

We need  
to talk  
about the

# Future



written and compiled  
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At Camerimage in November there was a certain buzz, not only about the new cameras, but what impact digital technology is having on the actual job and responsibilities of cinematographers. Has it really surpassed film? Here are some observations assembled fast and furiously to make the BSC show...

## Stephen Goldblatt



Whether we love film for the romance, the texture, the emotion, IT'S OVER.

The much bigger problem is not aesthetic or technical, it's the way the DP establishes and maintains a look, and keeps control of the look in the final film. Vittorio (Storaro) calls it "the authorship of the image" and that has been in jeopardy ever since DI came in.

Who looks after the interests of the cinematographer? Even with the ASC, the BSC, the Union in the USA, cinematographers do not have a political negotiating representation of their legitimate interests and that has created a vacuum that producers and production companies are all too happy to fill.

Often they couldn't care less how the film looks - all they're looking at is the money. Directors of photography must make themselves indispensable - they have to be better at the DI than anybody the studio can throw at it so they don't even think about replacing them with someone else.

As far as I can tell the Union doesn't give a damn and the ASC is primarily concerned with comradeship and artistry and meanwhile we are being screwed. You don't have to work in a black tent and we should all make a

specific decision not to be in a tent. I want to be right by the director's side, always involved, the hearing and the eyesight of the directors and the actors - as I see it, that's my job. The technology is available to have everything transmitted accurately right to you by the camera.

These days on certain films, it is possibly the Visual Effects Supervisor who is authoring more of the look than anybody else. We cannot be confrontational, we have to all work together because if there's a fight, whoever's got the most money will win.

What I miss most is the anticipation - it's always a mystery on film, you think you know what you are getting but it's far better than you imagined, sometimes far worse, whereas in digital you pretty much know there and then what you're getting. It's a tremendous relief to not have that additional hour or 2 after a 14 hour day for dailies, and you don't have those dreadful times when the printer or colorist decides not to do what you instructed them to do.

A lot of the fear is extracted out of the process. I think you can be more daring because the risk is LESS.

It doesn't have to be a bleak future, we can also influence it, but you must speak up or expire.

## Tom Sigel



There are two main facets of the digital question to look at for cinematographers.

The first is how the evolution of digital technology is impacting cinema aesthetics; the second is how it affects our role in the movie-making process.

On the aesthetic front, I think we can now say digital capture is no longer the poor step-child of film. The recent generation of digital cameras have as much dynamic range and color space as film with very little grain (or, in video terms, noise). Each digital camera has its own palette, much like each film stock. Now that the new film stocks have gotten so incredibly fine grain as well, it is often near impossible to tell if a movie was captured on film or digital.

Complicating the matter even further is that almost all films are now finished digitally, and why not? The tools available in the Digital Intermediate Suite even the playing field even more. Soon, movies in the U.S. will only be projected digitally. Not too long ago, the cinematographer was a dominant force on the set. The photographic process was mysterious and magical. The cinematographer was often the only one who really knew what the film would look like. Furthermore, his or her work could be altered in only minimal ways: red, green, blue, darker or brighter.

Those days are long gone. In the HD world, everybody on the set watches a video monitor that is pretty close to what is being captured. Afterward, in the D.I. suite, anybody has the ability to go in and make radical changes - not just red, green,

blue or brighter, but radical changes to the image. When it comes time to put the finishing touches on a motion picture, there are those who are very appreciative of the role of the cinematographer, and look forward to the D.P. completing his or her work via the color correction. Sadly, there are just as many who think the D.P. is a nuisance and would love to get rid of him or her in the D.I. Nowadays, it is just as likely to have an editor, studio executive, spouse or guy someone met at the bar last night in the D.I. as the cinematographer.

And that is not the end of it. Visual effects have become routine in all types of cinema - not just big popcorn movies. The more VFX are a component of a film, the more the D.P. is collaborating on the look with someone else. While a costume or production designer has a huge impact on a film's aesthetic, it is because of what they put in front of the camera. A VFX supervisor, on the other hand, is manipulating, and sometimes even creating, the image itself. When things go well, it can be a wonderful collaboration. Unfortunately, things don't always go well. Typically, the bulk of this work is done after the cinematographer has left the production. Our control of the image's authorship is diminishing.

Does digital capture let me sleep better at night, knowing what I have? Sure, it's nice not to have to worry about a negative scratch or a hair in the gate. But there is another benefit of seeing what you are getting - it encourages you to be braver. For instance, you can do something really dark and look at the monitor and say yeah, that's perfect, whereas on film you may worry you are going too far and chicken out. Perhaps digital will encourage us to take more risks.

I find that the workflow and on-set methodology is different for every digital movie I have done. Drive was an intimate, character driven small budget movie. I wanted to be on the camera and close to the actors. So, yes, there was a "black tent", but only so I could have a calibrated monitor where I could tweak the LUT using a TruLite system. Mostly I was on the camera, and would visit the tent to confer with my D.I.T. and check the monitor. Our "tweaks" would travel with the digital negative as metadata, which would go to the lab for dailies and other production requirements.

On Superman Returns, I operated a lot from inside the tent with a remote head. Superman was a huge show, where the camera was mostly on a crane. There were many VFX, and this way I could operate while looking at a 24" HD monitor - more accurate than any optical viewfinder. The material went to my colorist who corrected every shot based on my notes and graded samples. The point is, every show is different. What is the same is that the director will become accustomed to what they see in the Avid. That is why graded dailies are so important.

On Jack The Giant Killer we had the extra complication of 3D. In this case, the D.I.T. was not only applying the L.U.T. and tweaking it, but also balancing color between the two eyes. I would check things in 3D, but generally operate in 2D.

Some people don't have a D.I.T. on set. When Bob Richardson had to leave World War Z for Django Unchained, I came in to complete the picture.

They were sending the Alexa REC709 image to on-set monitors while shooting ArriRaw. The Codex Mags would go right to a trailer on set where they had built a D.I. suite. There was a professional colorist

grading all the dailies and two other technicians doing quality control. Each morning I could go into the suite with the colorist and tweak the material before going to set. It was a great way to work.

All the new tools and technology are very exciting for us, but they are also a challenge to the uniquely artistic role of the cinematographer. We are more vulnerable than ever.

The fact of the matter is that it would be great to have final control of the image – the equivalent of a director's final cut, but I don't think it will ever happen. Most directors don't even have final cut of their movies – one reason there are so many bad movies out there. And studio contracts with D.P.s don't even give us the right to choose crew or colorist – just to "consult". So, while we continue to fight for the sanctity of our creative position, let us have no illusion we are the gods we once were.

## Michael Seresin



I do love film, I love the tactile quality of it, I love the 'patina' on certain film stocks.

I guess I have been a bit reluctant to get into the digital world because there is so much beyond your control. There's a huge amount I don't understand and a huge amount that's changing so rapidly.

What concerns me most are the lenses, they dictate the look of the film so I don't really care what's behind them. Film or digital, the principles of photography remain the same - the lighting, composition, illustrating a story with images is what's important, how that's achieved is secondary.

There are a lot of brilliant technicians who can help you out, I don't really want to spread myself so thin that I end up worrying about that technical side. The most important thing for the cinematographer should be the lighting and composition. The digital world can change contrast and colour and all that, it can alter your lighting but it can't change it.

It starts with your imagination - you can use all the technical tools and devices available the digital world offers (and maybe there are too many) but imagination is one thing it can't help you out with. One concern I do have is, with more people being involved and contributing, it can become a committee approach rather than the director and cinematographer making decisions. I'm just a little concerned with this whole new breed of people - I'm not sure that another reinterpretation of what a director and a cinematographer have been working on for a year or two needs somebody else to reinterpret it or put their stamp on it.

To be honest, I don't have a huge preference - in these financially strained times we live in where it is so difficult to get any project made, you do whatever it takes to get the film made. If you can make it work on film you can make it work on digital. Of course, the post production side is much more geared up for the digital world than the photochemical side so it is inevitable; studios and film companies want to control as much as they can.

On films like Gravity, that I came in at the end for Alfonso Cuarón when Chivo (Emmanuel Lubezki) had to leave, 65% Digital or CGI, and 35% live action, so the Visual Effects Supervisor is a major major contributor - without him the film wouldn't be made. I guess you still need the cinematographer for the overall visual look of the film, but these days there's a technical side and there's a creative side.

Some people love the technical side but I find it boring. What I find fascinating is the creative interpretation of a story-that's where I put my energy.



## Ben Davis

Someone said to me the other day because I was working with film, "You're a luddite, you're gonna get left behind"

Producers want to shoot digitally because they claim it is cheaper and save money, but it's a myth. If you shoot Arri raw, you still have to store the data-before we stored on negative, now it's on power drives and that's expensive. It's more costly because, at the moment, there are extra personnel involved. All that data - it's still there - the images have to be recorded in some way, whether it's in negative or in ones and zeros and that still costs money. At the moment the most expensive part of shooting digital is data storage and data management. All film archiving is done on film negative and there's a reason for this - it does it very well and very cost effectively.

On Seven Psychopaths, the reason I didn't shoot digital was because

we had a lot of highlight capture, the whole 3rd act of the film is in the desert with a lot of scenes with fire and I felt that film is a better medium to catch the highlights. I looked at tests and didn't like the way flame moved on the HD digital cameras. I don't think the way it captures motion is as organic as film, particularly in something very alive like a flame. I do think that the HD cameras capture areas with mid greys and renders shadow areas in a way that is superior to film, but it doesn't capture highlights as well. For that particular project I felt that film was better decision.

On Wrath of the Titans we had originally wanted to go down the 3D HD route. But because of the bulk of the camera and the way Jonathan wanted to shoot hand held, we would not have been able to shoot 3D in that fashion. Also, it was a Greek epic and I felt it needed to be shot on film, I can't imagine something like Ben Hur in HD. There is something, some qualities that film has, that HD doesn't.

The whole point of all these cameras they are making these days is to get them to match film, but I still think film has grain and texture and the way that film looks is superior to the HD format. I accept that the whole work flow is digital now, so why would you not originate on a digital medium?

On the last two films we spent endless hours of pre production talking about work flow- I'm beginning to hate that bloody word. We waste so much time in prep talking about who will handle the data, whether it will be done on set or do we send archives across town-there are so many different ways of doing it and all these post production companies are trying to find their way. In the end, the situation will be that you shoot it just like film, you'll hand over a hard drive to a facility like Technicolor and Deluxe and they will handle the deliverables and you won't worry about it, but at the moment, it takes up inordinate amounts of time, and it's all very dull. I will regret the loss of film and I believe that it is still too early to write it off.



## Peter Macdonald

Maybe we were just unlucky, but in my (limited) experience working in the digital world, I found the technology not quite ready for what it is being asked to do.

There is no doubt that the end result is stunning and it gives you so much leeway to change things but I do wish the people who design cameras were more orientated to filmmakers. I have a problem with the tented city where you're like a Bedouin tribe on the move... 4 or 5 black tents with a director in one, a DP with a DIT guy

in another, the DP or operator with the remote head in another, the 3D people in their own black tent (which I understand they need to concentrate), and another black tent full of producers and writers. Suddenly the actual actors feel like very lonely people in the middle of a set and occasionally someone opens up a flap to look out at them.

Maybe it's time for cinematographers around the world to get together and decide how they can still retain control of the look of the film, something they have discussed weeks, months, or even years before with the director. We've all heard horror stories of DPs being kicked out of the final grade of the film - I find that worrying and disgusting, or that after spending vast amounts of time grading the film, once they were gone it was changed



by somebody into something they could not recognize as their work. I can understand totally why studios insist on pre-visualisation on large effects films - it allows them a certain amount of control and input, but sometimes there's the feeling that someone in some cellar in San Francisco is doing a whole sequence without any real knowledge of the locations you have to find shoot it and does not even know the proper dimensions of the set, or what the camera can actually do. I always felt these pre viz people, some of whom are geniuses, should be part of the film as the art department is, the camera department, production, make up - so you all are there together.

At the moment, they are a very remote group that every few days send you a few new images and you have to make it work. We can build anything we want to in the CG world but very often it takes away from the reality - when everything is flying everywhere and there is no logical possibility of it being anything like reality - it loses the impact...but maybe it's deliberate and appeals to video game lovers and play station people.

The thing that made movies so great over the years - humanity and human feelings - seems to be disappearing and I find there is a slight lack of feeling towards or sensitivity to the actual story.

While we should embrace this new world, I feel there is a danger that the art of filmmaking is being taken over by technology. Fighting for control of the visual imagery is part of this but there must be enough associations and organizations of cinematographers around the world to speak out and take it back - it's their world, it's their responsibility and in the end, it's their reputation that is on the line.

## Phedon Papamichail



On Ides of March, I tested the RED Epic and Alexa versus 500ASA Super 35 and Anamorphic.

We ended up using film for logistical and financial reasons. I was impressed with the tests and feel that digital is very close or at the same level as most film stocks, but the speed at which digital is progressing is much faster. Film won't be able to keep up with the things that future digital cameras can do in terms of speed, resolution, exposure latitude, but lenses become more important, so they need to develop new lenses that work better with digital cameras.

On Judd Apatow's new film "This is 40" we had a Panavised Alexa using Panavision Primo lenses. The digital cameras will be less forgiving on the lens flaws. I only chose digital after I personally could not tell the difference between the formats. I did extensive camera tests on 3 cameras and 4 formats, in which we went all through color-correction in the DI and filmed back out. I could not detect a significant difference in the final release print. I showed the tests to people and could have labelled the result differently and fooled anybody.

The latitude seemed identical to the film stock, it really surprised me. If it's that close, I don't have a hang up about what I'm recording to. Everything else doesn't really change in terms of our job. You still have to compose, light, collaborate with directors and actors, tell the story. Of course the workflow becomes a new animal. The day is coming soon when the film print process will stop: 70% now in the U.S. deliver in digital and as theatres switch over, even the secondary markets will stop receiving print altogether from the studios.

What becomes more important than ever is that you choose the relationship you engage yourself in - what picture you select to work on. I want to work with a director that is on the same wavelength, and who wants to do the same type of movie. As long as that is the case, digital can be a great creative tool, because we are actually able to see the final look on set. I don't have to try and explain it, I can show the director and ask, do you like this look? I think it can be a positive tool but of course the perfect condition is that you're working with someone you like and has the same taste- that's always the condition. It's better to get it out on the table and have the director sign off on it on set.



## John Seale



It's old fashioned but I love film - it's beautiful.

As technicians we are all so comfortable with it, we are confident and know what we are going to get. I love to go off and make a movie and not worry about the technical side of it. Years ago when we were approached as cameramen and asked, would you like to do this film, it's a western, a romance, in that country with these actors, we never discussed format, camera equipment, work flow. Once we get through this turmoil of image recording we'll settle back down and get back into making films again.

WHO actually gets the credit for visually making them? I'm not

sure. It will take time to work out who is the author of the cinema image. Unless we do something, the diminishing responsibility of the DP will be accepted as the norm and films will be made by a committee making decisions.

When someone says that digital recording is equal or surpassing film, it damn well should be, with all the vertical R&D it gets, but it needs to get back to the simplicity of film negative. The DI off film negative has become a nightmare of problems and disappointments in terms of cinematographers losing control of their work and it's only getting worse now with so many new people getting involved.

Digital does not have to match film. It is a very tentative question but to me, the quality of the film is in the script, the acting, the directing, the

editing and the camerawork.

Does it have to be a perfect image? Only 9% of the worldwide audiences watch film. They're not worried about image quality, they care about how engaged they are in what they are watching. If you have a great script and actors, top music, the audience will watch and laugh and cry- all the gambits of emotion the director wants can be obtained using even the oldest crankiest cameras and lenses in the world and that's where the quality of the film lies.... and that is more important than the quality of the image.

## Vilmos Zsigmond



Yes, we have a problem in the digital world - we have a lot of people who want to finish our job and it is easy for them to come and push buttons and they can change all the images as much as they want to. This is a BIG BIG problem.

You would need a union to solve it but they won't do anything because they are so scared of the producers during contract negotiations, the healthcare, working hours, etc. This is an artistic problem. The ASC is not able to help us because it's an artistic organization they just want peace.

I am trying to get the agents to put it in a cinematographer's contract that the final image control is ours. At the moment, the director, editor, visual effects - anybody who wants to "help", (meaning to change

colors, contrast, mood, the look) can do that, but if they can't convince me that it is better than the original idea that I had worked with the director in preproduction and shooting, then I would like to go back and control the final decisions myself. It is like when directors used to have final cut. I don't know what it would take to fight for this, but I'd like to establish a way for cinematographers to get final image control. We have to prepare ourselves for the future.

A lot of people are saying that film is too expensive and that it is too complicated but that is absolutely not true. Working on film and finishing on film is so easy compared to the nightmare you've got during digital photography. They say that we should manipulate the images on the monitor on set while we are shooting - the images that will be used in the final version, (if they don't change it). You see on the screen what you are working on at that moment, but then it goes to the laboratory where the technicians have to transfer those digital images (as data) and put it into a system that is not the same as we made on the set.

When someone says they couldn't sleep at night because of what the dailies would look like, well, I CANNOT SLEEP AT NIGHT thinking about what these digital people are going to do when they make their version of my work. We are in danger of shooting something that is never going to be used the way you shot it. We should have the right to control the final look of the movie.

What we are forgetting is that we are working with the director and the actor to get the performances which is the most important thing in any movie.

The most important part of our job is to tell the story with the right mood, composition, lighting, camera movement, etc. It is what you put on the screen.

The cinematographer is the person with the knowledge, expertise and artistic background to know what their film should look like. If a director starts listening to many new opinions, we, the cinematographers, are going to be left out of the process and the original intention of the movie will be compromised.

## Mike Brewster



Cinematographers work so long and hard on the DI to get the look they desire and then other people come in and change it.

Roger Pratt said that when you're shooting and go through DI, it takes the skill away from the floor because you don't have to get it absolutely right. Bruno Delbonnel told me it makes his job on the floor quicker because he knows he can manipulate it in the DI afterwards. You still have to get all the balances right, but certain parts of the frame you can change.

I was brought up in the other world- of getting everything right for the rushes the next day, and later on for the release print. It's a very useful tool, I enjoy it but I think a lot of people tend to rely on it too much. You have to get the basic balances right and then manipulation becomes a lot easier.

Manipulation means anyone can change it, and there are very, very few DPs who have control of that - it depends on their contract, and like directors, very few have final cut these days. It is not the DOP who controls the final look anymore, it is whoever is in charge.

On Jack the Giant Killer the DIT operator always came to me to say what would be better - you have to live with that situation because if the DIT and the DOP don't have a tight collaboration, it won't work. We were in the black tent with the histogram - the wavelength monitor used to judge skin tone, prevent clipping the whites or the blacks to make sure you stay within certain parameters.

I had the adjusted monitor and "what you see is what you get". The discussion in the tent with the DIT operator is about whether the rest of the picture looks good, these things are acceptable or not.

Knowing that probably no major motion picture will be photographed on film anymore, I'll miss that way of working - that you have to get it right on the floor, that you have to trust your eye, know how film reacts, and be precise but as Bruno said, it takes a little more time.

Previously you knew exactly what you were doing but now because of the manipulation you lose control - other people come along and manipulate it to what they want it to look like. That's not what photography or cinematography is about - it's a craft that you spent a long time learning. You have to know what you are doing and today, it gets so easily abused when unqualified people come in and change what you have done after you've gone... but that's the way the world is now.

## Robbie Ryan



The changeover to digital is happening much faster than we imagined.

I had hoped that film could co-exist with digital but the infrastructure is so damaged, even co-existence is threatened. Laboratories can't survive because they're not getting film to print for projection. Digital projection is taking over.

The 35mm image projected on film, the movement of the image, the focus, the density - is beautiful. Personally I find the digital image more difficult to get enjoyment out of. Words like emotion, depth, texture - it's hard to put your finger on it or to describe objectively or technically what you perceive. For a lot of people, it's an unconscious thing. It's the

romance of that magical chemistry of things that mix together to create this lovely rendition. I always choose slower film stocks, with much finer grain, and I know how that works for the blacks and the highlights. I would use 500 ASA in low light situations with the knowledge that it wasn't too grainy but it would retain the blacks and I'd be able to shoot with darker blacks, the density of the negative would keep the blacks. To shoot with a digital camera you have to shoot at 800 ASA and I've never shot 800 ASA in my life - with this very sensitive chip, there is so much detail to be gained - so much to be captured. The digital chip doesn't keep the blacks, it sees into the blacks. That's what they say in post - you can 'contrast it up' in post, and do all of that work, and have the benefit of having detail in blacks, as well as knowing you can have the contrast. Well, having a situation where certain people advise you that you can deal with all of your

darker photography and all of your brighter photography by keeping it at a certain level (pulling it to dark or bringing it up to bright) but we won't lose the details - that FREAKS ME OUT. I don't like it. My style is more organic or natural - I like to catch the naturalism in everyday life. My secret weapon is the knowledge that the 35mm or even 16mm film stock will translate into the way I want it to look, it's grainy but I like the texture of it. I know what film stock will do for me so I love that. Looking at the monitor of a digital HD camera, I know that's kind of what it's going to look like - and that freaks me out. I prefer not to know what it will be like and then grade it later on. In my mind I know exactly what it will look like on film stock, and nobody else does and that's the advantage. Unfortunately we just have to buckle down and make the most of it but still I only wish that film could co-exist alongside the digital format.

## Oliver Stapleton



I consider it to be the best of times right now for cinematographers because we have this vast range of cameras available to shoot both on film and digital.

There are at least two elements in the choice you are making in any given situation, the aesthetic - the type of image you want on screen and the other is environmental, you may consider film more appropriate to a situation because of its simplicity. Film is so simple to shoot with - you put it in camera and off you go; digital you have a whole trail of cables and people and monitors and tents, so just by virtue of that it's more expensive to shoot and in terms of what you have on set, it's more cumbersome. Digital adds a whole layer of extra personnel and all the 'charm' of very high tech electronics. What used to be relatively simple has become very complicated. I spend my life trying to minimize the intrusion of machinery into the working space on a feature film because I think the actors and the director and the drama need to be uppermost in everybody's mind. If you cover the sets in gizmos and

black tents and cables and DITs and people everywhere, I think it just makes it much harder to make a good film. The manipulation of what you need to do digitally to make a digital movie look like film is still a big task. People don't like the fake film look. If everybody is just purely measuring cameras in terms of - how many stops of latitude it has got, what's the resolution, and you throw everything else in the ditch, that is wrong. I certainly welcome these new devices to add to our armoury of tools for making moving images, but I don't see quite why one has to take technical parameters (that are so subjective and specific to a given movie you might be shooting) and make that the criteria for choosing how we make a film. We need to learn how to work with digital and learn what to protect, who needs to be involved. If we don't lay down those ground rules very rapidly at this point, the opportunity will be lost for the habits to form. It's a very important time in the next few years for the established cinematographers who have the clout to set some rules and standards, because if we don't speak up now, our job will be seriously diminished. The power will go out of the eye of the cinematographer and into the hands of ten other people who think they have something to say about the way the picture looks. It is The End of an era, but it's not a reason to jump off a cliff.