Hub
Magazine

SCIENCE FICTION   HORROR   FANTASY

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by alasdair stuart

NASA goes Rock Star

Whilst we were away, NASA landed the largest Mars rover in history from a sky crane that entered the Martian atmosphere, hovered, lowered *Curiosity* then went and obligingly crash landed. The first pictures from Mars arrived less than 24 hours later. The video, taken by the Rover, as it descended, was online not long after that. It has a Twitter feed. It has *parody* Twitter feeds.

I love that. I love that science has captured people's imaginations like that. Not in the usual, stolid 'Now we shall do SCIENCE' way either but through an odd combination of the underdog complex and a slight sprinkling of rock star. This is the year the shuttle was finally retired, now officially little more than museum pieces, the year where manned spaceflight of any meaningful sort moved even further away.

But this was also the year Curiosity landed and it's as though there was a sigh of relief when it did so. We can still do this, we can still go on an adventure for no reason other than to see what's over the horizon. We can still do epically crazy things in the name of science and, thanks to the internet, not only witness it first hand but in several crushes on the mohawked scientist in the control room. Bobek Fardowsi, tweeting under the name @tweetsoutloud, has become an internet celebrity and in doing so has helped make NASA cool again. Suddenly, a group of men and women flying a robot that's on another planet are heroes again and that just feels right somehow. We're not there in person, but the Curiosity team have made us all wish we were. If that's not rock star behaviour I don't know what is.

FICTION

Tourists

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by emma newman

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In 2013 the marvellous Angry Robot books will be publishing three Split Worlds novels, the first is out in March and called "Between Two Thorns". This story is part of a crazy thing I decided to do before I got the book deal and was forging ahead with the project on my own: releasing a new story every week for a year and a day, hosted on a different site every time, all set in the Split Worlds. I wanted to give readers a taste of my kind of urban fantasy and have the opportunity to build in secrets and extra tit-bits for those people who, like me, love the tiny details. It's also been a major part of my world-building work alongside writing the novels.

This is the forty-sixth tale in the year and a day of weekly short stories set in *The Split Worlds*: **http://www.splitworlds.com** If you would like me to read it to you instead, you can listen here: **https://soundcloud.com/ejnewman/tourists** You can find links to all the other stories, and the new ones as they are released here: **http://www.splitworlds.com/stories/** You can also sign up to get the stories delivered to your inbox, one per week for a year and a day.

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Tourists

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Rishi hunkered down in the auto-rickshaw, hoping his friends had gone to school and wouldn't see him in the awful clothes his uncle had provided. They stank and the flip-flops weren't safe to drive in. He seethed at the thought of the classes he was missing so close to his exams. He should have stood up to him, but he didn't want a split lip and black eye like he did the last time he'd said no.

He watched his cousin at the door of the hotel, dressed in the crisp uniform and sweating in the heat. He didn't care what his father made them do. He just thought of the money and said only the stupid ones fell for it.

After checking no-one was watching, Rishi pulled out the tablet from his rucksack and opened the file he was working on. He wanted to get the site up before his exams and get a good amount of traffic to it before applying to university. Better to show he was already writing better code than most undergraduates, rather than just getting the highest grades in the school.

There was a short whistle and he put it away. His cousin was straightening his jacket and watching the latest victim come out of the hotel. There was a tall one with brown hair tied back in a ponytail and a shorter one with very red cheeks. Both were young and dressed in pale linen suits which were slightly old-fashioned. They looked like they'd stepped out of the days of the Empire.

Rishi pretended to doze, then jumped and started the engine when his cousin batted him on the shoulder. He gabbled a good morning and asked him where they wanted to go in Gujurati. It was all scripted and over in seconds. The tourists got in, thinking he was nothing more than a poor taxi driver.

"Gosh, how exciting!" the red-faced one said once they left the town. He was holding an ivory key that Rishi's aunt had carved. "I'm so glad I took that chap's advice, the auction was splendid."

His companion took it from him, inspecting it. "It is beautiful. What did they say it unlocks?"

"It's a key to a long lost temple. By Jove, what luck! If we find it, we could get an audience with the Maharaja!"

Rishi peered at him in the rear view mirror. Offensive bastard – is that what they called any wealthy man in Rajkot? His guilt eased.

"And then I could use the Persuasion Charm to convince him to give you an audience with the Princess and you could dazzle her with tales of the Aquae Sulis season and she'd-"

"Oli." His friend's voice was low. "Don't speak about that sort of thing in front of the mundane."

"Oh he doesn't speak a word of English, it's fine. If you could persuade Princess Rani to include Aquae Sulis on her tour, I'm certain your father would be -"

"Who told you about this auction?"

"The chap at the hotel. I asked him if there was somewhere I could buy some gifts."

"The same one who arranged this taxi?"

"Yes."

Rishi risked another glance and looked away when he met the suspicious one's eyes.

"And did they auction this key off as one that unlocks a secret temple?"

"Of course not! I showed it to the chap at the hotel when I thanked him for the good idea and his eyes nearly popped out of his head when he saw it. He told me all about the legend and the woman who might know something, the one we're going to see now. Jolly exciting, what?"

"It's a scam. Stop the taxi," the tall one ordered him.

Panicking, Rishi pretended not to understand.

"They call them tuk-tuks, don't they?" The red-faced one leaned forwards. "Stop tuk-tuk!"

Rishi wanted to punch the patronising idiot, almost as much as he wanted to punch his uncle. But they were rich and if they complained he could be in serious trouble.

"See, he doesn't speak a word of it. Bloody-"

"Please stop this taxi or I will be forced to use violence." The tall one was very calm, like his uncle when he was most angry.

Rishi pulled over. They were surrounded by fields. "Yes?" He was only half a mile from the house where his uncle was waiting for them. Perhaps if he beeped the horn they would hear it.

"Take us back to the hotel."

"Will! Dash it all man, why are you being such a-"

The tall one got out and stood at the opening to the driver section. "What are you planning to do? Rob us?"

Rishi slammed his fist down on the horn, terrified by the look in the man's eyes. The man moved his right hand towards his left hip, making Rishi beep the horn again, thinking he had a gun. He moved his hand upwards and in the next moment a sword was in his hand – as if it had been there all along in an invisible scabbard. The blade tip was at his throat before he could cry out.

"Will! Good grief, put that away!" The red-faced man was gripping the back of the driver's seat.

"You can speak English, can't you?"

Rishi swallowed and felt a prickle as his Adam's apple bobbed. "I can, very well thank you."

He prided himself on it, in fact. When he wasn't coding he was watching films, mimicking their accents. These two were straight out of Upstairs, Downstairs. He didn't think anyone talked like that anymore.

"This key business is a scam, isn't it?"

"Yes. My uncle forced me to drive you. I can take you back to the hotel, but the doorman is my cousin."

"Gosh!" The red-faced man got out and put a hand on his friend's arm. "Will, old chap, let's find a way to resolve this without a blade, shall we?"

"No-one robs an Iris."

"That may be so, but we're unharmed and I'm sure this young man could take us to another hotel. You can't challenge him to a duel. This is Mundanus, after all. You seem to have forgotten."

The man flushed, returned the sword to his waist and it disappeared again, as if he were sliding it into something chroma keyed out, like in the movies. Rishi felt sick with fear. Who were these people?

"I can take you to a very good hotel," he said. "Nothing to do with my uncle."

"You do that." The tall man climbed back in. "You're too forgiving, Oli," he said as Rishi turned the auto around.

"We can dine out on this story for weeks," the other said. "As long as we change it a little so I don't sound like a complete idiot." He gave the key to his friend. "A souvenir for you."

Rishi drove them back to town. "This is the best hotel in Rajkot," he said as he pulled up outside.

The tall man strode into the hotel whilst his friend paid four times what he should. "You're evidently a

bright boy. Brighter than me, in any case." He pulled something else from his pocket, palmed whatever it was and then touched him on the top of his head. It felt like he was full of static from a television set and Rishi shivered. "I suggest you go to your uncle and persuade him to leave you out of any future scams. Make sure you shake his hand or touch his skin when you do so. Do it now, understand?"

Rishi nodded. "Who are you, sir?"

The man grinned. "Oh… just tourists."

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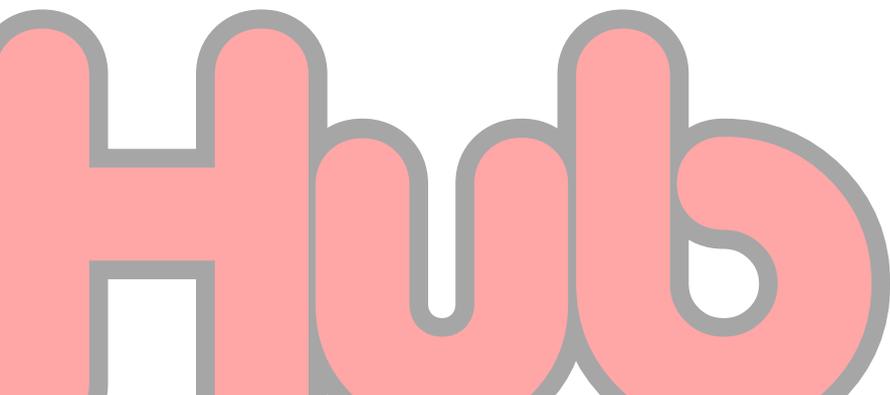
REVIEWS

Hero of Ages

reviewed by catherine mann

By Brandon Sanderson
Gollancz
£8.99

This review is more spoilertastic than my previous one. I advise reading the previous volumes, *The Final Empire* and *The Well of Ascension* (preferably in that order), which I reviewed in earlier Hub issues. If you're trying to keep yourself pure and spoiler-free I'll simply say this: Read these books!

It's the end of the world as they know it. Mists smother the land causing illness and even death. Ash falls constantly and earthquakes shake the world, leaving little doubt that the end times are nigh. The populous is starving and the crew -now diplomats, rulers and spies- must try to keep the remains of humanity together, even in the face of ruin. For Elend this means becoming the kind of leader he never wanted to be. Sazed dully follows orders despite personal loss. Meanwhile junior crew-member Spook is determined to prove himself. And Vin shoulders a heavy weight of personal responsibility. After all she did inadvertently release the evil force of doom that's gradually destroying the world.

The book begins with a seven word sentence that sucks you right in and the story never lets you go. Italicised passages begin each chapter, these are written by the eponymous mythological figure -a being whose coming has twice been subverted. While the existence of this account provokes questions, it also provides many answers. In fact the italicised sections clearly and concisely answer questions you didn't even know you had, whilst retaining enough mystery to keep you intrigued. Events in the previous books are revealed to be part of something much bigger and older than either reader or characters imagined. I was increasingly impressed by how cleverly the overall story-arc and the setting have been put together. The only downside is that I became impatient for the main story to catch up with the tantalising snippets that frame it.

One major revelation is how the fantastical elements fit into a wider context. This expanded worldview was only hinted at in previous volumes. As each building block falls into place you realise how obvious it all is, once you have the facts. Joining Allomancy and Feruchemy is a third metallic magic, Hemalurgy. Mentioned only briefly before, Hemalurgy is euphemistically described as messy. It's an art that isn't inherited, but does require certain knowledge. Hemalurgy involves gaining abilities by doing unpleasant things with metal spikes. It is -we learn from the enigmatic Hero- the power behind the creatures the Lord Ruler created a millennium before.

The sense of creeping unease that was present in *The Well of Ascension* returns and is multiplied. Knowledge of a mystical adversary makes the situation more discomfiting. There are some moments -when Elend learns about mist-sickness statistics, and when Vin discovers how much she's been compromised- that are genuinely creepy. Ancient prophecies, traditionally inviolate in fantasy, are used to manipulate characters, making it hard to know what to trust.

Once again Sanderson seems determined to pile pressure on his characters. As if overthrowing a dark lord and establishing a kingdom weren't enough, now they're trying to avert the end of the world. This means following clues left by the Lord Ruler, but the clues are scattered, so the crew must turn to diplomacy and warfare to find the information. Vin and Elend are desperate to stop the deadly Ruin, but with time running out they must become increasingly aggressive. Do their good intentions justify tyrannical methods? The dynamic of their relationship has changed since they got married and Elend gained Allomancy. Despite the desperate situation there are warm moments between them. Elend's affectionate joke at a ball is

sweetly reminiscent of their early, confused courtship. The strength of their relationship is especially poignant in a world breaking apart.

Spook was always the junior member of the crew. Initially brought in to help his uncle, everyone treated him like a kid. Spook is sent north to gather information. On his own, and desperate to prove himself, Spook pushes his body and his Allomantic ability to the limit. He discovers that he's more like Kelsier than he thought, and the rest of the crew discover that they shouldn't underestimate him. Sazed is the wise counsellor of the group, a calm, respectful repository of age-old wisdom. He preserved the knowledge of thousands of religions and taught those around him of their importance. However after the conflict in Luthadel he lost his faith. Sazed still follows Elend's orders, but his sense of purpose and personal worth has dried up, replaced by bitter disappointment. He's bereft of cheer or advice, an absence that is sorely missed by his friends. Sazed is the most changed character in the book, the only one who loses the sense of self that drives the others. Even in the midst of an apocalypse Sanderson makes the reader care about the disillusionment of one man. This juxtaposition of the great and the small is a powerful theme in these books.

The Hero of Ages takes place in hitherto unseen parts of the Final Empire. Characters travel across landscapes that become black and featureless as the ash falls. The book contains the customary map of the Final Empire, and maps of two smaller cities. Fadrex City and Urteau soon feel as real as Luthadel. The different types of government that sprang up after the Final Empire fell are explored. Elend is compared to the Lord Ruler more than once, and although he has the interests of the populous at heart his methods are little short of dictatorial. The question of whether Elend can justify his empire-building is raised, but not directly answered. Urteau is a city brutally run by the formerly-oppressed. This violent reversal is justified by devotion to Kelsier, now a skaa religious figure. However the anti-noble sentiment has led to an impoverished and paranoid society. Urteau's rulers are as power-hungry and prejudiced as the nobility that preceded them, but without the organisational skills of the previous regime. Fadrex City, on the other hand, has changed little since the collapse of the old Final Empire. Traditionalism and order are enforced by one of the Lord Ruler's former priests, a man who believes his master will return.

This book is an excellent conclusion to the Mistborn trilogy, a story that widens in scope with each instalment. The gradual revelation of the meta-plot is fascinating, although it does start to overshadow some of the subplots and supporting characters. Impatience to find out what it's all about may prompt the reader to rush. However Brandon Sanderson has tied the whole story together with great skill and attention to detail. While it is inevitable that certain characters and events are more significant than others, it is not necessarily clear which will be crucial to the final outcome. That said, reading the book is certainly not a chore, the characters and setting feel real, the action is gripping and as for the climax, it's definitely worth the wait.

Resurrection Engines

reviewed by paul simpson
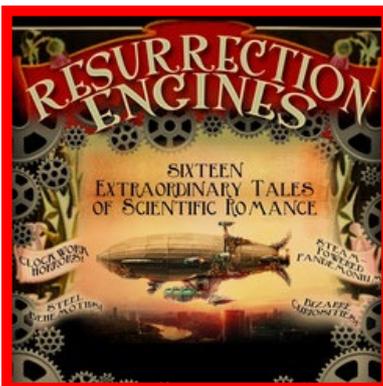
By Various
Snowbooks Ltd
£7.99

As various books have recently attested, Steampunk as a genre is very hard to pin down with a definition, and a collection like this only goes to prove how varied it can be. All of the stories qualify but they are all very different in style and content.

It would be interesting to see the parameters that editor Scott Harrison gave to the contributors to this volume since they have clearly been interpreted in a very wide way. In fact, although introductions in collections have recently been the subject of attack for apparently becoming more important than the stories they preface, this is something that *Resurrection*

Engines could definitely have benefitted from, if nothing else to set the scene for those who perhaps were unfamiliar with the stories being retold. (In some cases, you do need to refer to the back cover to discover on what the stories are based, since they've been reworked so much.)

That's a minor quibble, since the majority of the tales stand up in their own right without needing to know the ins and outs of the originals. Some take the Victorian originals and rework them with a more twenty-first century viewpoint: Alison Littlewood's *Silas Marner* retelling that opens the collection, Juliet E. McKenna's alternate version of H. Rider Haggard's *She*, and Philip Palmer's inspired reworking of Wilkie Collins' *The Woman in White* all veer off in new directions. Roland Moore's *White Fangoria* only draws on the start of Jack London's classic – although it would be very interesting to read a full-length version of this – and Jonathan Green's *There Leviathan* is a potted *Moby Dick* with twists (and the links between the original and *Star Trek II: The Wrath of Khan* become even more evident through this retelling). Simon Bucher-Jones adds an extra Stanza to Charles Dickens' Christmas classic (and after listening to the recent recording, it's hard not to hear Tom Baker's fruity tones narrating the tale), giving an intriguing slant on how Scrooge and Marley might have functioned in a Steampunk world, or three.

Others use the basic principles as a starting point: Alan K. Baker's *A Journey to the Centre of the Moon* is a sequel to Verne's classic, while Scott Harrison's very different account of *Jekyll and Hyde*, Kim Lakin-Smith's *The Island of Peter Pandora*, and Cavan Scott's *Fairest Of Them All* examine some of the same themes as their inspirations but add an even darker side to them, with Lakin-Smith amalgamating elements of *The Island of Dr Moreau* into J.M. Barrie's children's story.

Interspersed between these more recognisable tales are a group which don't simply start from their source material – they use it as a springboard into completely new territory. Brian Herbert and Bruce Taylor's *The Great Steam Time Machine* discusses H.G. Wells' writings but becomes a discussion about other forms of time machines between real writers from all walks of life; Adam Roberts' *The Crime of the Ancient Mariner* is a dissertation on the nature of Time. Paul Magrs' *Talented Witches* features the author himself as well as Iris Wildthyme in an apparent reworking of *Wuthering Heights*. In all three cases, a more straightforward Steampunk take on the ideas would remain possible for a sequel volume.

The final story is my personal favourite: Jim Mortimore's take on Robin Hood, which derives its cues from many different versions of the myth and then throws in some H.P. Lovecraft to salt the mixture. Mortimore can sometimes try to juggle too many concepts at once, but he's been effectively reined in on this so there is a logic to what appears to be grand insanity.

A varied and very enjoyable collection.
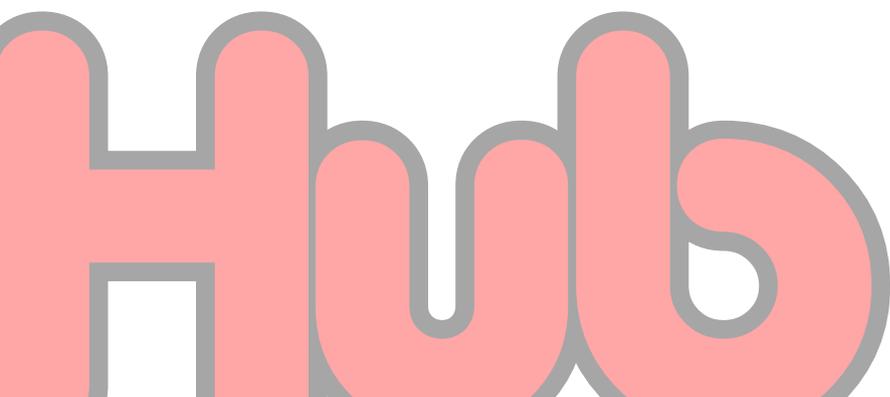
Interview: David Mack

with richard whittaker

Ever picked up a comic with an amazing fine art cover, and been disappointed at how hum-drum the work inside is? David Mack is one of the few comic creators who remains as audacious inside the book as out. His runs on Marvel Comics' *Daredevil* – as writer, artist and writer-artist - have been some of the artistically most significant and applauded of the title's history, mixing high art with the gritty street-level heroics of the Man without Fear. However, throughout his career Mack has remained dedicated to *Kabuki*, his tale of masked female warriors in a near-future neo-feudal Japan. The seventh and most recent volume, *Kabuki: The Alchemy*, restarts the story for the eponymous anti-heroine as she starts a new life away from the cycle of killing. However, Mack is far from being a marginal fine artist in the mainstream comic world: Along with *Powers* by Michael Avon Oeming and Mack's old friend Brian Michael Bendis, *Kabuki* was one of the original titles for Marvel Comic's Icon imprint, designed to give top-tier talent an in-house outlet for their creator-owned titles while they worked on the firm's major books.

Hub Magazine: You were an underground success with *Kabuki*, but you really broke out into the mainstream with your 1999 run as writer on *Daredevil*. How did that come about?

David Mack: At HeroesCon in 1995, I met Joe Quesada for the first time. He didn't know me from anyone, but he was very kind to me. I was still in college at the time, and I'd just come out with the first volume of *Kabuki* and I gave him that collected story. I would give it to lots of different people, but a week later I got a call from Joe, who didn't know me from anything except as this kid that gave him this book at this convention. I was able to make a living from doing *Kabuki* and I was doing fine, but I wasn't known in the mainstream. So I got this call from Joe and he was like, 'I really like your writing and I think this is a well-told story and it would be really fun to work with you as a writer.' At the time he was doing Event comics, and he was doing *Ash* and he said, 'Maybe someday you can do an *Ash* story and we could work together.' I said, sure, any time you're ready. That didn't happen, but we remained friends and I would see him places, and I would still talk to him for advice. Then I got a call out of the blue in late '97, and he said, 'I'm going to be editing a few books at Marvel comics and if there's a certain character you like, I'd like you to pick that character and you can write it and draw it.' That's an amazing call, but I'd just moved *Kabuki* to Image comics, and I'd got to write and draw that there, and I wouldn't be able to do two books at the same time. So he went, 'OK, what if you just write a story for us?' So I said count me in for that. He called back and said, 'We're starting Kevin Smith writing *Daredevil*, then you'll take over writing and I'll draw it and be your editor.' Perfect.

HM: Your big addition to the title was Echo, the deaf assassin, who ended up in the unusual position of having her own story arc in *Daredevil* in which Daredevil didn't appear. How did that happen?

DM: It wasn't planned to be in *Daredevil*. [Joe] asked me to do an *Echo* limited series, and I should also preface, that when I was writing for him, I really wanted to write whatever Joe wanted to draw. You write for the artist's strengths. I wrote a story for him that I wouldn't necessarily write for myself. I write for what I perceive to be the cool stuff for how he does stuff. I said, 'I'm just gonna write from where my childhood memories of reading Frank Miller *Daredevil* comics left off, is there anything you'd like me to include?' He said, 'I want you to include a new antagonist for Daredevil, because he doesn't have that big of a rogues gallery, and most of them are borrowed from Spiderman.' So that became Echo, and she became an antagonist for Daredevil, but she gave me a lens through which I could give a Kingpin origin story, because he doesn't have that much of an origin story. That became my favorite part of the story, in that there's an issue which is essentially the Kingpin pulling himself up by his boot straps as a marginal person as a child to become successful. That was what I loved about that story, but after we did that story, he said, 'That Echo

character, people are asking me if they can start including her in other stories, and eventually that's going to happen, so you should do an *Echo* series to flesh her out a little bit more,' and I said, 'Cool.' So I did it, and he said, 'Instead of doing it as an *Echo* series, we're going to put it in *Daredevil*, and give the creative team of Bendis and Maleev a chance to get ahead. So maybe squeeze Daredevil in on a page or two at the beginning and the end to bookend it, because it's a Daredevil story.'

HM: Now you have a creator-owned deal with Marvel through their Icon imprint. You've published *Kabuki* with a small press, a major indie and one of the big two companies now: How does that affect the creative and publishing process?

DM: It doesn't have any effect at all as far as the creative side of things. It's still me doing whatever I want to do as far as the story goes. But I think it does have an effect just in terms of the different demographics you reach. I experienced that before I moved to Image, when I was with Caliber comics. I was doing *Kabuki* the way I would do *Kabuki* no matter where I was, and I felt I was able to meet a living off it. I was comfortable doing it at that company, and hoped they were able to grow as I grew and the book grew. But in '97 I moved to Image Comics, and I did notice that you're in a different section of the *Previews* catalogue, where retailers order your book and they see it more when they're ordering. So other people who read something one company does more than another company does - which is interesting for me, because when you buy music you don't go, 'I only buy music from Electra records,' or 'I only buy music from Sony.' That would never occur to me. I think part of the way it work is that retailers when retailers order from Marvel, it's in that separate Marvel catalogue so it does get into a prominent place so people at least think about ordering it more than if it's in the back of the preview catalog the size of a postage stamp.

HM: You're famous for working in a wide variety of styles and mediums, from pen and ink to water colours to montage. What has driven that constant experimentation?

DM: That's an interesting question, and my response is probably not what you would think it would be. It's not so much about the art, but it's about the story. I guess whenever I'm doing any kind of book I consider myself a writer primarily, and I want to use the art as another tool of the writing. So every time I write another story I want to cultivate a look and a storytelling style and a layout and a pace and rhythm that I think best dictates that particular story. So I feel like thinking of it that way gives me a lot of liberty in terms of using whatever medium I think works for the story, rather than thinking I have to make it look the same way every time, or do it the same way every time. It doesn't seem as interesting to me that way. Having the art is just another tool box that you as a writer, as a story teller, so in the same way that you would say, 'Is this story most powerfully told in third person or first person?' you can say, 'What colour is it best told in,' or 'What medium should it be told in? Should it have stick figures or photo-collage or painting or drawings?' I just feel the comic book medium is such a fertile format and there's no reason to do it only one way.

HM: You're really exploring that with your most recent work for Marvel. Current *Kabuki* is a long way from both its early roots and traditional four-colour comics, and then there's your other Icon title, *Dream Logic*.

DM: It's a 48 page book, it's just kind of a format for me to do a variety of experimental things, like some short stories in the front of it, and I'll also do sketchbook material for figure studies for art process for whatever things I'm working on at the moment. Drawings, paintings, a variety of things. I've a brand new hardcover out now called *Reflections*, and it's a 320 page book of art commentary and art process. My newest *Kabuki* volume is *Kabuki: The Alchemy*, and I feel that it's the best example of my work in one book. I'm really happy to have that in hardback and paperback. It has a great introduction by Chuck Palahniuk, it's got a bunch of extra stuff in it, but I feel like it's my most evolved work as a writer and an artist, and I feel that it reflects the most diverse array of art approaches in one story. I've been doing a variety of covers. I just finished a bunch of Marvel covers, and I'm doing a new cover for Brian Michael Bendis' *Scarlet* at Icon, and a cover for his new creator-owned book at Icon called *Brilliant*. And I've been doing covers for *JLA* at DC for the last year and a half. I was at a convention in New York and one of the editors asked me if I'd like to do it for them, so I said sure, I'll give it a shot. They just keep asking me to do it every other issue. It's just kind of fun, doing characters I've never even heard of before, but I also got to do Batman and Supergirl, so

that's been fun. I also got to adapt that Philip K. Dick story called *Electric Ant*, and that's recently come out in hardcover in Marvel. Something else I'm working on that hasn't come out yet is a Daredevil story called *End of Days*, and I'm co-writing that with Brian Bendis. I'm doing some art for it, and so is Alex Maleev, but the majority of art for it is Bill Sienkiewicz and Klaus Janson, so it's all guys who have done pretty large chunks of their career on *Daredevil* working together, and it's a blast. If you see Bill, he usually has the pages with him and they're fantastic. Bill's work, Klaus' work, it's fantastic.

HM: When Bill Sienkiewicz started doing this kind mixed-medium work, it really seemed very much on the fringes, the kind of thing that required an imprint like Epic to get it on the shelves. It seems that traditional superhero comic audiences have become a lot more receptive to that style of art.

DM: I guess what you're saying makes sense. I wasn't necessarily looking at it that way, because I've been looking at it from inside and I've been trying to give each volume of *Kabuki* its own look. One thing is that it gives you the opportunity to contrast: You do something one way just so you can contrast it with the next thing, whether it's a scene to a scene or a volume to a volume, and I think people will be open to that. The flipside is that I did this first *Kabuki* volume, and I thought that, even though I was in college and did a lot of mixed media at the time, I just felt that the story was best told in black-and-white. It was almost like a crime story in Japan, and I felt that it should have a crime noir feel. But when I put it out this was at the height of computer-colored lens flare that was the rage, which I had the opportunity to do, but I didn't want to. So you had a lot of people who had the idea, 'Oh, it's black-and-white, are you going to do it in colour some day?' Then when I did the next volume I wanted to contrast it by having mixed media. But every time you do one thing, you do have some people who it's not their cup of tea yet, it's just outside their comfort zone. So when they do get used to it, and you do something different, they say, 'Well I liked the way you did it before.' But I learned that that's OK, because they just need some time to adapt to it. Any time I do any book, I always get a certain number of people who embrace it, and a certain number who say, 'Why didn't you do it the way you did before? I was just starting to like that.'

Interview: Tom Smith

with richard whittaker

Industrial Light and Magic was the special effects firm that defined sci-fi and genre cinema in the 1980s. But without Tom Smith, the company may never have existed. A short film director and documentarian by training, in 1979 he was hired by George Lucas to become ILM's general manager. His task was simple: Turn it from simply the effects house for *Star Wars: The Empire Strikes Back* into a full-fledged, full-service firm. To say it revolutionized the film industry is an understatement, but it was only one fraction of Smith's career. He also designed some of the longest-lasting 3D attractions at Disney World, and helped keep the Muppets alive after the death of Jim Henson. As a general FX fixer, he was even called in to help Woody Allen's mother in the clouds for *New York Stories*, and strip down modern America to its pylon-free Civil War natural splendor for *Gods and Generals*. Yet he has remained the ultimate behind-the-scenes man. He recalled how, a few years ago, he travelled to France to appear on a TV show. As a young man, he had travelled there on a Fulbright scholarship, and he wondered whether any of his university friends had seen the broadcast and would remember him. As he was leaving the studio, he was paged: There was a call for him. Excitedly, he picked up the phone, hoping for an old acquaintance. He recalled the strange voice said, "You don't know me, but I work for a hair restoration company, and I think you could use my help."

Hub Magazine: The earliest part of your film career was dominated by short films, and you were extremely prolific. I was wondering what drew you to the short doc format, and how that period affected you as a film maker and industry professional.

Tom Smith: As a student at Northwestern University I took a class in film production and was hooked. I had planned to work in radio or TV but fell in love with film. I graduated in 1960, was lucky to get a Fulbright to study film in France for a year and when I got back was about to be drafted into the army. Instead I entered the Air Force officer program (trained near San Antonio) and after a little more than three years I

was out and looking for film work. I felt I didn't have a chance in Hollywood but I knew someone working for Encyclopaedia Britannica Films near Chicago and got an offer to work as a writer. At that time the educational film business was booming stimulated in no small part by federal funds to help education. Within a year I was directing my own films and continued making films for EBF for over ten years. About half way through my EBF career in Chicago, I transferred to their studio in Hollywood and got a little closer to where most feature films were being made.   I'm pretty happy with the 16mm films I was making in Hollywood and not all of them were for Britannica. I had the opportunity to learn nearly all phases of film production: writing, camera, directing, producing and editing. Later when I would be hired by Lucas to run his visual effects facility, I believe knowledge of these essential film crafts made me a better manager of a large creative team.

HM: How much of a turning point was your short _The Solar System_ in your career?
TS: In the late 1970s, I was assigned to make a film for Britannica on the subject of the Solar System. I decided the most interesting film would be a journey through the Solar System. While NASA had done some exploration to Mars, there was little else but telescope views. So we built models of what astronomers believed the actual planets looked like.   We had a great astronomer, Dr. Alan Sandage from Cal Tech, as our collaborator on this.

The real challenge was to film it so it looked real. _Star Wars_ was not yet released and all of us were struggling with ways to shoot space objects in interesting ways. In our case we had a very small 16mm film budget but we had a team of dedicated craftsmen and women who worked on this. Many would later go on to work for Lucas and Spielberg.

 Although I am not certain of this, I believe Lucas seeing this film, helped me get the job at his visual effects facility in 1979. Some of the technicians who had worked for me on my Solar System film were now working for Lucas and had shown the film as a sample of their work.

HM: George Lucas similarly made his early reputation for his experimental shorts, and I was wondering whether that factored in to your working or personal relationship?
TS: George was interested in hands on filmmaking. There were even a few occasions when he came in and ran a camera. He had used the same 16mm cameras I had used. He appreciated the fact that I was not simply an executive running his shop; an empty suit.

I had an appreciation of the film crafts. It also meant that those working for me could be totally honest in their needs because I knew what they were talking about. But let me stop here to point out, they were all far more talented than I was. I was simply the ringmaster but I didn't have to go in the cage with the lions.

HM: How did you come to take the post at ILM, and what was the firm like at that point?
TS: I was hired in 1979 and began work in January of 1980. ILM was at that time four months ways from finishing work on _Empire Strikes Back_. I was hired because the person managing the work up to that point, left to produce a feature film. A film that by the way turned out to be a flop. But it was good luck for me because they needed someone quickly and I was it.

There were about 90 people working at ILM and by the time I got there, they were exhausted; working 50 hours and more a week. The other divisions of Lucasfilm referred to ILM as "animal house" because the it looked like chaos with workers in rough outfits doing the sometimes grimy work of filming on dusty stages. But the shots were looking great; better than the first _Star Wars_. We all knew that there were millions of moviegoers waiting for the film and we couldn't disappoint them.

HM: ILM started on Lucasfilm projects, but under your tenure it rapidly moved to being a house for hire. I was wondering about how that came about, and whether there were big differences between working on a LucasFilm project and something like, say _Kahn_ or _The Neverending Story_?
TS: ILM was originally set up in Los Angeles to do the visual effects for _Star Wars_. It began as an empty warehouse and was built up from there, assembling artists such as Joe Johnston, fresh from a degree in design at Long Beach State and Dennis Murren who had been working on the Pillsbury Doughboy

commercials. It was a rough start but by the time they were done they represented the best visual effects group in the world. The film was an unexpected sensation but by then ILM had been disbanded. It was soon apparent that there would be a sequel. Lucas decided to set up in San Rafael, CA, 400 miles from Hollywood. And so a year or so following the release of *Star Wars* he began looking for a new spot to put ILM. He found another warehouse and slowly began recruiting some of those who had led the work on the previous film.

In 1979, when Lucas hired me, the first thing he said was that he didn't want to close down after *Empire Strikes Back*. He told me I'd have to find outside work to keep ILM running till he needed it again. He also added that it had to stand alone; he would not subsidize it. He made it clear if we couldn't turn a profit to survive, he'd close it up.

When I started ILM was run as a branch of *Empire Strikes Back*, the film paid all the bills and ILM turned over the shots needed. But there was no accounting system where the money was going and what each department was costing. That was my first job after Empire, in order to make it a business.

One of our first "outside" clients was the Paramount picture, *Raiders of the Lost Ark*. Lucas was the executive producer and his friend Steven Spielberg directing. We had been given a boost but we had to do the film under contract and on budget. It was strictly contractual and if we went over budget we'd get no extra money. Sometimes it felt odd wrangling with someone like Howard Kazangian, producer of *Jedi*, over charges. We both worked for the same boss but he didn't step in to referee. We also took on *Dragonslayer*, a Paramount/Disney film. Again we had to price the job and stick to that price. The following year we did, *Star Trek II*, *Poltergeist* and *E.T.* None of these were associated with LucasFilm. We were building our staff and expanding our capabilities. So when Lucas came in with *Return of the Jedi*, we were a well functioning machine. There was none like us in the film industry. To this day ILM is the leader in the field.

HM: There are a lot of technical milestones during your tenure, and a lot of industry 'firsts' achieved by ILM: What was the culture like there, especially when it came to those kinds of innovations?
TS: It was a youth culture willing to try anything to satisfy George Lucas. Few were from the established Hollywood culture and most had never worked on a Hollywood feature except for Lucasfilm. Computers were beginning to be put to use and for the first time were controlling cameras and model-movers. Large format VistaVision camera were called out of retirement and put to use so multiple layer images could be duplicated without a degradation in image quality. Special lens were designed for our use and images were composited on printers made by ILM for ILM. I don't have time to enumerate the technical and artistic innovations but we were leading the industry in the visual effects field. But most important of all, George Lucas was willing to invest in new technologies. He spent millions developing digital images. He later sold this division to Steve Jobs who created Pixar. For *Star Trek – the Wrath of Khan* we incorporated a long digital scene showing the transformation of a planet. There had never been a scene like this before in a feature film. Now, scenes like this are common in films. In fact, digital imaging is almost the only technique used in motion picture visual effects but at that time (1982) it was revolutionary.

HM: You talked a little about using CGI on *Kahn*: Talking to a few FX people, especially practical guys like Greg Nicotero, and they feel that the friction between CG and practical has died a little bit because they can integrate them more smoothly (as Doug Jones told me, it makes it a lot easier on an actor in a full body suit if they can add eye blinks in post.) In those early days, what was the feeling about CG versus practical?
TS: When we first saw what could be done with the computer, everyone was astounded. But those first shots in *The Wrath of Kahn* were very, very expensive to do. The computers were slow and enormous amounts of storage was needed for the data. Because Lucas wanted to test it out, we did not charge the Paramount what it actually cost to do it. When Spielberg saw the shot we had done, he immediately got excited and said he wanted more of that in his next film. I told him what he saw was like gold. It took a lot of time and cost a lot; more than he'd want to pay. But as computers got faster, better applications were developed and storage less cumbersome, costs dropped. By the time ILM did *Jurassic Park* digital imagery was better than traditional stop motion. So Steven got his digital effects and stop motion animator Phil Tippit was

working on a computer, not manipulating a puppet.

We knew that the day would come when Digital Imaging (computer graphics) would replace a lot of what we were doing optically and with practical models and sets. Since the 1990s, one of the big responsibilities of the visual effects producer has been to decide which technique to use. If a model is only to be seen once, it might be more practical to build a physical one. If it will be seen repeatedly, a digital version might be considered. Deciding is complicated and as the digital has become easier to do more and more is done with the computer.

There are some areas of the old craft that have been become almost extinct because of CG. Rarely does anyone use an optical printer now. Models are mostly made digitally and rather than being photographed with motion control camera and lights, they are done in a computer. So a good percentage of the crafts from 1980 are extinct. But most of those at ILM who stayed on during the transition, learned how to used the computer. Good artists with good graphic sense are still needed no matter what tools they use.

HM: What was interesting for me about ILM was that, prior to then, viewers thought of VFX in terms of single people - Willis O'Brien, Ray Harryhausen, Douglas Trumbull - and while they were obviously massively influential, it occasionally obscured the fact that feature film making is essentially collaborative. Was there an awareness that the company was changing how audiences viewed the film making process?

TS: I don't know if anyone was aware of the historical change taking place as we worked. We were more interested in just doing our job well. Even those you mention, had teams of workers helping them. But years ago, the studios didn't want the audience to know much about VFX. They often thought of them as "cheats" putting in mountains that weren't there, adding a ceiling to a large set etc… There were lots of visual effects in "Gone With The Wind" but no one talked about them and the craftsmen who did them had their names tucked deep inside the film's credits if credited at all. Now there are visual effects fans who read all they can about it and look for familiar names in the credits. As "Visual Effects Producer" my credit has been on the front of seven feature films. This would never have happened in the 1930s and 1940s. Harryhausen, Trumbull and O'Brien made such a large contribution to their films they could not be ignored.

Nowadays, there is hardly a film made that doesn't have a long list of special and visual effects credits in it. This is true for films where there don't seem to be any effects in them. Visual effects are often used simply to remove things. For example, a story supposedly taking place prior to 1900 might include jet contrails in the blue sky while filming. These must be removed and replace by puffy clouds. When I worked on the Civil War epic, *Gods and Generals*, in open fields there was often no way to film without including a distant highway, power poles and barbed wire fences; all things that didn't exist then. There was even the occasional Styrofoam cup on the ground in a shot we wanted to use. All this had to be cleaned up. So on top of all the additions we were making to this Civil War epic, we made as many subtractions that the audience wouldn't suspect.

HM: You also worked on several and attractions for Disney's theme parks: How did that change in career come about?

TS: Lucas was producing *Captain EO* for Disney, a 3-D musical film staring Michael Jackson. Post production was running on and on and both Lucas and the film's director Francis Coppola had other commitments. So Lucas sent me to Disney to finish the film. It took more than 6 months because of the technical problems of doing visual effects for a 3-D movie musical. As that production came to an end Disney hired me to do more work for them. Lucas had nothing else going for me at that time and so with his blessing I went to work for the Mouse. I produced two more 3-D park attractions and the feature film *Honey, I Shrunk the Kids*. All these films were full of visual effects. I was getting type cast as a visual effects producer.

One of the 3-D films was *MuppetVision 3-D* with Jim Henson directing. I produced it and just as we were finishing, Jim Henson died. What a tragedy! He was not only a great artist, he was one of the finest people I have ever worked with. Later when his son Brian produced and directed Muppet feature films, he hired me to produce the visual effects. Those films were, *Muppet Christmas Carol*, *Muppet Treasure Island*, and *Muppets from Space*. I also produced a two night (four-hour) mini-series with Brian for CBS. So all this came

out of doing *Captain EO*.

HM: You used 3D in those attractions at a time when 3D was considered dead in mainstream theaters. I was wondering how you felt about the current resurgence.

TS: I like the current 3-D process better than the Polaroid process we used on the Disney films. What they have now is a new technology that takes advantage of digital projection and special glasses to separate images for the two eyes. However I find a full feature of 90 to 120 minutes is a long time to wear the glasses and I can't relax as much as I can seeing a flat film (2-D). That's just me. I don't know how others feel about this. Also the extreme effects we could pull off in a 20 minute Disney theme park film, where you felt you could reach out and touch objects in space, you can't do in a longer format as it might cause too much strain on the eyes. I'm not certain 3-D will continue to dominate but wouldn't bet against it either. Audiences are always looking for something new.
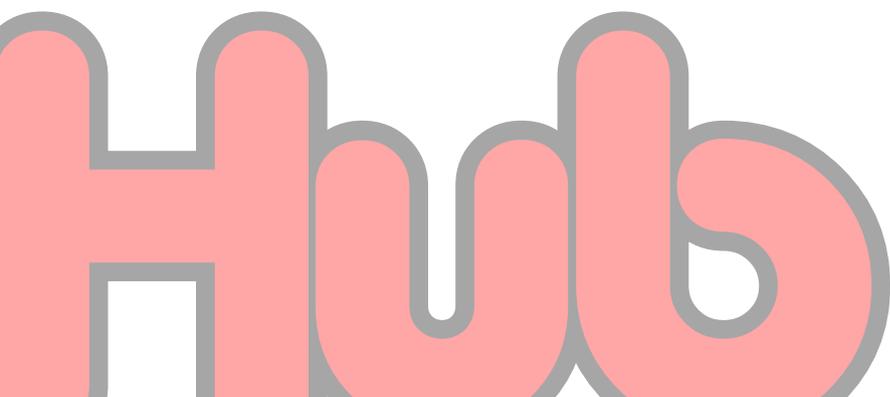
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