorman. So I was very excited to work with Focus and their PR group to bring you this special issue of Stop Motion Magazine. For one thing I have to definitely thank Fumiko Kitahara. Without her help this issue would never have been possible.

I can’t tell you how much of an honor it was to meet Travis Knight, Chris Butler, and Sam Fell. They were exceptionally cool and laid back. Not only that, but they provided us with such a unique look into how they made their film, I honestly don’t know if any other studio interview will ever match up. Their film ParaNorman is amazing. I’ll say it again “Amazing”. Its breath taking cinematography and fluid animation is jaw dropping. The detail in the complex artistry that it takes to make even 10 seconds of a film let alone an hour and a half is staggering when you realize that every piece of every prop, puppet, and scenery were hand made. I saw the film in 3D Stereoscopic and was impressed at how subtle the 3D was and not overwhelming to the point that I would have had to take my glasses off. Very beautiful camera work mixed with amazing artistry equals a classic.

The story wasn’t what I expected at all. It was in fact a better story then I thought the film was about. Heart felt and original is what I can say about Chris Butlers writing. He really captured a world in a bottle and sold it to us with this amazing tale. This film really is the perfect storm when it comes down to it. I am so impressed by what they have achieved.

I’d also like to thank Georgina Hayns, Jeremy Spake, Tristan Oliver, and Brad Schiff for giving me the time to interview them. They really made this issue a wonderful experience. I hope you enjoy reading all the interviews. You aren’t going to find interviews like these anywhere. That is what makes doing this worth the effort and time. I personally enjoy asking the questions that other magazines have no idea about and getting really detailed answers from people who share the same passions as all of us in Stop Mo. It was an honor to meet these great people and share a moment together on this little blue marble floating in space.

Keep Animating
John Ikuma
Executive Editor
Stop Motion Magazine
HAVE YOU EVER WONDERED WHAT HAPPENS WHEN YOU LEAVE YOUR TOYS IN THE ATTIC??

“An Animation Masterpiece”
– Screen International

“Four parts ‘Toy Story’ and one part Tim Burton”
– New York International Children’s Film Festival

“By far, one of the most unique films ever made”
– USA Today

FEATURING THE VOICE TALENT OF
FOREST WHITAKER JOAN CUSACK
VIVIAN SCHILLING AND CARY ELWES

In an Animated Masterpiece
by Acclaimed Director Jiří Barta

Toys in the Attic

OPENS IN
SELECTED THEATRES SEPT. 7

The Art and Making of ParaNorman
Review by Pike Baker

If you haven’t heard already, ParaNorman is most likely one of the hottest stop motion films ever made. It is most likely due to the creative artistry produced my hundreds of hands and thousands of hours of painstakingly laborers work by masters of the stop mo world at LAIKA. So how better to see the behind the scenes then in a “Behind the Scenes Book!”.

The Art and Making of ParaNorman is a magical look into what was involved with the making of the film. Unlike other behind the curtain books like Fantastic Mr. Fox or Coraline; the ParaNorman book has a ton more previsualization in it than other stop motion books. This is most likely due to the passion put into the overall look of the film. There’s a massive amount of concept designs of sets and characters. Norman Maquettes and drawings really give you a feel for the characters evolution. The environmental designs and storyboard art is also another great way to see how it all developed. Finally when you get to the puppet armature making, facial printing, and set construction; you should be on stop mo overload and breaking out your magnifying glasses to see what gear they used, how they built their tables, what kind -of ball joint they made for the knees of the puppet. Basically if you don’t go bonkers over this book then you’re probably not reading this magazine or review. Definitely a must buy book of the year in the stop mo world.

You can find it at Amazon.com or your local book store
In the stop motion world Fon Davis is well recognized as a top notch professional prop and set builder. His pedigree of films run through almost all the major stop motion features (Nightmare Before Christmas, James and the Giant Peach, Coraline) along with major block buster live action films like Return of the Jedi, The Matrix Series, Jurassic Park III, to name a few. He recently teamed up with Micro Mark, the world’s leading hobby and pro micro tool distributor, and has produced and released probably the most detailed instructional video on the subject of model making ever produced.

This video is so deep that you won’t be able to watch it the whole 4 hours through. I had to stop it at the 2 hour mark for my first viewing. It was overwhelming in a good way with tutorials on Vacuum Forming, Kit Bashing, and Armatures for Models, Painting and Weathering, and even putting Miniature Lights in your models! This video makes my head spin with how well it’s produced and it proves that Fon Davis knows what he’s talking about. I know for a fact that if you are into making props for your stop motion films, this video will be a turning point in your life. Yep I said it; this DVD set is life altering.

I should point out that the instructional video is focused on the making of a model spaceship from scratch. The craftsmanship that is displayed throughout the video is inspiring and well worth the purchase of the video. I highly highly recommend this DVD set and urge all of you who want to make amazing Cars, Spaceships, Boats, Chairs, Tables, and PROPS, to just go to MicroMark.com and buy this 2 disc set. Well done Fon Davis and Micro Mark, Well Done!
SMM: Was there anything exceptionally challenging in the making of this film?

Sam Fell: One thing is the subtlety in the acting style we wanted to use. We wanted a real naturalistic acting style, more like cinema acting. So it was a challenge to get a whole animation team working to that really finely tuned level, and they weren’t all of the same level. There are people like Travis who are super experienced, and then there are kids who have not really worked on a feature before. So trying to get that kind of subtle style running throughout and having that color RP printer helped enormously with the subtlety and facial acting. Yeah I’d say that’s one of them, there are many.

Chris Butler: And scope as well. It’s a huge ambitious project just in terms of story. Our approach at the beginning was to make it feel more expansive than stop motion normally feels. It can often feel quite contained, and that’s the nature of the process. You have to have physical sets with real puppets on them. So you’re limited often by budget or scheduling as to how much you can show. In the story there are mob scenes, we see the whole town, we’re often driving along very long winding roads through forests. We wanted to approach it almost through a live action point of view so it didn’t feel contained, and that ties into the acting approach. We really pushed the boundaries of the medium as much as we possibly could. Even when it came to the logistics of it, having the balls to say, “let’s do it” as opposed to, “that’s not normally done in stop motion we shouldn’t really tackle that”. It wasn’t that, ever. It was always like, “this is impossible so how do we do it?”
SMM: Did you work as a pair on set or were you on the stages at different times?

Chris and Sam: A bit of both.

Sam Fell: In the early days when a set is getting up and running and it’s a first look at a new environment, we’d go together. Later, once we’ve storyboarded the whole thing several times and it’s all kind of locked and we’ve been around it more, because we’ve got 52 units, we’d go to individual areas and work on set. It’s the lovely thing about stop frame, you can go on set.

SMM: When dealing with an animator and an actor are you giving them similar direction for that particular character?

Sam Fell: It’s still like directing performance.

Chris Butler: Yeah, there are a few exceptions. I think sometimes the approach to recording the kids is to keep them on their toes so they remained natural and didn’t feel rehearsed. Whereas with the animators, it has to be so rehearsed. But it’s to try and capture the same thing, which is the spontaneity of it.

Sam Fell: When you talk about a scene, you talk about what the character is thinking and we gave the whole scenes to individual animators. So a scene would be run by Kodi doing the voice, and an animator doing Norman for that whole scene. You try to give it a sense of continuity and a sense of the feeling of the scene too.

Chris Butler: They definitely share those characters. The animators are as much a part of Norman’s performance as Kodi is; it’s equal weight. They gain so much from that vocal performance anyway. We’d record the actors reading their lines, recording their voices. We’d sometimes use that video footage but not exclusively. Occasionally it would suggest something that you wouldn’t ordinarily think of. Because we were trying to avoid the very broad gestural pose to pose animation, we were trying to go for something that felt more fluid and nuanced and real. Sometimes that would come from watching very subtle stuff that the actors were doing.
SMM: Did the animators film themselves to give reference?

Chris Butler: Oh yeah, but not all of them.

Sam Fell: I think the animators all act it out in some way. Maybe not publically, maybe not recording it, but you have to get inside the character a bit.

SMM: Did you find any part of the production extremely enjoyable?

Sam Fell: Overall.

Chris Butler: Yeah over all.

SMM: You kind of have to say that.

Chris Butler: You know that’s the really good thing about it is that every time we are asked a question like that it’s very difficult to answer it, which I think means that we’ve got the right shape.

Sam Fell: It’s a balance.

Chris Butler: We actually managed to succeed in not having bits that work so much better than others. So that’s good. There are some sequences that you become attached to because of part of the process. Like there’s a scene that ended up exactly as it was in my head. I boarded it myself and worked very closely with the animator and it’s pretty much dead on what I imagined and that in itself is rewarding. But then the flip side of that is sometimes you have a set idea. I imagined Mr. Prenderghast as this frail old man in a suit, and he ended up being this huge lumbering hobo. But that in itself is rewarding as well, because you never imagine that but it’s taken to another place.
Sam Fell: I like that aspect amongst everything, the aspect of character design and the way we approach that. We had one character designer do the whole cast and she didn’t do a whole lot of alliterations and we didn’t “F” around with it a lot and beat the creativity out of it. We took these amazing drawings; she’d never done it before professionally on a feature film. She drew the whole cast and then we got Kent Melton to sculpt the whole cast, more or less. I mean we did have a couple of other sculptors we have to give credit to. But really effectively we had a very small team working very quickly developing the whole range of characters which kept it fresh.

SMM: In production, different departments depending on their particular jobs will either gain weight or lose weight. As directors did you get in shape running from set to set?

Sam and Chris: Oh, yes!

Chris Butler: The funny thing is on this project I gave up smoking and started going to the gym. Everything changed, and I think it’s because you could just run yourself into the ground otherwise. I became healthy on this project.

Sam Fell: I think stop frame is the healthiest form of animation. Unlike CG where there’s a lot of sitting around, we literally get marched around. I didn’t put a pedometer on foot, but when you get marched around that large studio area. It’s a huge warehouse. You definitely cover a few miles a day I think.

Chris Butler: You’ve got to look after yourself on one of these things because it consumes your whole life.

SMM: How was it working in 3D Stereoscopic Stop Motion?

Sam Fell: We used it as a tool to tell the story. We didn’t let it overtake all the other tools that we had. We used depth of field, we used composition, we used everything. It really becomes part of the telling of the story. We wrote a 3D script so we knew we wanted to push it deep.
Chris Butler: Yeah, it was never a post process. It’s absolutely fundamental to how we planned it. I worked in story on Coraline, the first stop motion 3D movie, and I thought the approach to that worked so well, which was to make it immersive. What’s appealing to stop motion is these real tactile surfaces and physical objects that are real, and I think that’s what people respond to. They want to reach in and touch things that they recognize as imperfect and real, and I think the 3D on Coraline said, “come on in and walk on the set”. And I think that’s definitely something that we continued through to this. Obviously, because it is a zombie movie, we had a few more “in your face” things. Weirdly enough, at first we were a little frightened that 3D might not work with Stop Mo because of the imperfect nature of it but actually it’s a perfect marriage because of what makes stop motion appealing.

SMM: The Van scene is stunning. Were you pulling hairs out of your head during the filming of that scene?

Chris Butler: If I had any left.

Sam Fell: Yeah, and the deal is always to make it feel like it’s spontaneous and energetic. It’s hard with stop frame action sequences. They can feel planned sometimes, or too worked out. So we just wanted to get that freshness and that sense of the camera just catching stuff. We were much quicker cutting.

Chris Butler: we hired a storyboard artist who works in live action. Martin Asbury, who had boarded a whole host of chase sequences in (James) Bond movies, and in the Borne movies. So just having him do those initial passes immediately took us to a different place.

Sam Fell: Yeah it was like a good live action-type coverage. Multiple camera kind of coverage. Often in stop frame you start with, well we know there are six standard setups that we can use to shoot a chase sequence and they’re the ones that are logically the easiest to do, and they’re the standards. But this was much more like shooting with six cameras and just catching the stuff as it whizzed around. It was nice to get a little handheld feeling in there as well.

Chris Butler: Which in itself was something that you probably should never do. (Laughs)
SMM: Was the handheld look done with motion control?

Sam and Chris: Yeah...

Sam Fell: Yeah, but actually the van was moco’d as well. So the van had a moco’d movement in it, and then the camera had a moco movement and then we put a post drift in there as well.

Chris Butler: It’s difficult to get that feeling of a camera man actually being there. We were chasing our tails on it for a while I think, until we found the shorthand for it.

SMM: Did you have a favorite set what was used in production?

Sam Fell: I did like the introduction to the world and the fact that we built things just for one shot, like the bicycle leaning against a fence. It’s just a gorgeous shot.

Chris Butler: Mr. Penderghast’s house was such a huge build. It was the size of this room (roughly 25x25 feet) and it was so lovingly made and it exists for one shot. And I just love the concept of that shot anyway, it was taking a lead from the Texas Chainsaw Massacre with the swing shots as she first walks toward the house. So there is so much about that shot that I like, and I’m so pleased that it exists at all in an animated movie where ordinarily some producer somewhere would be saying, “What? Don’t do that”. So I love that because it’s such a beautiful thing. But there is so much good stuff in there that it’s hard to say.
SMM: Did you videotape the voice over performances as reference?

Sam Fell: Yes, we watched that sometimes. We don’t necessarily copy it, but sometimes you just take some inspiration from the actor’s performance. A lot of the physical performance comes from the animators themselves. The difference with this is because there is a puppet, you start frame one and you move through and you capture this performance that really is a performance. It’s like a onetime deal that we capture.

SMM: Can you tell us about casting? You had a couple of rookies in there.

Chris Butler: It was interesting because they came in thinking they needed to put on a voice. I think there is a certain perception of cartoon voices where they have to be bigger and bolder. Our approach to this movie on so many levels was naturalism, and we went for the actors that we went for because we liked their natural voices. There were qualities to them that worked well together. In fact as part of the casting process we’d get character designs on cards in front of us and sit in the edit suite and cut together little sound bites of the actors we were interested in just being interviewed, not acting, just regular talking, and we’d play them together. Because a lot of this movie is rapid fire dialog overlapping. You got all those kids who are in the van at the same time, so we had to make sure it worked musically, it was almost symphonic. From that we went out to people and they kind of embraced it.

Casey (Affleck) was funny because he was like “Why would you want my voice?” he doesn’t actually like his own voice. But it was because of that, because it has an identity that worked well with the design.

Sam Fell: Unexpected things happen when you take an actor’s voice and separate it from them. Christopher Mintz-Plasse’s voice is amazing when you play it next to the Alvin character design.

Chris Butler: You wouldn’t expect it. You wouldn’t go “we need a bully and Mintz-Plasse’s the guy”.
SMM: Anna Kendrick’s role as Courtney was not normal character for her.

Chris Butler: The good thing about Courtney, and part of the whole narrative really, is that we have these stereotypes of kids. I grew up watching Scooby-Doo, and it never made sense that these different types of kids would be friends, let alone drive around the country side investigating the paranormal in a van. I thought if you took that, if you took a jock and a cheerleader, and these different types and threw them together, well they’d be useless to start with and they’d probably be bickering. But I think the fun part of it was taking these stereotypes and turning them on their heads, and I particularly enjoyed Anna’s performance. She was able to go from bitchy to thoughtful and heartfelt on the turn of a dime.

SMM: Kodi (Smit-McPhee) was very natural.

Sam Fell: Absolutely, and that’s what we wanted from him. His performance has the biggest range. It’s tricky when you have a kid as the star. You don’t want him to be too precocious or to clever or we didn’t want him to be sorry for himself because everyone is mean to him. We really had to walk a fine line and Kodi’s an amazing find.

Chris Butler: The amazing thing with Norman is he’s probably the only smart character in the whole movie. Everyone else is completely stupid. With that smart dialogue, or because he is slightly more knowing, he could easily come across as annoying. Kodi has this real subtlety and nuance; he has vulnerability to him. What was interesting to us was that he also has this very lite comedic touch as well. I think at times Norman seems very vulnerable. Norman feels like he’s a real boy and that’s because he is.

SMM: Was it challenging making a horror movie for kids that is also accessible for older audiences?

Chris Butler: I don’t think it was a challenge to mix those. I think it’s quite easy to mix these references up. We never shied away from it.
Sam Fell: We didn’t, and you can’t if you are going to use this material. What I’d say though is that it’s not a horror movie for kids, because a horror movie just sets up to scare the pants off you and then you go home. A lot of horror movies leave some dark thought unresolved. But I loved this script because it was referencing all these horror movies that I loved. It was using that to tell a story about judgment and tolerance. It’s actually not a pure horror movie.

Chris Butler: We always talk about it being a rollercoaster ride. It’s The Goonies. It’s Scooby-Doo.

Sam Fell: A supernatural adventure that’s funny and scary to play with.

Chris Butler: If you strip away the zombies there’s still a lot more being said. Actually that’s what attracted me to it in the first place. The idea was that the best zombie movies are the ones that have some kind of social commentary; using zombies to tell something else. When you’re eleven years old, the kid that lives down the lane who bullies you every day is far more terrifying than a horde of zombies, and it was playing with the perception of real horror when you are eleven, and fictional horror. I really liked that cross pollination.

SMM: You guys have a history of working in stop motion. How was it working together and co-directing this film?

Sam Fell: It’s funny because people want us to say that we argue, and fight, and that it was a nightmare, but it wasn’t. We complimented each other. Chris had the story; he’d been working on it forever. It was something that he completely explored, and he brought stuff from his own life and fiction. He’d done all that work. Him being a first time director and me having been around and directed a lot, between the two of us we had everything we needed to make the film. I already liked the script. I came in to make a great movie with Chris and not to change the script. The story is often the battleground in animated movies, and that can get quite hairy. But we had a beginning, middle, and end that we liked.

Chris Butler: I think that’s part of it. Because these things are such juggernauts, they often need two directors. I think what made this good was that I had the story, Sam liked it, and we didn’t have to try and re-invent it as we made the movie. It actually gave us the opportunity to find a distinct look, a distinct voice, a distinct tone. We got to spend all that time in prep rather than arguing about the story. We got to actually concentrate on making the movie.

Sam Fell: Often, filmmaking can suffer because you are trying to figure out the story while you’re headed into production.
SMM: Chris at what point did you envision it as a stop motion movie, or did you always envision it as a stop motion movie?

Chris Butler: I did. I didn’t write it as anything specific. I had always intended it to be stop motion, I didn’t want to let that limit it, because stop motion is always limited by the number of characters, size of sets, and the scope of it. A few people said when they read the script that it read like a live action script, and I was like “Good!” that’s a good thing. I think people were quite surprised that LAIKA’s take on it was to keep pushing the boundaries. Rather than say “that can’t be done in stop motion”, they said “go further”. The idea of doing a zombie movie --it just had to be stop mo because of the tradition of Ray Harryhausen monster movies. I can’t imagine a better way of animating the undead than the skeleton fighting scene in Jason and the Argonauts.

SMM: Was there anything that you didn’t get to do in the movie because of time?

Sam and Chris: No.

Sam Fell: There’s nothing. We’re not disappointed by any of it. We pushed the bar, like he said, and then with the storyboarding we pushed the bar ridiculously. Usually, you come back a bit and then that’s still good, but actually we got the really amazing version.

Chris Butler: We saw a couple of deleted scenes. Not even wholly deleted, but changed. We saw some recently and we were like “ew, that was the right decision”. We weren’t forced to cut anything basically.
SMM: What was the most memorable scene that you shot?

Sam Fell: I think the third act. Both sides of the third act when he goes to meet the witch. On the terms of scope and scale and technical wizardry.

Chris Butler: I’ll tell you the flip side of the big spectacle was, there are a couple of scenes that are real intimate; just basically two characters having a conversation. It’s the kind of stuff that’s just very very difficult to do in stop mo, but I think because of the technical innovations and because we were brave enough to do it, we got scenes that are about real acting. Like proper movie acting, not characters going from posse to posse; it’s not wacky fun in your face. It’s like proper emotional acting and I think that is very challenging in itself just because of the nuance of it.

SMM: What is your favorite thing about stop motion animation?

Chris Butler: I love seeing handmade costumes. I don’t want to say that’s my favorite, because everything is my favorite. But that’s what I always love to see in a stop mo movie. Because the design of it is so a-symmetrical and seeing these perfectly handmade miniaturize costumes with a-symmetrical stitching. It’s just mind blowing, because you can see that someone handmade it, you can tell. CG is always trying to make something that looks handmade, and we get it for free because ours is.

Sam Fell: I just love the magic of it. It’s an inanimate thing and it comes alive.
SMM: Having been in the stop motion industry for a while, what would you say is the greatest lesson you’ve learned making these films?

Travis Knight: I think the critical thing is to not lose sight of what drew you into this. It’s very easy, when you work on a project for months, years at a time to lose sight of what was special about it to begin with. It’s an extraordinary thing to be able to make a living doing the thing that you love. I really feel that I am blessed. I’ve loved animation my entire life, and to actually have the opportunity to make a living doing it is a blessing. To have the opportunity to change the direction of this medium that I love, to take it beyond where it’s been, to really push the edges of the form; that is something I thought I’d never have the opportunity to do. It can be easy to get lost in the minutiae, and get so immune to all of it starts monkeying with your brain, and you think “oh there’s something wrong with it, I need to change it” or “that joke isn’t funny anymore”, or that emotional moment isn’t landing anymore. It’s not landing because you’ve seen it for three years, but it’s really a powerful thing that is coming from deep inside you.

SMM: Did you sneak anything funny into your shots that no one else would know?

Travis Knight: (Laughingly) you can’t really... You can do that on TV, but you can’t really do that in features. Too much is riding on it. But there are things; the crew really becomes a family. You see these guys and you see these puppets more than you see your own family. You spend so much time with them. Everyone becomes so much of each other’s lives. We bring so much of ourselves to it that it ends up filtering into the show, to the point that businesses on the sets are named after people who worked on the film. We name props after people. We’re kind of paying homage to all the different people who have contributed something to the film all through-out the process. So if you were to go through and look at all the different sets and the props and stuff, you’ll see people’s names and people’s contributions all over the place. It’s a tip of the hat and nod to all the hard work that goes in it and our appreciation for the people that put it together.
SMM: Did you ever bump your set while animating?

Travis Knight: Oh yeah. I’m like a bull in a China shop. It’s a nightmare. I’m probably not built for stop motion animation. I think the perfect stop motion animator is probably a very small person, with very delicate hands, and I’m not that. When I have a camera next to me and a light and this little labyrinth of stuff that you can’t touch, and you’re bringing in your elbows like a James Kirk painting posse and you’re trying to not bump anything, invariably you’re going to hit something. The great thing with the digital technology is that a lot of that stuff is salvageable. It used to be if you knocked a puppet over, that’s it; you got to start that over. You’re never going to get that back in place. Or if you bump a camera, or hit a light, or something goes out, or a set shifts because we work on a shot for hours, days, weeks, even months. Particularly in Portland where there is so much temperature fluctuation and moisture in the air. Those sets are fluctuating dramatically over the course of a shot. So you try to find ways to minimize that sort of thing, but sometimes it just can’t be helped and you just live with it and that’s just part of the process. But it is one of the great things about technology and digital technology in particular, is that with the frame grabbers, you know exactly what you’re looking at through the camera instead of having a tap on the side or having a tap that’s really crappy or having a little lens on the side or camera on the side that gives you that parallax problem. To know exactly what you’re shooting, takes away a lot of those problems that came with the old Mitchell cameras and a little video camera next to it. I thank God for those developments because technology really is our friend.

SMM: What software are you using?

Travis Knight: Dragonframe. It’s the best frame grabbing software I’ve ever used.
SMM: Which cameras did you use?

Travis Knight: They’re Canon 5D’s. On Coraline we shot with these crazy medical engineering things. They were not even proper cameras. I don’t know what the hell they were, but it was the best thing that we could find at the time to get the sort of range that we wanted within the scope of the image. By the time we shot ParaNorman, the Canon cameras were so good, the quality was so good. You know you just go to a camera shop and get a prosumer camera and you can shoot a stop motion feature. That’s what we did. We’re using stuff that you can download off the internet, software like Dragonframe or a camera you buy from a camera shop. It’s that good. That’s one of the wonderful things, a democratizing thing with technology. It allows people the opportunity to do stuff like this that’s on a high level without having to have this esoteric knowledge. The tools are readily available. That certainly wasn’t the case when I was a kid and learning how to do this.

SMM: How have you evolved as an animator from the start of your career to now? Do you look at animation differently now?

Travis Knight: Yeah, I think the more experience you get the better you get. You do things through a more critical eye. Your view of what’s important is different. I think starting out as an animator you want to do fun histrionic stuff, big broad animation stuff. But that’s not really what it’s about. To me some of the funniest things to animate are those things that are really subtle. Those things that where it’s character based, it’s very refined, it’s some of the hardest stuff to animate, but if you can pull it off and make people have an emotional connection with this steel and silicone doll, then that’s something, that’s a bit of magic. One of the great things about the experience I’ve had is the variety. I’ve worked in television where you’ve got to work super-fast, and you’ve got to learn to trust your instincts, commercials where you’re doing gigs that are 2-4-6 weeks at a time and you’ve got to dramatically shift from one thing to the next so the variety is huge, working in CG which gives you a different group of muscles that you start to exercise and look at animation in a different way because it’s not straight ahead. All those different experiences allowed me to have a very sophisticated view of animation. It filtered into how I approached the animation on Coraline, how I approached the animation on ParaNorman, and how I continue to approach what we do and what’s really important and how we can take this artform that we all love and really make it something beyond what people tend to define it as. All those things end up informing your point of view and it certainly is true for me. I would not be the animator I am today, I would not have the perspective I have today, had I not gone through all those different kinds of experiences.
SMM: What was the development of character movement like when translating the actor’s movements to the animator’s movements as a whole?

Travis Knight: Initially when you start on one of these things, the crew is really small. It’s effectively your key animators working on the thing. That’s the group going in there working with the armatures and working with the puppet department, developing the characters, figuring out the animation style for the film, and then we effectively create a bible. This is how Norman walks, this is the way that Courtney moves, this is how she shifts her weight; all the different things that exemplify aspects of their character. We collect all those things into a series of files that any animator can go through at any time and look through. You create something of a bible for every single animator that comes in. You show them the ropes and what the style is and how these characters are supposed to move. We worked with the greatest animators on the planet.

Everyone that works on these films is fantastic, but stylistically people might not naturally gravitate towards what we are doing. The skewed naturalism that we’re using for ParaNorman, which is an evolution of the theatricality that we had on Coraline, is extraordinarily difficult to pull off. It’s a really challenging way to animate, but I also think that if you can pull it off it really does deepen the emotional connection that people have with the characters, because they see them as real people. It’s really hard to animate that way. You can’t just shoot like a 24 frame hold and just sit back, you’re constantly moving, even if it’s just a slight drift or slight weight shift. It’s really really hard to do. But it’s also really rewarding when it comes together. The way you try to minimize the fluctuation between the different animators and what they do is you cast animators just like you would actors, because that’s really what they are.

Some of our animators are really great at really subtle stuff so you put them on the kind of heavy emotional stuff because you know that they can pull that off. Other animators do big action stuff, some animators are good at everything, some animators do creatures, some are really good at physics. You try to put them in the part of the film that best brings their talents to life. One of the things we started to do on Coraline but we really embraced on ParaNorman was that we give animators entire chunks of the film. They basically own sequences. Some of those sequences can be 4 minutes long. So you’re sitting there watching one set of hands through that entire thing. By doing it that way you really get a unified sensibility. Those animators know their sequences inside and out. They know every single thing that needs to happen, and they probably know it better than the directors.
They know when to hold back some in reserve because that will lessen that moment later in the sequence. You really give animators an opportunity to know everything about their characters and their sequences and to really bring those things to life in the best way. And I think because of all those different things the animation on this film is probably the best animation I’ve ever seen on any stop motion film ever, and it’s consistent. I mean there’s always fluctuations from animator to animator, but even within an animator you can have an off day and not give it your best performance. There’s shots in there that I’d love to reshoot, there always is, “I wish I could change that, I wish I could do that”. But the performances are really extraordinary and I think it shows what stop motion animators are capable of doing. It’s not this clunky little form of animation that should be marginalized.

It really is a vital form of filmmaking that can be used to tell a story in a beautiful and magical way. I’m just extraordinarily proud of the work that the people did on it, and it’s a wonderful thing to see it all come together. We had these ideas about how we could make this thing better and to evolve it from where we came from on Coraline, and it worked and I’m really pleased with that.

SMM: The animation in the film was so smooth and meticulous. What were the challenges with that?

Travis Knight: The fundamental process is no different from things I’ve been involved in and certainly no different than Coraline. You don’t want to reshoot anything. It’s time consuming, it kills the budget, and it takes up resources that other animators need. It’s not like CG where it’s a virtual asset. Stop motion is a real thing. If one puppet is on one set, that means that that puppet can’t be on another set, and if you are using that set or that puppet and you have to reshoot it, that means those things can’t go to other parts of the film. So you really want to minimize the amount of reshoots, and we hardly did any reshoots in the entire film. The general progression is you block a shot out shooting on 4’s or 8’s to basically work out the choreography in the lighting and the staging and everything. You get briefed from the director, you shoot the scene in a rehearsal shooting on 2’s or 4’s, usually on 2’s, but trying to get through as quick as you can. Then you get briefed by the director in editorial and then you shoot the shot for real on 1’s. So you kind of get three stabs at it to get it right. In a perfect world, it works that way. That tends to be the case when animators come on board that haven’t been on the show for a long time. Some of the more green animators go through that process. But there is an improvisation quality to it. There is spontaneity to it.
You can plan out a shot heavily which is what I do when doing a shot. But you’ll get out there and sometimes the puppet won’t do what you want it to do. Or there will be something that gets in the way and you can’t move the puppet in that way, or maybe you’ll just have a better idea, “Hey you know what, if I did this the shot would be even stronger”, and you shift gears kind of mid-stream. And that’s one of the things I love about stop motion. It really truly is a performance art. You start one place, you end another, and in-between all manner of things that take place will change what that performance is going to be. It’s life, it’s in-between the start and the end. The animator’s mood, their personality, what’s happening with their day, if their back hurts, any number of things can effect what’s going to happen in a performance. I really do think it gives it a humanity and it gives it something that you don’t find in other forms of filmmaking. That’s not to discount other forms of filmmaking; it’s just what makes stop motion unique. Reshoots will kill you so you have to try and minimize the ingredients that go into a shot that would cause that to happen. But in the end there are mistakes all throughout the film. There are things that I did that I wish I could change. But that’s also part of the humanity of it. Again, it’s why these things are so special. You can’t go back through and later tweak a little curve, or go back and redraw a drawing. It’s baked in. But that’s why it is beautiful.

SMM: How do you juggle your position as CEO, Producer, and Lead Animator during a production?

Travis Knight: It’s a strange way to live your life, there’s no doubt about it. But this is where I was meant to be, this is where I needed to be, and I’m in exactly the right place in my life. I do have two parts of my personality and mind: the artist and the more analytical side of myself. It’s about finding a balance, and it’s been something I’ve been doing for a long time. Over the last 10 years it has been the artist finding his inner executive. The interesting thing about it is that being an animator trained me for this job of being an executive because on a smaller level, an animator has got to focus on the most granular detail which is the frame their working on, in fractions of inches, but they have to be able to see where this fits within the context of the shot, and then where the shot fits within the context of the sequence, and where the sequence fits within the context of the film. It’s not all about doing the money shot. Every single thing has got to be a glorious shot. To be able to dive in deep and then pull yourself out and see the bigger picture, where we are taking the company as a whole. I really have found that doing both jobs has made me better at the other and there is nowhere else I’d rather be.
SMM: How was your experience on this movie?

Travis Knight: It’s been a long ride. We started developing the film when we were part way through Coraline. Chris Butler approached me with this idea he had for a zombie film for kids, and I was instantly intrigued. I was the kind of kid that grew up on a steady pop culture diet of George Romero zombie films and Ray Harryhausen creature features, and the idea that we could bring these things to life in this medium, I thought it was really exciting. But that’s not enough to sustain a movie, so we started to dip into what does that mean, and it was a very special story that I thought needed to be told about this kid who was kind of a misfit, an outcast on the fringes of his society because of who he was, but who had something extraordinary that he could contribute that would bring his community together. I thought Norman’s story had an ingenious connection to all of us, the people who do this, the artists who are bringing this story to life. In a lot of ways his story was our story. All of us were pretty much weird kids growing up. We were kids who were picked on or kind of strange or were kind of on the fringes of our groups, but all of us had unusual and special gifts that we could contribute that to the world, that could enrich the lives of those around us. I thought it was a really beautiful story and a beautiful story that we could tell in a very fun way.

SMM: You founded LAIKA as a stop motion studio. Why did you choose that path?

Travis Knight: It’s basically one of the first visual effects ever developed in cinema. It’s been around since the dawn of film, but we wanted to take this creaky hundred year old art form into a new era, and we did that by incorporating technology and CG and other tools to re-invigorate this old art form. In the late 80’s and early 90’s with the ascendancy of CG, a lot of people thought stop motion was basically dead. Steven Spielberg was going to do Jurassic Park with stop motion dinosaurs until he saw tests from ILM where they created digital dinosaurs. We all thought that was pretty much the end [of stop motion]. Phil Tippett had been hired to do the stop motion, and there’s a famous exchange that they had where Spielberg said “You’ve just been fired”, and Phil Tippett said “I’ve just become extinct”. That was kind of the feeling that we all felt when the whole world went to this new digital platform, with stop motion left behind. But there is something magical about it. It has its own kind of distinct magic.
It has warmth, a charm, and a beauty that’s unlike anything else. It’s not to discount other forms of filmmaking, it’s just to say that in a digital world, the idea of still making things with your hands is something I think is still very special. To see on the screen the artist’s hands at work I think it is a really beautiful thing. You can see and you can feel that. It’s not a visual representation of a binary code or a computer. It’s an actual artist who has brought this thing to life and there is something very beautiful about that, and it’s still a very effective way of telling a story.

SMM: As an animator and the head of a company, can you tell us about the technological changes that have happened from Coraline to ParaNorman?

Travis Knight: At the core of what stop motion is, it hasn’t changed in 100 years. You still have an animator with a puppet with an armature inside it, on a set, with lights and a camera, taking one frame at a time. What has changed is the stuff on the fringes of it. I thought at the time that Coraline really did represent a systemic shift in what we did with in the medium. It had been kind of creaky and hadn’t evolved too much. When we decided to bring technology into the mix, it opened a whole new world for us that allowed us do really interesting things with an old art form. We used digital 3D printing technology on Coraline. We had never done it before, and we were just figuring out how to do it. On ParaNorman, we built on it and took it beyond what we ever could have on Coraline. We integrated color 3D printing, which infuses the faces that we make in the printer with color and texture. Those used to be painted by hand.

There’s only so far you can take the designs. Now we can pretty much do anything, and because of the materials we are using, the skin on the puppets really does absorb the light in a more naturalistic way. There’s a scene where Norman is standing in front of the setting sun and you can see that his ears glow, and that’s because of the materials that we are using which feel more like skin. His hair is made out of goat hair, because it had the exact quality that we were looking for. The trees are made out of cardboard and shredded paper and chicken wire. We use whatever tool makes the most sense. If there’s something that we want to do doesn’t exist, then we have to invent it. We’ve done that for each film. By continuing to grow and expand what we can do, we just become that much more ambitious. Coraline was a fairly small film in terms of its scope. ParaNorman was much much bigger, and we tackled things that you’re just not supposed to be able to do in stop motion. But we didn’t want that to get in the way of us telling the most effective story. We’re getting better at it, and our ambition for what we want to do continues to grow.

SMM: Can you talk about the tone of the film?

Travis Knight: We’re heavily influenced by classic Disney fairy tales of the 40’s and 50’s, like Snow White, and Pinocchio. Those fairy tales had a terrific and perfect balance of darkness and light, of intensity and warmth. But those are not the films that Disney makes anymore, nor are they the film that any family filmmaker makes anymore, for the most part. The movies from the 80s that inspired us that we all grew up loving, like The Goonies, and Ghostbusters, and Gremlins: I think you’d be hard pressed to find a way to make those these days. It’s a shame because I think that those are the most powerful kinds of films. They have balance. To have that kind of dynamic range in a film, I think, is the most powerful kind of emotional experience you can go through in the cinema. You can’t have a light moment without a dark moment to offset it. I think that gives those light moments a kind of euphoria you’re not going to get otherwise. So we wanted to make sure we didn’t flinch from those things when the story demanded it. To really get to the emotional core, the story demanded that we go to an intense place or a dark place, even though it was a little scary for us. It felt right for the story, it felt like it was something that we should do, and that would be the most effective way to communicate what we were trying to do. So we didn’t shy away from it, we just embraced it. That’s what this story is, and that’s the story we wanted to tell, so that’s what we did. I think it’s not without risk, and I think with full acknowledgement that these sort of films are not generally made anymore, but these are the films we love to make, and these are the films that we think are going to have the greatest emotional resonance with the audience.
SMM: Can you talk a little bit about the aesthetic of the film and why Coraline and ParaNorman look completely different?

Travis Knight: At LAIKA we don’t want a house style. We don’t want to repeat ourselves visually. Coraline looks very much like a Henry Selick film because he is the artist behind it. He was the drive and creative force behind it. But ParaNorman was a different kind of film. Coraline was a dark modern fairy tale; ParaNorman is kind of a quirky coming of age adventure. It demanded its own aesthetic; it demanded its own look. We wanted to find something really unique, an interesting way to bring this story to life, and so we found a character designer straight out of school who had never done anything. But she had this idiosyncratic way of looking at the world and that was kind of the root of where everything came from. She had a strange, nervous line quality to her illustrations and everything was kind of askew, but very well observed. That ended up informing our environmental design and we built on that.

SMM: What kind of materials did you use to make the Norman puppet?

Travis Knight: Underneath his body he has a steel armature, which is like a little metal skeleton inside, which allows you to kind of position his body and it will hold its place, and you pose him. These puppets take a lot of abuse over time. You put them in all kinds of wacky positions. So those things need to be really strong, but kind of flexible and refined enough to get subtlety out of them. He’s covered in a silicone skin. He’s got real handmade and hand sewn clothing that was designed by a costume designer who makes these tiny little clothes. That’s tricky, because you have to get fabrics that hold up on the big screen. He wears denim jeans, but we couldn’t use denim for his jeans because the thread would give the scale away; it would be huge on his little body. So you have to go and find very fine materials that you can then screen and paint to make them look like denim. His hair is goat hair and it’s got little bits of pros-aide. Courtney has synthetic hair, but it also has raffia and paper in it to give it a graphic quality.

SMM: How did you keep track of the hundreds of little pieces of dirt in the graveyard scene that you animated?

Travis Knight: You keep all that stuff in your head. I think people can kind of understand that it’s a physically demanding thing to stand on concrete for hours on end, and contort your body in all kinds of weird positions and cut your fingers and everything else. People understand that it’s a physically difficult thing to do. But probably more than that it’s really mentally taxing and demanding, because you have to focus on tiny bits of detail for hours and hours on end. It’s intense focus, so when you have dozens and dozens of little tiny pieces of dirt that have to fly in the air in a choreographed way, at any given time you could bump it with your pinky or something and they all fall over and you’ve got to start again. You keep track of it with the kind of software programs that we have where you can look frame to frame where everything is going, but you’ve got to keep all of it in your head. Typically what you do is come up with a routine, “Ok, I move this first, I work my way around kind of counter clockwise, I come up here.” You kind of keep a little mathematical diagram in your head and you just continue to do that over and over until you get the performance. It is painful, it’s horrible. But if you do it right I think it’s also pretty beautiful.

SMM: Why is LAIKA in Portland, Oregon and not in Los Angeles, California?

Travis Knight: It’s where we started, it’s where I’m from, and it happens to be a perfect place to do stop motion. When it looks like this outside (points outside to gorgeous sunny day in Beverly Hills) who the hell wants to be in the dark playing with a doll all day? In Portland you look outside and its grey clouds and rain, it’s like “what else am I going to do?”
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SMM: Can you tell us a little about your position as Creative Supervisor of Puppet Fabrication?

Georgina Hayns: I supervise a team of between 60 to 90 people depending on the size of the project. From my standpoint I creatively supervise the fabrication of those puppets. So I am the link between the director’s vision the illustrator’s drawn image, and the head of animation, and Travis, the head of the company. I am the liaison between them and my team to make the most articulated, performance heavy puppets that we can for the build we have to make. My history in making puppets goes back 20 to 25 years at this point, back to college days when I got a work placement at Cosgrove Hall, a TV animation company back in England. I got to know the puppet making department there and they became Mackinnon & Saunders, which is a company highly regarded in stop motion animation. I got my training with them. I worked with them for about 15 years and worked in everything from sculpting, mold making, costumes, hair, and then specialized in armature work and it allowed me to get a general understanding of the whole process of stop motion animation. Then I was lucky enough to work on Corpse Bride on sets as a lead maintenance person, so again hosting every step of the process. Then I came down to LAIKA as the head of fabrication on Coraline. I’ve always had my whole career based towards highly skilled crafts, and I use every part of that.

SMM: When looking for materials do you go out on field trips to the fabric shops?

Georgina Hayns: Deborah, our costume designer, and one of our costume people would generally stay on the West coast. We know what all the local stores have, but we’ve gone down to L.A., and we also go down to San Francisco. Depending on the project, if we don’t find what we need there we will do a trip to New York, but generally we manage to get most of our stuff from L.A. We’ve got all the fabric houses in L.A. and we know what they do now and I think a lot of people think we go out and have fabric made especially for this scale. The invention of Lycra made our day really. Fine cotton, shirt cotton, you can actually get four way stretch cotton now. So they are the sort of fabrics we’re looking for. Very fine scale but with a Lycra in them so they can animate. So on the surface it just looks like a normal fabric but you can pull it and it stretches each and every way.
SMM: Were the puppet maquettes designed using Super Sculpey Firm or Gray Chavant?

Georgina Hayns: We work between the two materials but it was mainly Sculpey, because we can bake them afterwards. Kent Melton works mainly in Super Sculpey, and we are so fortunate to work with Kent. He’s probably one of the best maquette sculptors in the world. He retired from animation a few years ago, but he has an absolute love for stop motion, and he loves LAIKA so he comes out of retirement for us on each project. I think he and Heidi Smith had an incredible relationship from the start and were able to communicate. She was in the same room as him while he was sculpting her designs. They worked really well together.

The maquettes are beautiful and it’s interesting because Heidi did these amazing designs and then Kent sculpted these incredible maquettes and that’s where I come into it. I see it all the way through and I think, “Oh, how are we going to make that”, but that’s been one of the really fantastic challenges on ParaNorman. We as puppet makers didn’t put any restrictions on the designs. We decided that everything that the team had learned from Coraline would help us enable the fabrication of designs that had never been made in stop motion before. So we really went to town on the challenges of big necks and big limbs and round short bodies and we overcame it with knowledge of materials and armature building and miniature gears and things like that.

We were really lucky. We’ve nurtured a team of people here up in Portland. I would say it was 70% of local talent who had either worked with Will Vinton way back or are just classic artists or people in Portland whom we’ve taken or nurtured into making puppets, and then there’s a small percentage of people like myself who’ve come in from Europe or England who’ve been in the animation industry in television or commercials, and then there’s the San Francisco and L.A. contingent that have come up from live action or Nightmare Before Christmas, or James and the Giant Peach days. So it’s interesting, because on Coraline it was all of us getting to know each other and working out the way we wanted to build puppets at LAIKA. There was a lot of conflict and resolution on Coraline to get the process up and running, but that was the wonderful thing when ParaNorman hit us. We have a crew of people, we had a process and it enabled us to overcome more interesting issues like, “how are we going to make this puppet?”
SMM: You guys have revolutionized the face replacement technology because you are using a color 3D printing method that give a slight transparency to the skin.

Georgina Hayns: The color printing technique has blown all of us away. I’ve worked with mechanical facial animation in stop motion for many years and we were always limited by how much we could stretch. We were always able to get a little translucency on the skins of the faces but then underneath those faces you had to but a big lump of metal and a joint. So when on Coraline they came up with facial animation and rapid prototyping technique it blew our minds, but still we had these limitations because we had to paint all the faces. You couldn’t get that lovely translucent texture. So yeah, the color printer has been amazing and the material really matches the silicones that we use for our necks and our hands. Now we have fully articulated armatured necks and faces that can do anything. It took our painting to another level. It’s interesting because on ParaNorman, all the human characters were done with replacement facial animation and then the zombies were all mechanical, and there was always the worry that they would look like they were from two different worlds. But because we were using the color printing, we were able to get the level of sophistication with the paint on the replacement faces like we were able to get on the zombies. They are from different worlds because we’ve got zombies and humans, but they totally blend into the same film and same stylistic look, which has been great.

SMM: How long did it take you from design concept to actual working puppet?

Georgina Hayns: ParaNorman presented a lot of challenges. We generally say about three months to build a puppet from the end of design. On ParaNorman, it went from 3 to 5 months depending on the complexity of what we were building. Puppets like Neil, the little short guy who had no neck and a ball shaped sort of body with a belly that needed to move. It would take up to 5 months to get the first puppet off the shop floor for animation testing. And the Judge would be the same; he’d have so many things we’d have to figure out and the costumes were so elaborate. Background characters generally take 2 to 3 months for the hero puppets. There were duplicate puppets of course. We can turn them around in about 6 weeks per duplicate.
SMM: Did you use real hair on all the puppets or just on Norman?

Georgina Hayns: We used a mixture. I think with Heidi’s drawing we took the technology we learned from Coraline with the hair, and then we took it to another level with creativity. A lot of the hairstyles didn’t need to move. Mitch has a crew cut. Norman is just scared of life so his hair needs to be static, so we use goat hair on Norman, and then on the secondary characters we used a combination of synthetic hair. We don’t use human hair, it is really not that friendly, and it doesn’t want to do anything. When it’s curly it curls and when it’s straight it’s straight. That’s why we’ll use synthetic hair because we can manipulate it with heat, with tools and gels and things. But we do use mole hair and goat hair.

SMM: Do you cut down the chatter of the hair with Hair Sprays?

Georgina Hayns: Yeah, we use a lot of natural gels that are on the market, and we use glues. The glues work better but then we have to dull the glues down, and with that comes the problem that they are not constantly sticky. We had problems on Coraline, especially when her hair was active, so we had to keep it quite sticky and then it would pick up dust and everything. On this one it was a combination of products that are out there. Along with the actual strands of hair, interlaced into that was paper.

We found fine fibers of paper and raffia, and that was not so much a product to make up the hair but it was more to break up the line to give it the Heidi look. She would always draw everything with a pencil so the line would always go from thick to thin in one drawing line. So we wanted to make sure we kept the thick to thin. So yeah we would put actual strands in between the hair, and I think that’s why it looks really good. It’s very textural and you can see shadows.
SMM: Having seen some of the behind the scenes images of the facial armatures for the zombies, I was really impressed with the designs and methods used. Could you tell us about them?

Georgina Hayns: We had quite a challenge with the Judge. The great thing with the zombies is that they don’t talk, and they are grown so we didn’t have to overcome the age old lip sync problem with mechanical heads. But the Judge is so important, and he delivers I think just four lines in the movie, but those lines had to be as convincing as Norman. So we went to town on his head with mechanics. We had an incredibly talented armature maker (Patrick Zung) who came from the East coast. We found his work and went, “Hey you want to come with us?”. He took on the Judge. He really went above and beyond. I’ve worked with Mackinnon & Saunders for years making head mechanics, so I talked him through our process and then he took it a step further because he wanted to be able to manipulate and distort the skin like you can in facial animation. So he was actually compressing the silicone with joints and gears.

The Judge alone has three gears in his head. There is a tiny pin gear that is accessed through his hair line and one below his jaw, one to pull a smile and a frown on the right side of his mouth and one to do the same thing on the left side. I was counting up and he must have within his head around ten to fifteen articulation points. The eyebrows are articulated so that the center bit could be pushed down, and then the eyebrows could move themselves, and there are mechanical eyes in there and tiny little paddles. When it came to animation they actually used the same breakdown method with the face shapes that they do in rapid prototyping and just applied it to the mechanical animation. So the animator had those mouth shapes broken down before he went into the scene. That’s why it works so well with the replacement characters. Anthony Scott shot those scenes with the Judge talking, and the first time we saw that shot come into rushes in the morning it blew my mind. I’ve never seen facial animation on a silicone head look so great.
SMM: What kind of silicone did you use for the bodies?

Georgina Hayns: We used a lot of tin silicone. We don’t use any of the Dragon Skins. When I first came to America there was a real trend to use the Dragon Skin Silicones because they are for the film industry and they have a much higher tear strength, but they are very hard to control. So we went back to what we were used to working with on Corpse Bride in the past, the GI series. We start off with the GI-1000 base and actually discovered a new silicone for all the necks we did on ParaNorman, but for the larger fat necks. It’s a much softer silicone, it’s pretty amazing actually. It’s a little bit like those toys that you get that look like alien slime. We experimented a lot. What’s been amazing for me is that we’ve worked with silicones for years, ever since I’ve been involved in the industry, and really there’s never been interest enough. It’s the cosmetic industry and the manufacturing industry that really comes in. I think they (the manufacturers of silicone) have suddenly realized, “Wow, look at this application of our silicone”. So we finally had one of the big heads of Silicone Inc. come to our studio to see what we’re doing and they said, “Wow, we are open to working with you guys and experimenting to see if we can make things that will help your process”. It was cool and amazing to be recognized by such a huge company.

SMM: I wasn’t aware you could make puppets using GI-1000.

Georgina Hayns: Yeah, GI-1000 and GI-1110 were the base silicones that we used for a lot of our puppets, for hands and things that need to withstand more wear and tear. The bodies of our puppets are mixed media. We still use foam latex, because of the softness and the movability, so often we’ll double cast our puppets. We’ll do a foam latex base over the armature and then we’ll trim back the foam latex and then we’ll cast silicone over the top. So you get a beautiful skin like surface but you’ll have the softness that you’ll need around the joints for articulation.
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SMM: What was it like to translate an actor’s performance to the animator’s performance?

Brad Schiff: Our voice actors were really good, and I think a great voice performance gives an animator so much more to work with than a flat voice performance. There’s so much credit given to the voice actors that I think it’s a snub on the animators sometimes. We videotape all the record sessions and we don’t use it all the time, but there are times we use it. For instance there’s this scene in the back of the station wagon when the zombie was sitting between Norman and Courtney, and Courtney says something like, “He’s sitting on my side, uhhh...” And we watched (Anna Kendrick) and she did this great little gesture, this “uhhh...” with a head shake and a little nuance that you’d never would have gotten had you not watched the video reference, and Dan incorporated that into his shot.

We were lucky to have had great voice performances which allowed the animators to do great animation. There’s a scene where Courtney’s standing at the door talking to Mitch; in my opinion it is so spot on and so beautiful and so natural and unlike anything I’ve seen in stop mo. That is the perfect example of being able to focus and take every bit of your energy and put it into the performance of the body because you don’t have to worry about the face because it’s already done.

Interview with Animation Supervisor
Brad Schiff
SMM: Are there any new techniques that were developed during the making of ParaNorman?

Brad Schiff: I was talking to somebody the other day and they said, “How does the animation keep getting better and better?” Part of it is the fact is we do these replacement faces now, so before you do the shot you meet with a facial animator and you go over the facial performance of the character and the directors buy off on it. So it kind of changes the way you approach and think about a shot, because once you get on a stage, the face is already taken care of and it’s just plug and play. You’re never worried if you’re going to be able to hit a certain expression or if you’re going to hit it on the right frame, or “I hope I have the head in the right expression so that ewww shape reads”, because it doesn’t read from any other position except that. You don’t have to worry about that can really focus on the performance of the body. We’ve had people that have been doing the most beautiful naturalistic stop motion that’s ever been shot, on this film. I think this is a big reason why.

SMM: What were the challenges of shooting in Stereoscopic 3D?

Brad Schiff: I remember before we shot Coraline everybody was concerned about the triangulation, and if it was going to look right. Our default eye is really the left eye (when previewing animation), and then the camera moves over and shoots the right eye and then goes back to the left. So we’re animating to the left eye. I remember everyone was concerned with if it was going to look the same? Is the animation going to be smooth on the right eye? Is it going to be as perfect? You don’t even notice. It’s totally fine. The biggest challenge with 3D from an animation point of view is just the time. Just those extra few seconds, and depending on the exposure you know it could be an extra 30 seconds for the camera to move over and take the other eye. It just sort of leaves you sitting there sometimes on longer exposed shots because it takes twice as long to take a frame. Depending on the animator it’s quite easy to get taken out of the zone, because it’s hard to get into a rhythm sometimes when it takes so long to shoot a frame.
SMM: How did you hide the tie down holes?

Brad Schiff: They’re fixing it in post. On Corpse Bride, most of the sets were gray and they gave each animator some gray clay to fill the holes. On ParaNorman, we didn’t have to fill holes. It’s just a pain in the ass and you can just forget it, since it’s just as easy to shoot a clean plate for them to do it in post.

SMM: Did you get to push any puppets?

Brad Schiff: Yeah, I was able to get in there and get my hands dirty a little bit, like when they rode over the zombie in the van. From the time they hit the zombie and get out of the van to when they get back in the van, I did that whole sequence. I animated that whole sequence with Mitch picking up the zombie (head) and it opening its eyes and drop kicking that thing.

SMM: That was an awesome shot!

Brad Schiff: It’s funny because I found some great super slow mo of a collegiate football punter. The whole joke is “did you see that I kicked it a hundred yards?”. So he really had to look like he was kicking the shit out of that thing. Mitch had such tiny little short legs, and when these guys kick the ball at the peak, their foot is past their head almost. So when I did the rehearsal I put his leg all the way up like it would be, except it went to his chin. It doesn’t go above his head; it just goes to his chin. And the directors looked at it and they’re like “It really looks weird; Maybe you could not go as far. I convinced them that it would look like shit; it would not look like he was kicking it a hundred yards if I held back. So they let me go for it and I’m glad they did because I think it really worked in the end. I also did the chunk when Mr. P comes back from talking to Neil and Norman, and he walks into his apartment and he croaks and he thinks he dies but he doesn’t die and then he dies.
SMM: When you were animating that scene you had to do two separate passes, right?

Brad Schiff: I think I did three separate passes. We shot him on the real set; basically the whole time he is alive we shot him on the real set. For the two passes where he was a ghost, we took the walls off the set and shot him on the real floor in front of blue. Then there was a third pass where he sticks his hand through his body and kind of wiggles his finger around and says “Aw nuts” and realizes he really is dead. Having to animate while supervising was probably the biggest challenge. I spoke before about getting into a rhythm or a zone with the 3D.

As a supervisor I sit in everybody’s editorial sessions, so I spend half of my day in edit and another quarter of my day visiting my guys talking to people: “Hey Brad would you come and look at this?” And another part of the day sitting in meetings, and then I’m expected to finish shots. So I walk onto my set and animate a frame and I’ll get called to edit. Maybe I’ll get two frames done and then get called back to edit again. There is no zone and no rhythm to do shots. I found it incredibly difficult to try and get a good performance. That was pretty tough. Every time I walked back in, I’d have to watch it a few times and try to get my head back in. Especially the sequence with the dead Mr. P flouting around. He was on this insane rig with all these different axes, so every time I had to kind of remember where I was an hour ago, or two hours ago, or five hours ago.

SMM: Did you have the mouth reads on paper charts, or was it all in the computer?

Brad Schiff: There’s been talk about just having it in Dragon, but they print it out for us. Who knows, maybe the next generation of stop mo guys will be so used to the Dragon x-sheet that they’ll just do it straight in Dragon. We had them all printed out cause we all draw on them. You bring your x-sheet into editorial and take notes where the directors want certain things to happen.
SMM: How’s the transition from having been an animator for years to becoming an Animation Supervisor?

Brad Schiff: It was challenging, because all of a sudden you go from being everybody’s peer to being everybody’s boss. That set up its own set of challenges. Everybody was pretty cool about it, but it certainly took some adjusting. As an animator you know what’s expected of you and you know what to do. Every week you can look at the big board and you see what you’ve got. It’s like “Ok, I have these 6 seconds” or “these 5 shoots I have to get done this week, or these 3 shots I have to get done this week”. At the end of the week you press play on your frame grabber or you roll into the theater during weeklies and you see what you’ve created that week, and you’re exhausted but it’s incredibly rewarding. As a supervisor, at the end of the week I used to come home at times and I’d say to my wife, “I’m so tired, but I don’t think I did anything this week”, (Laughs). I didn’t have any substance with which to judge what I had accomplished. It’s not until the end of the project that you really kind of see all of that come together, where you’ve had all of your guys who have overcome adversity. The expectations are so high at LAIKA and everybody around you is doing the best work you’ve ever seen in your life. It can be pretty intimidating, and confidence is everything when you are doing this stuff. From time to time people tend to lose their confidence and it’s my responsibility to try to make sure they get it back.

SMM: Travis Knight said that you guys would block out a shot animating on 4’s or 8’s, then do a run through the shot on 2’s, and then a final take on 1’s. Is this a standard practice in the field or is this something that only LAIKA does?

Brad Schiff: It seems that it’s something that’s common practice on feature films. We never did it on any of the television shows. On television shows, you get your direction and you just go for it, and unless there is something horribly wrong with it, they’re buying that shot. But now the level of animation is so high, and you’re there to make the film the directors want to make, and so the blocking fase gives them the opportunity to see the process that you’re thinking about doing and comment on the lighting and comment on the frame. Then you do your rehearsal on 2’s, which gives you the time to rehearse your performance and also for the directors to give some last minute tweaks. It also gives you the opportunity to show the director “this is what I’m thinking of doing in this performance”. Sometimes they’ll say, “That’s great”, other times they’ll say “why don’t you just leave that part out”. Then you do your shot. You have to do these runs because unlike CG, in stop motion it is a performance and you can’t save a version and come back to it and tweak this and tweak that. If something’s not right, you have to start all over. Sometimes you can cut back but all your previous work is deleted, it’s not a minor tweak. It could mean days of work down the drain. To block it and rehearse it gives everybody from the directors to the animator himself the confidence to know where you’re going with the shot.
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Interview with Director of Photography
Tristan Oliver

SMM: When did you start your career as a Director of Photography in stop motion?

Tristan Oliver: I was a child really. I’ve been doing it for about 25 years. So I was pretty young and was in my early 20’s when I started. I got a break with Aardman in the days when everything was relaxed and casual and I knew a couple of guys there, and I just rang them up to borrow some lights one day for a promo I was shooting and they said “do you want to come and shoot a commercial?” and that’s how it all started.

SMM: How did you start working at LAIKA?

Tristan Oliver: My contact on ParaNorman was Claire Jennings, who had been producer on Curse of the Were Rabbit, which is how I knew her and how she knew me. She connected me with Chris Butler because she needed that relationship to work obviously before they offered me the job, and I got on with him very well. Then Sam Fell came on the same time as I did, but I had known Sam for 20 years. I’d worked with him back in the early days of Aardman, when he was even younger and thinner than I was at the time.

SMM: How does it feel to be one of the most recognized DP’s in the industry and to have done so many films in stop motion?

Tristan Oliver: Well it’s been great. The funny thing is these damn films take so long. It’s taken me 14 years to shoot 4 movies which is a big chunk of life really, and there are very few people who do what I do at the level I do it. And I guess there are two or three of us right now and at any one time, probably one of us is unemployed. You’re chasing a tiny amount of work. Someone asked me the other day if I’d be interested in participating in a training screen for stop motion cinematographers and I said, “No, there’s quite enough already”.

SMM: What kind of cameras did you use on ParaNorman?

Tristan Oliver: Canon 5D Mark II.

SMM: What kind of lens packages did you use?

Tristan Oliver: Over the course of the movie pretty much every size came out of the box. They were all Nikon lenses that I sourced out of London because I couldn’t find a supplier in the States who could do the whole package for me. So I went to this funny little old fashioned company in London who had also done my lenses for Fantastic Mr. Fox and provided the lenses for The Pirates! at Aardman. They’re a specialist Nikon supplier and they are able to make manual focus lenses. So you’re looking at the top end of the second hand market and they go to Japan and purchase there. They put a set together for me which ran from 15mm to 200mm, but I would say on average this film shot longer focal length wise than you would normally get on a stop motion movie. It was more telephoto than you would normally have, which is great because I very much wanted to work with a shallow depth of field and with a tighter look on it.
SMM: The 3D Stereoscopic looked as if it wasn’t as obnoxious and in your face as other 3D Stereoscopic films, why is that?

Tristan Oliver: It was a decision we made from the beginning. I drew about a stereoscopic script for the movie and I never wanted it to be so strong that you felt ill. Because when you go to a 3D movie you often see people looking at the floor and that’s because they feel nauseous with the 3D. I simply didn’t want that. I wanted people to be looking at the screen. I think 3D works for stop frame when it enhances the reality of the environment; it makes you feel as if you are looking into a real world. I tended to keep everything behind the screen except for the odd zombie funky moment where it comes through and everyone goes “ewww”. I never wanted to feel ill myself so I kept stuff throttled back, and Sam Fell was particularly sensitive to it as well, and even stuff that I thought was subtle he would sometimes take his glasses off and rub his eyes and say “we’ve got to reign that back a little bit more”.

It’s an enhancer of the space rather than a funky effect for me, and that’s how we played it. The other thing is if you work with the 2:3:5 aspect ratio, if you’re working in cinemascope as we did, it becomes much harder to relieve things from the edge of frame, and what you need if you are going to bring stuff out through the screen and into the theater is you need stuff to be free of the frame, and that’s much easier with a squarer format. So Coraline for instance shot 1:8:5 and it’s easier to free stuff top and bottom but in 2:3:5 it’s such a mail slot look; stuff tends to be cut through top and bottom of frame and you can’t bring it outside of the screen plane because it looks as if it’s disjointed and stretched out of itself. There are practical considerations to doing the aspect ratios as well as artistic considerations.

SMM: There are a few shots in the films that have an amazing depth and look to them. How did you achieve this dramatic cinematography?

Tristan Oliver: We had a number of shots in the movie where we shot on swing shift lenses, which is a lens that pivots around half way along its own length. The focus can then be confined to a very narrow band in the image. We referenced a movie called George Washington, which is a little indie movie about some kids.
We very much liked how they shot those kids in their environment and whenever you had an intimate moment with the kids they used this shifted focus look, and I was quite interested in using that to isolate Norman within various points of the movie. I was keen not to overuse it because suddenly since we made that decision it was in every commercial you look at. We didn’t want to feel like we were on that particular band wagon, but we did use it at specific points through the movie just to keep him alienated from his environment and to show that he was a lonely little boy with in that space. And that was one of those and it worked extremely well. You can’t move the camera while you are doing it, it has to be locked off, otherwise it makes you feel ill.

SMM: How have you improved or changed over the years as a cinematographer?

Tristan Oliver: The move into features enabled me to do things that I had always wanted to do. The fact is that you need more money more equipment in order to get certain looks and certain insight into what you are doing. So when we started on Chicken Run we suddenly had much bigger cameras to work with and we had the equipment that we had wanted for years. We were able to expand from a TV size world into a theater screen size world, and you have to think pretty hard the difference between small screen and big screen and how you justify how you’re using that size of camera. The other thing you have to learn is how to manage that number of people for that long. On Curse of the Were Rabbit and on Chicken Run and Fantastic Mr. Fox, we were running around the 35, 40 shooting unit mark. So at any one point in the day we had that number of cameras shooting stuff. At LAIKA I was up over 50. I have to keep an eye on the continuity of the lighting of the entire movie. I can’t conceivably put up every light on every set so I have other people working for me. I do a lot of hands on lighting because that’s what I love to do, but I also have to track the continuity and make sure every frame of that movie fits stylistically how the movie should look. So I’m not letting other camera guys go off and make their own movie within that space, which is often what happens in stop frame. As much as anything it was managing what other people were doing and setting a style myself that they could work to and also selecting those people who would work within those parameters rather than going feral on me and doing their own thing. That’s really what the job has become now. It’s kind of managing yourself split into a number of other people but still making sure they’ll do what you do.
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SMM: Was there much flicker in the filming?

Tristan Oliver: No, we worked out a long time ago what causes the flicker on digital camera and it’s the iris on the lens. A stills camera is designed so that when you take the frame, the lens shuts the iris and then opens up again. What you have to do is disable the iris so it’s completely manually controlled and the camera can’t speak to the iris and the iris is always open. Because of that it pretty much eliminated the flicker that was the bane of early stop frame shot on digital cameras. The adapter is the thing that sorts your problem out really. If you’re using a Canon and a Nikon lens, that simple kind of five dollar ring of steel stops the camera talking to the lens and that’s exactly what you want. If you use a Nikon camera you actually have to saw the tab of the lens, you have to physically remove it to stop them talking to each other. But it’s an easy fix on a Canon.
SMM: Was the little witch scene at the end very difficult to shoot?

Tristan Oliver: Bizarrely it wasn’t that difficult, because we used rapid proto-typing for the faces, so the faces were designed as a series of replaceable frames. They were designed in computer and then printed out as a three dimensional solid face with etching points on the puppet. So in terms of the head expanding and contracting and screaming and doing all that, that was just a simple process of replacing different heads. Inside the head I placed an array of LED’s that work through that vast geometry and movement range so that her head was illuminated from within. Printed into the texture of the face was that warping rippling flame effect that you see. That’s actually done with various thicknesses of the print in the rapid prototype printer. Most of it was shot on green and her dress and electrical hair were enhanced as a CG effect, and then we shot all the backgrounds separately and she was dropped into the backgrounds as a layer. I had to take multiple passes on the background with various lighting set ups so that the CG guys could map her in very accurately into the environment, so that what was happening against the trees or against the ground looked like she was doing it. It wasn’t difficult. It was laborious but technically straightforward.

SMM: Were there any practical effects in ParaNorman?

Tristan Oliver: It’s slightly harder when you’re working in stereo I think. The great thing about working in 2D is that you can shoot your background plate with organic effects like flames, rain, flowing water, and smoke, at 24fps on a live action camera. But when you’re shooting in stereo the way we did, you can’t do that. Because the same camera takes shots for both eyes, there is always a delay between the left eye and the right eye. So anything that has organic movement to it, like water, has moved on somewhat. It never looks right, it always looks very jittery. So most of that stuff was done as a post-production effect as opposed to an in-camera effect, which to me is a sad thing. That’s a disadvantage of shooting in 3D. But as much as possible we did stuff in camera. For me the camera work and vfx processes is one of enhancement, not one of fixing. They should never be fixing something we’ve got wrong; they should be enhancing what we’ve done right and making it better. We try to get as much in-camera as possible. VFX is an incredibly time consuming and expensive process, so you can’t rely on them to do stuff that you could do much quicker and better in a couple of hours. So as much as possible we do try to get it in camera.
SMM: Could you give us a breakdown of the street scene with Norman and the ghosts?

Tristan Oliver: That’s a biggie actually. That was a very very big shot. The street was constructed pretty much in its entirety at full scale. So the houses were somewhere around 5 to 7 feet high, and the street was getting on to 80 to 100 feet long. So the street was constructed and the camera move was worked out through the street using a very large camera rig with a huge beam that extended out of the front. It was a rig that we bought from Los Angeles second hand and it entirely fit the bill for that shot. So the street was set up, dressed, and lit beautifully and then we shot through on the street without Norman in it. It was just essentially a background plate. Then the entire street was removed with the exception of the sidewalk, and then that was painted chroma key green and a number of chroma key green screens were put up all around it so that as Norman walked down the street, he was always against green in some way, and his feet were on green.

The animation took weeks. It took 6 1/2 to 7 weeks to do that enormously long walk because he’s talking all the time and walking and the camera is moving around him. But that enabled the animator to get right up next to the puppet because all they had in the way was an 8 inch wide piece of sidewalk. So they could get all around the puppet without having to climb on and off the street set with houses. Obviously he was lit appropriately. If there was a tree on the set then a relevant flag was put in the way. If the light was coming between two buildings, then that was reflected in how he was lit. Then the CG artist put in all the characters. All of those ghosts are entirely CG created. There are no hands on stop frame animation in those ghosts at all.

They were built to his action. Then at one point the camera goes right around his head and as it goes around his head it goes in very very tight on his eyes, and that was actually beyond the physics of any lenses that exist on earth. So that little pushing to his eyes was enhanced in post-production. We did a digital zoom in just to get that size on his eyes. At the end of the shot the camera booms up over the town and you see right off into the hills in the background and that was done as a digital set extension. So the hill and everything beyond the end of the street is a digital construct. It works really well I think. It gives you the sense that Blithe Hollow lies as a small town within that wooded environment.
As the VFX characters were built and placed in that environment, there was a very long proactive process backwards and forwards as to how they should be lit within that environment and whether they give off their own light or whether they are affected by the light that is in that environment. We battled the backwards and forwards for months and months and months. In fact, that shot was one of the first we shot on the stage and one of the last that was finished by VFX. It really did take a hell of a long time to put together. The other thing about it is that the stereoscopic nature of the shot changes throughout.

It starts off quite flat, and as the camera travels around his head and you see what he sees, it becomes much deeper stereoscopically. So there’s a dynamic stereoscopic shift within the shot which we designed in order to give you some idea of this special world that only he can see. But again, although laborious, it’s within the limits of what we normally do, it was just significantly longer and logistically difficult. It wasn’t stupendously complicated. Much much smaller things are much more complicated. Trying to get a miniature mobile phone into someone’s hand and make sure it lights his face; that’s technically far more difficult than shooting that huge ghost reveal that Norman was in.

SMM: Did you use a lot of practical lights?

Tristan Oliver: We used an awful lot of practical lights actually. I had a guy whose sole job was to wire up practical props with appropriate bulbs and luminaires, LEDs, and things like that. I spent a lot of time choosing what sort of light emits out. I love practical lights, they work to our advantage enormously, and because we use long shutter speeds, up to 2 seconds, we can actually light sets with a lot of tiny practical lights. That can work on occasion. In the interior of Mr. Penderghast’s house there’s a funky little string of fairy lights at the back of the room and they’re all real miniature fairy lights. A lot of the street lighting and the practical lights on the outside of buildings in the town were all built and wired up. We had separate control on all of them. We can now dim every single practical separately.
Interview with Lead Armature Designer
Jeremy Spake

SMM: Are you using Steel and Aluminum on your armatures?

Jeremy Spake: We don’t use any aluminum on our armatures. It’s tooled steel for the most part, and some stainless steel components. We’re pretty much all steel construction. One benefit of aluminum is that it weighs less, but you can’t solder it. So we have to plan a lot of mechanical attachment points and things of that nature. We find that with steel you skirt together to make a proto-type, you can drill holes, tap stuff, screw it together. Then once you’ve figured out your sizing is correct, you can solder it together, and later you can change things by desoldering it and grinding something off, milling a new base on it, whatever you need to do. If it were an aluminum body block that takes you five hours to mill and shape all the stuff you made out of aluminum you’d pretty much you’ll have to start over to change it. Steel is stronger and structurally sound and seems to do a good job. Obviously we do use some aluminum wire, and we do use some phosphor bronze parts here and there.

SMM: As armature designer on ParaNorman, what does your job consist of?

Jeremy Spake: Most of the joint designs were done by myself and a guy named Mark Gaiero. At the very beginning of the project, of decided that we were going to do all of the parts in house. As you may know, on Coraline we worked with Merrick Cheney, and he made these beautiful armatures for us, which we then had to hack up and mutilate and cut and paste, making new shapes. Because of the other projects he had going at the time, he didn’t work with us on ParaNorman. So we wound up doing all of our joint designs in house. Mark and I started making a library of generic parts that we can reuse on a modular system of hinges, step joints, ball swivels, and also some very specific shapes like feet. Norman had a specific torso, so we made a part that we could incorporate 4 or 5 different slots into. Once we had the joint designs all done, each armaturist was assigned specific characters and my role was not only to make my own characters, but to help people when they get into jams. For the most part, people own a character and solve most of the problems.
I was their support, as well as Georgina Hayns. She has years and years of experience with armatures. So between my and her expertise we figured out problems. The cool thing about LAIKA is that there are so many people with different ideas about how to solve problems, so usually if somebody gets stuck it doesn’t take long to find a good answer.

SMM: Did you use any new technology on the making of the armatures?

Jeremy Spake: The cool thing about the rapid proto-typing here is we may be the only department that uses it in the proto-type phase. We design joints in the CAD program, such as a foot design, and then they print it out and you can look at it. Within a couple of hours you can get a print out of a part you just designed. When you’re making a joint based on a 3/32 ball, to look at it huge on a screen is kind of misleading. So if you can print it out and hold it in your hand and look at it it’s super useful. By the time we had all of our designs, one of the biggest challenges was the poor machine shop we work with. We overload them with components. Because of the huge amount of work they had to do to get joint studs, even though we had a CNC shop making parts for us, we wound up making the first four Norman prototypes in house. It was kind of crazy.

SMM: Do you use pencil and paper to design stuff or do you use the CAD software?

Jeremy Spake: Personally I work much better drawing things out. I’ll probably spend most of the time just drawing it out and not in a really specific accurate way. I’m not a particularly accurate draftsman. I just try to work fast and loose if I’m trying to come up with an object. I usually keep these note books and then soon as I need to actually do the work will just go into the CAD program and do it. I like to have a hard copy all in one place and I find that the notebooks seem more logical to just draw with a pen. You don’t need to boot anything up to draw in a notebook.
SMM: Were there any armatures that you really enjoyed designing?

Jeremy Spake: With something like Norman, it’s always challenging, especially with the head, neck, and shoulder. Fitting all the joints to something that small, plus the rigging and costume attachments you need. It can be a real pain to fit all the stuff you need into that small of a space, but it’s fun to make because you know he’s going to be a high performance puppet that a ton of people are going to be using and you know you are going to work it out. At the end of the day you’re going to have a puppet that people enjoy animating and that shows up on the screen. Probably the two characters that were opposite of that were Mr. Prenderghast and Mrs. Henscher. Prenderghast is this giant square shaped character, and Mrs. Henscher is about the size and shape of a volleyball. So they are rewarding problem solving adventures. You never know if you’re going to wind up with a puppet that’s going to make people crazy or not. Fortunately, both of those puppets worked pretty well. I think you’ll see it in both performances of those characters. We had some sleepless nights trying to wrap our head around some of the stuff on Mr. Prenderghast specifically, but I think he ended up moving pretty well.

SMM: What are you using to clean up your armatures at the end of construction?

Jeremy Spake: Usually after they come out of the pickle, we use a generic off the shelf stearic compound and a soft brush. We have these soft bristle stainless brushes which are pretty nice. They’re soft like a brass brush but they are steel so they don’t make everything weird and shiny gold color. But there’s nothing special. We didn’t really tumble parts very much, but now we are doing more machining in house so we’ll definitely tumble more parts after the machining operation is done to break the burs off and things like that. But that’s not really a part of our standard. Mostly they’ll tumble parts and components before they’re sent to use from the shop. We don’t need to do that again necessarily.
SMM: Was there a lot of maintenance on these armatures as the animation department used them?

Jeremy Spake: Yeah, for sure, there always is. Its funny how there is always some unforeseen issue with stuff that you thought was going to be bullet proof. One of the things about a project like this is that as soon as you’ve identified something that seems to come out frequently you can kind of go “alright this is something we can deal with”. You figure out the best fix. Obvious if a puppet is not available on the stages, that’s a problem, so we try to turn it around as quick as possible. Come up with repeatable solutions, and figure it out quickly. I didn’t get to do as much on set and puppet maintenance as I like, because I’m always busy working on new characters. But we certainly had a lot of people who got really good at making sure things moved smoothly.

SMM: Was it difficult to translate character designs into an armature?

Jeremy Spake: The puppet department would get a drawing from Heidi Smith, and then the sculptor would get direction from the directors and from Georgina and whoever. The maquette tells us a huge amount of information. Then we’ll have a breakdown meeting with all the heads of different departments: the mold makers, the casters, the hair department, costume department, animation, and armature department. Everyone is involved in identifying. We’ll look at the script, and the scenes that these characters are involved with, find out all the different things they need to do. The animation department has some specific ideas about how they want the performance to look. Stuff comes out that you may have not thought about, like Mrs. Henschel; they want her to have these dingo wings because her arms are so big and they want her to flap around. We all put it on the table and everyone tries to identify what the potential problems would be, and then when we leave that meeting we have a pretty good idea of what everybody wants. Sometimes you walk out of a meeting knowing exactly what you are going to do. Sometimes you’ve identified some heavy thinking you need to do to solve some problems.
Those meetings are pretty much what inform the rest of the process. Between armaturists figuring out that we need the armature to break apart at this point because that’s where the swivel point goes into the swivel socket at this point and that’s where the costume needs to cover it and is that going to be a good place for the silicone guys to seam it together or are you going to see it, do we need to make the costume longer, do we need to make the mold break at a different part. As soon as all that stuff is figured out, everybody can go back to their world and hopefully have a puppet that works the way everyone expects it to. It’s never quite as simple as that. It’s never just a matter of “oh, I can just make the armature the way I want to”, there’s just so much more involved.

SMM: What’s the most rewarding experience you’ve had so far in your career as an armature maker/fabricator?

Jeremy Spake: I think being able to do something that you inherently feel is right for you. I went to school for graphic design and always was decent at it. I was working in that field but always as a hobby. I just felt like all my free time I was doing little armature puppet building animation projects, researching it and building things. I feel super lucky to have been able to get any work doing this. So to be here at LAIKA and having so much creative freedom to have ideas and be recognized for it, that’s ridiculously awesome. And then to be able to make armatures for some of the best animators in the world and have them say “wow, this is a really good puppet and I love the way this part works, I was really able to get this element of the performance that I didn’t expect to”. More often than not you hear, “oh this doesn’t move far enough” or “why is this so tight?” or “why is this not working the way I want it to?” When you do actually get that compliment its huge because you know how hard it is on the stages and how much pressure is on them. So when they take the time to say “Hey man, this thing really worked out well”, it’s pretty huge. Those are good days.
Stop Motion Explosion!

Using some nifty in-camera effects and Stop Motion Pro (SMP), you can blow your audience away.

Our short film is made up of four story steps filmed from a fixed camera angle. A burning fuse, a wisp of smoke, the explosion and the aftermath. We filmed on “twos” at 24 frames per second.
This is one explosion you should try this at home. You need clay, pipe cleaner wire, a laser pointer, cotton wool or plastic roof insulation and thread. You can download the free trial of Stop Motion Pro from our website, and pretty much any webcam or Canon / Nikon DSLR camera. We used replacement puppets/props to speed up filming.

The burning fuse effect is created with the laser pointer shining onto the pipe cleaner wire. The laser gives a nice sparkle effect, and by reducing the length of the wire over successive frames, the fuse burns down...
The wisp of smoke that rises required the rig removal tool. The smoke was made from cotton wool and by its nature clung to a thread. A desk lamp with a flexible head positioned the thread over several frames.

The rig removal tool is great for removing props and supports from your animation. Even if you use a different compositing application, you can still remove rigs in SMP to preview your shot while you film. It’s non-destructive and completely reversible.
Our explosion was created with plastic roofing insulation. You could also use cotton wool. Tease it out to an explosive shape. Having the bomb distort before it explodes helps the audience understand something big is about to happen.

With your camera exposure locked, you can easily generate an explosion effect by holding a desk lamp above the insulation/cotton wool. This blows out the light levels and makes a bomb-like flash. Over the next 8 frames, move the lamp further away, reducing the glare.
Syncing an audio file to your visuals is easy with the SMP Audio Sync tool. You can see where the loud noise of the explosion starts in the waveform. Right click with your mouse on this point in the audio file, then scroll through your animation to the frame with the explosion. Click the Sync button to lock them together.

Press the Play button to watch your film. Is the timing right? Does everything match up? Perhaps you need to add a few frames, or hide some? It’s easy to tweak your timing with the SMP Editor. Hide, duplicate and drag and drop is all possible.
Visit our website to see the example we made here. You can also find resources for helping make your own explosive animation.

http://tinyurl.com/smp-explosion

Stop Motion Pro software has been used by Aardman Animations to film “Wallace and Gromit”, “Shaun the Sheep” and the exciting new feature film “The Pirates! Band of Misfits”

www.stopmotionpro.com
IT'S ALL FUN AND GAMES UNTIL SOMEONE RAISES THE DEAD

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