

CAMERACRAFT



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THIS ISSUE of *Cameracraft* has appeared much later than originally intended. As readers will probably realise, it's not a commercial venture though subscriptions have so far covered our costs. It remains my favourite 'task' in the calendar but with the first three year run completed I have to accept that it must now retire (even if I don't).

In 2012 when I met Gary Friedman over a kitchen table we knew it was almost impossible – either the whole world would love it, and anyone claiming to be interested in photography would absolutely HAVE to receive *Cameracraft*, or it would be a rare collector's item with a small subscriber base.

In 2014 Icon Publications Ltd re-acquired *f2 Freelance Photographer* which we had founded as *PHOTOpro* in 1989 and sold to EC1 Publishing in 2007. They concentrated on its appeal to student readers and professional trade advertisers. We returned to a broader scope of content to interest all photographers, improved the print format and quality, changed from ten issues a year to six, increased the price and saw circulation start rising immediately.

I was now having to decide whether a set of images or a story was best for *f2* or *Cameracraft*. Gary's contribution has been exclusive to *Cameracraft*, my own writing has been divided with difficulty. The only things preventing the two publications become a single one have been postage weight and the pleasure of creating *Cameracraft* as an 'ad free' title.

Cameracraft will merge with *f2* from the November/December *f2* edition (published October 2015) onwards. Gary Friedman becomes US Associate Editor of *f2*, and our regular features will become part of *f2* – the 8-page portfolio included.

No subscribers will lose out, no further subscriptions to *Cameracraft* will be taken, and we'll inform all readers by post or email about choices available. *See Page 501.*

– *David Kilpatrick*



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FACING THE CAMERA

Bruce Gilden's new book is just called **FACE**. In the age of selfies and street photography, his latest portraits defy both the narcissism of one and the covert observation of the other. He confronts some difficult features directly.



Bruce Gilden claims to have confronted his own personal identity problems in a new book from Dewi Lewis published in August – **FACE**. The 49 portraits featured in this plain covered edition are not flattering and they are not confrontational street shooting. Instead, every subject has been photographed close up with a dauntingly large camera and rapport with the photographer.

A Leica S camera was used with standard 70mm Summarit-S, stopped right down to *f*22 to capture every detail by the Magnum member.

Gilden says he has been tracking 'characters' down all

through his career. Growing up in Brooklyn with a 'tough guy' of a father, he developed a love of the streets as his 'second home'.

"The basis of this project is to show people who are left behind," Gilden says. "A lot of these people are invisible and people don't want to look at them and if you don't look at them how can you help them? When you pay attention to those who are usually ignored, it makes their day. That's not why I do it. I'm not claiming to be a humanitarian; I'm a photographer. I always photograph what's interesting to me and it has always been

people who are underdogs because I see myself as an underdog."

In his essay for the book, Chris Klatell writes: "They say to the viewer: So, you've constructed your 'social network' out of aspirational pictures, of yourself and of your 'friends', but what space does that leave for these people? They are my 'face book' friends. You need to look at them – at us – too. You can't make us disappear with digital photo filters and social media platforms that act as a real world filter, sifting from your 'community' all that is discomfiting. We are

here, closer than you might remember."

Gilden worked on this series for two years, including a two-week trip to Bogota commissioned by the Archive of Modern Conflict. In the USA, he visited state fairs. The two images above are both from Iowa State Fair, Des Moines, 2014. Left: *Nathan, a farm boy*. Right: *Jamie, a farm boy*. 

www.brucegilden.com

FACE by Bruce Gilden.
Dewi Lewis, £35, cloth bound hardback, 370mm x 247mm 104pp, 52 colour plates. ISBN: 978-1-907893-75-9. See: www.dewilewis.com

For those who don't yet have the new cameras of 2015, the prospect of more and more megapixels is enticing. For those who have bought or even borrowed the new cameras, a great sense of calm has replaced an urgent desire to replace their perfectly functional existing gear.

With the Canon EOS 5DS in our offices to test, part of that process meant lending it to a professional who was thinking of buying one. Three days later he was glad he had not; the disadvantages of the larger files, higher noise levels and slower shooting and review rates outweighed the theoretical higher quality of the images. His Canon 5D MkIII and D1X bodies would continue to be the workhorses.

At the same time, I had acquired a Sony A7R II – by the usual painful process of purchasing, since Sony's ability to lend units in a timely fashion is defined by generally having only one camera body to do the rounds of fifty bloggers and publishers. I don't believe in reviewing a camera on the basis of a few days use when other work limits the potential to shoot in a sufficient variety of situations to find out anything useful.

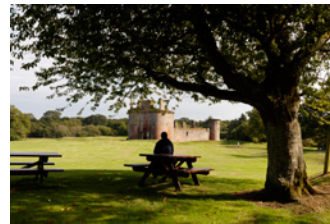
Now I do not regret this because the A7R II brings so many other upgrades relative to all the range of previous models. It would be just as desirable had it been 36 megapixels not 42, and probably worth buying even if it had been a 4K video capable, silent shutter enabled revision of the A7 II. The actual difference made by 42 versus 36 megapixels is not all that significant, a mere inch or so extra on a large wall print or a small extra cropping margin.

Anyone who is looking for telephoto reach from today's full frame higher resolution sensors is misguided, as relatively inexpensive bodies like the Sony A6000 are already better able to extract detail at long range (56 megapixels equivalent) and one-inch sensor bodies like the Nikon 1 series can do even more. Where the full frame sensor gains is that you don't

CAMERACRAFT UPDATE



More pixels mean more scope to crop. With no way of getting closer and 16-35mm at 35mm, the Canon 5DS shot on the right is loosely composed. But the crop below is still bigger than a Canon 5D MkIII file. 300dpi clip, left.



aim for ever longer lenses, but use the framing leeway – fit a 300mm lens, but think in terms of needing an 18 megapixel finished file. That is the APS-C crop from an A7R II. Keep your moving bird in the centre of the frame, use electronic first curtain release, and you have the highest chance of getting

difficult shots without any cut-off or subjects partly out of the frame.

The A7R II actually introduces some far more important technology than mere extra pixels. It uses the first backside illuminated full frame large pixel pitch sensor, with a shallow microlens

and filter layer. This not only more than doubles the photon-gathering area, it also changes the focal length and aperture of the microlenses so that telecentric lenses are no longer needed; almost any back register of lens, including extreme wide angles, will work without vignetting or shading. The same change makes phase-detection focusing on sensor able to cover a wider area of the frame with faster more accurate focus from a wider range of different lenses.

The improvement is so great with well matched lenses – generally those designed with focus motors and distance encoding for reliable contrast detect AF – that tracking speeds compare well to consumer DSLRs. In fact, a direct comparison of the Canon 40mm STF $f2.8$ lens (one of the best for adapted use) on the 5DS and the A7R II with Commlite EF to FE the speed of focus change was better on the alien body.

The need for telecentricity has decided the design of entire systems in the past. The original FourThirds system was based on a very long back register for the format size. Nikon and Canon both have large and expensive 'holy trinity' lens sets (16-35 or 14-24, 24-70, 70-200) whether in $f2.8$ or $f4$ aperture, often with surprisingly elongated lens barrels. This is all done to optimise the digital performance. Suddenly, with the Sony 42 megapixel BSI CMOS sensor, the need for such designs is removed. However, even Sony still goes down this route as every other body they have ever made uses older sensor technology and needs telecentric lenses.

So, 2015 will be a watershed year in one sense – ten years of digital lens bloat can be forgotten from now on – but will have no effect as it will be another ten years before all sensors are made this way and makers start risking optical designs which allow shorter back focus distances and more oblique angles of ray incidence without smearing, vignetting or colour shading.

My first lens purchases



The 12mm Voigtländer Ultra Wide-Heliar f5.6 – original Leica screw model – needs no colour shading correction, no special vignetting correction, and yields superb film-quality results on the Sony A7R II backside illuminated CMOS sensor. Caerlaverock Castle at f11.

after getting the A7R II were a Sony SAM 85mm *f*2.8, because this lens focuses quickly and perfectly on an adaptor with no translucent mirror, and an original series Leica screw thread Voigtländer Ultra Wide-Heliar 12mm *f*5.6 because it's unique, unfashionable, and can accept filter systems which the newer Mk II version will not. And it works superbly well on the camera, just as if the image was shot on film.

As the A7R II also has an impressive high ISO performance, both electronic first curtain and totally silent modes, a larger electronic viewfinder (if not very colourful) and a good range of 4K and 2K movie modes all writing directly to internal SDXC card it should have a reasonable life before obsolescence. It also has a very solid all-magnesium body, a shutter rated to 500,000 actuations and has been packaged by Sony with professionally essential extras of a second battery and a mains charger.

During the summer, I had a chance to try a few key new



The Ultra Wide-Heliar on the A7R II – a camera now able to use this lens without needing any correction

products. The Tamron 15-30mm *f*2.8 lens proved to be exceptional and fully useful wide open, but definitely a product in terms of size and weight of the *pre-BSI-CMOS era*. The Nissin Di700A and Air 1 wireless remote flash kit was tested by mixing Sony and Nikon fit flashes, controlled by one commander on the camera. It's the first system where all three types of flashgun (Sony, Nikon or Canon) can be used in one multi flash set up and will work with any of the three commanders.

Then we learned that Elinchrom, Sekonic and Phottix are now working on an industry standard which will in future enable all flashguns and studio flash units to be controlled wirelessly by all cameras. Like the change in lens designs presaged by the A7R II, this may take a decade.

As we went to press, the Chinese devaluations continued to push down the price of many accessories and presumably will limit the cost of many lenses and cameras. Flash memory, whether

affordable 64GB SD cards which unlock access to higher quality video or big SSD drives which will transform computer storage, is falling in cost by the day. Manufacturers are turning to the craftsmanship levels found in Vietnam (the new owner of Tamrac bags moved production from China), Thailand, the Philippines and India. It can only be a matter of time before Africa becomes a manufacturing centre. Against this, global reserves of metals vital for all of our current technology are known to be inadequate and at a certain level of scarcity may begin to force the costs up again.

Cameracraft was launched two years after the first mirrorless cameras arrived. We have recorded a major shift away from DSLRs and an increased interest in the use of traditional film and processing. As a snapshot of a critical phase in the development of digital photography and video, our three year window of magazines should be of some value a century hence.

– DK



SOFT & CLOSE

TREEZA CONDON MOVED FROM A CAREER IN BUSINESS MARKETING TO CREATE HER OWN BRAND OF MARKETABLE PHOTOGRAPHY. THROUGH PLATFORMS LIKE FINE ART AMERICA SHE NOW SELLS CREATIVE MACRO IMAGES ALONGSIDE REGULAR COMMERCIAL ASSIGNMENT WORK.

A prolific output and wide range of interests may pay well in general photographic practice. Wiltshire, UK, photographer Treeza Condon has been learning new skills and tackling an ever-growing range of assignments since she moved into photography eight years ago. You can find her work on Flickr, and she's a member of SWPP, one of Britain's professional groups.

It is through Facebook, however, that she found one subject which obviously appealed. After buying a Sony A7R with its unrivalled 55mm f1.8 Carl Zeiss Planar, she



acquired some inexpensive extension tubes and started shooting at wide apertures with generous exposure to create subtle, soft focus

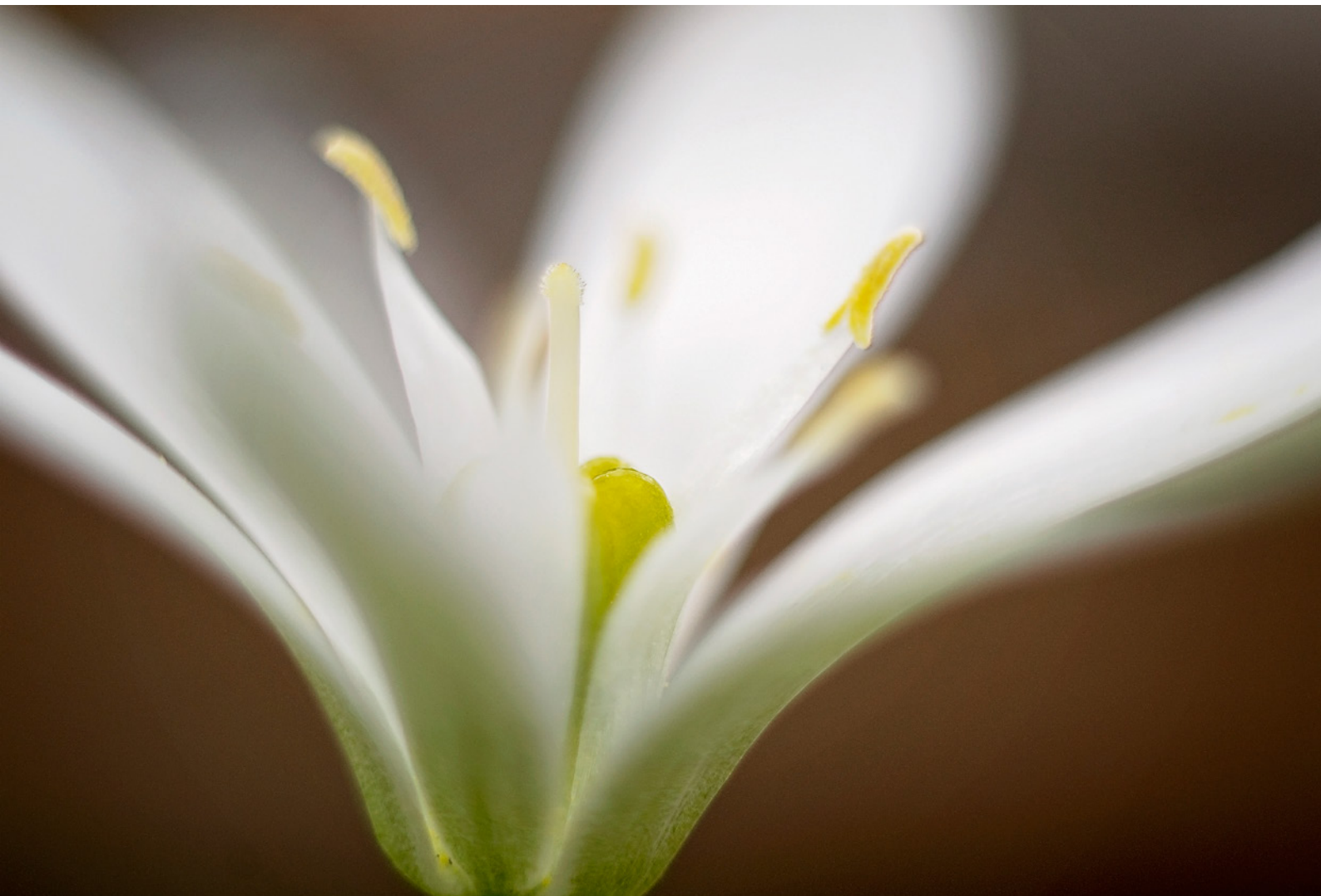
flower and plant studies with just a tiny zone very sharp (upper images on this spread, left hand page on following spread). To achieve even higher

magnifications (she teamed the tubes with a Canon 40mm f2.8 STM lens adapted to the camera (lower images here, right hand page following).

The first images were just creative exploration and often used high ISO or additional cropping. Now she aims for fine art print or stock image quality and works at ISO 100 – the lens is often wide open and very high shutter speeds ensure the tiny subjects don't blur through wind movement.

It's her use of colour and tone, and soft light, which makes these images work so well.









Treeza has only recently started to see the potential of this work for wall prints and stock photo uses. You can find her at: <http://fineartamerica.com/profiles/treeza-condon.html> where, for example, the image 'Blue Haze' (left) joined her collection in July. She has recently been recommended to a leading science photo library by one of their specialist floral and botanical contributors. You can find her on Facebook under her own name and also her business page, Treeza Condon Photography.

I came to photography through photography's back door, eschewing a camera for a cell phone. I had no more expectation, at sixty-five, of becoming a photographer than I had of becoming an astronaut. I had always taken pictures dutifully upon command – snaps of family or friends. As the dad who gets handed control of the family point and shoot, it was down to me to take pictures that served as memories of holidays and events. Everybody one inch tall, all with legs that stopped at the knee, squinting into sun for a count of *three... two... one...*, in front of a tiny Niagara Falls to be glanced at, recognized, good times remembered, bad moments forgotten, all for a second.

In Buenos Aires there are jacaranda trees in the spring. The leaves turn beautiful shades of yellow and purple with the force of spring, much stronger than leaves turn here in Canada where I live. with the waning force of autumn. I wanted to take a picture of the leaves. On impulse I stood below the branches and aimed up, expecting a lousy snapshot. Who knew why I went below? And I snapped, as blind as ever, expecting as always that the camera in the cellphone would 'see' only what I was looking at, not what was there, and expecting the inevitable disappointment from a 'lousy' picture.

But this time the photograph, the branches, the composition (a word I thought belonged to high school essays) were balanced, even delicate, and the pattern led me into and through itself. It was what I thought was as balanced and as beautiful as a Chinese landscape. I wanted a souvenir of a tree. I what I got was more. What I saw on the screen stood for itself and by itself, was no longer the vestige of a tree, a trip, a memory.

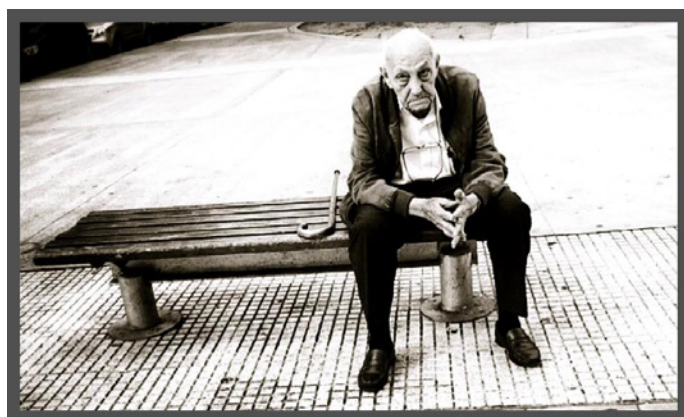
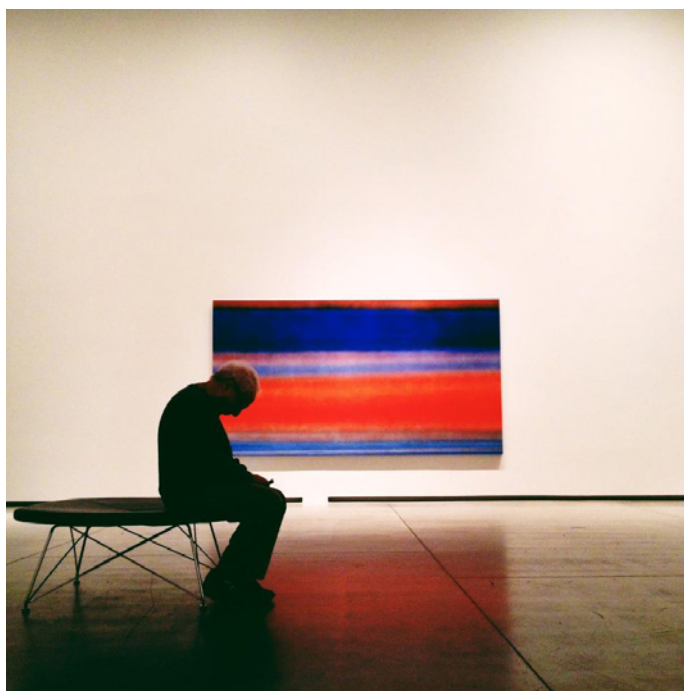
I went to the countryside of Argentina. Valleys bordered by Andean ridges, and again discovered I was taking photographs rather than holiday snaps. I took some photographs. Clouds had

PHONE ENCOUNTERS

Street photography can be a very tricky thing... striving to be discreet because the subjects might get perturbed (or worse).

But one look at Danny

Cass's body of work shows a different tack is being taken here – he mostly uses an iPhone very close, and it appears that his subject might be aware of what he's doing. How does he do this without getting beaten up? And what is it about his subjects that make them so intriguing? Danny tells his story.



billow, horses had shiver... you could feel as much as see the forces of nature. I loved what I saw on the screen.

It was, for me, like waking up one morning to find that I could perform root canals, or could play piano. Suddenly I knew what I had never imagined nor even felt there could be a need for me to know – I knew I could take photographs. I knew I *should* take photographs. I knew I *would* take photographs. And I went back to the city. But I had 'done' a tree. And horses, shiver and all, were not to be found here. Geography was no longer a matter of trees and mountains. Geography became the human face. I could still capture geography but now it would be the geography, the topography, the feelings of the face. And you find faces on the street.

I started taking photos of people. I didn't see myself as a street photographer. I thought that street photographers anticipated situations and interactions. I thought if two cars were heading towards each other, a street photographer would anticipate and photograph the crash. I wouldn't be able to anticipate or catch the crash. It would be busy trying to take a photograph of one of the drivers if they had interested me.

And those who interested me were people who seemed to answer questions that I had never known to ask until I saw them – people who were visually and emotionally interesting. They had to be different. What they showed they felt – or what I would pull to portray from them would be what any and all of us would or could feel.

I had only an iPhone with me when I went to Argentina and took the picture of the tree. I decided to keep using it. I used only an iPhone: a tourist frozen in a holding-camera stance is an invitation for a motorcycle thief. A more concealable iPhone seemed worth sticking with. But there were drawbacks. For one, you had to get in close. The best way was to become someone



boring to look at. Nothing more boring than a guy talking on the phone, then trying to fumble for something in his carry-bag while holding the phone pointed at you while he's rooting... There are other ways. Subtle ones like self-timer so you can aim and look away and still get a shot. Headphone cords that allow a photo when the volume control is pushed... phone set to silent. No click sound. The silencing of a phone click is forbidden in Japan: I suspect for reasons of moral panic about school locker-room candids.

It's easy to get close but

not so easy to do so unnoticed. All of us, I'm sure, know what it's like to look for too long in the direction of someone else in a restaurant. A look of discomfort quickly signals that a 'permission guard' has been set up, so we look away. I think people always know when they're being 'clocked'. It's the same when I aim the cell phone. I know it, and so do they. If I continue beyond the defensive reaction – if I continue to root in my bag – we both move on. I think it crosses everyone's mind when I'm in front of them that I might be taking a photograph, but I then think they dismiss the thought.

I think it crosses few minds if I'm only in peripheral vision. The best is to pre-aim, to remember with haptic memory where you had aimed, point the cell phone away, then look away, and then re-aim the camera with your recall, haptic recall, of where you want it to point...

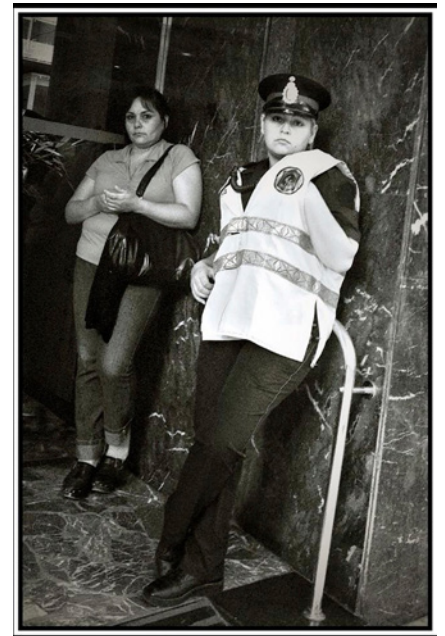
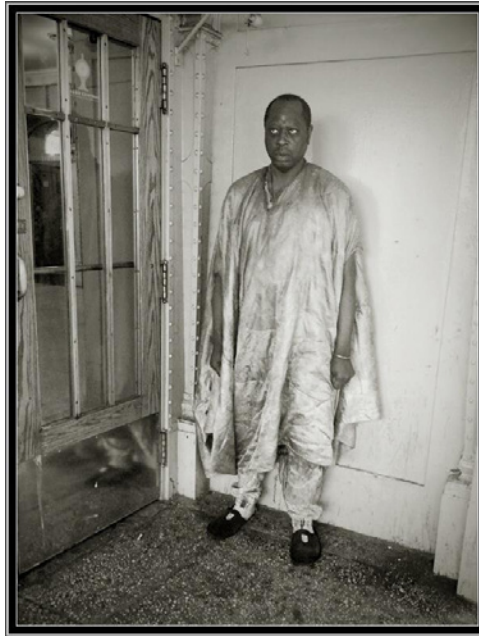
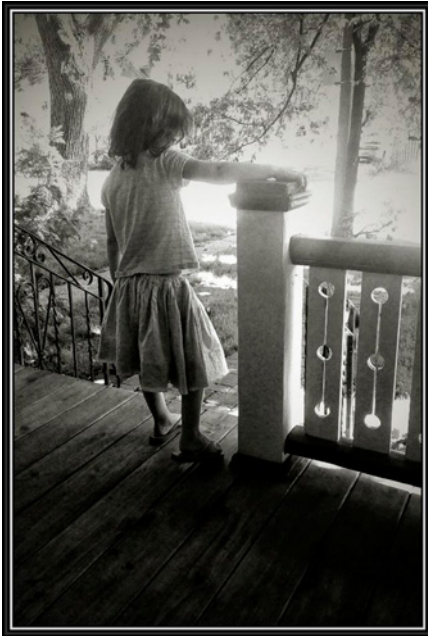
I am interested in those to whom a lot has been said and whose faces say a lot in return. I don't knowingly seek a particular aspect or a particular effect. When I see a face with a story, I want it told. Asymmetry, cares, expressions usually unseen, evidence of dystopia, evidence of utopia,

these interest me. The story has to be different. Each subject, each person, each story, has to be visible as what it is, a story somehow different from stories before, and stories to come after.

What moves me is expression. I usually only take in one person, occasionally people interacting. I prefer portrait orientation. You don't have to scan or sweep or search a vertical photograph of a person to know what is felt, what's right here right now in a face, a posture, a mood.

I have been trying to use a camera instead of the phone. I think there are places available





with one to which passage is denied if I stay with what can fit in my pocket. I make the joke that I have lens envy but it's really more a matter of focus. Not focus as the result of being out of focus when I take it, as the depth of field with a lens the size of a virus is close to infinite, but as the result of what happens when the photo gets blown beyond cell-screen size, especially when a photograph has been put through destructive editing, with results like you once got with repeating photocopying. The loss leads to fuzz. What began in Las Focus doesn't stay in Las Focus, unfortunately. But the world is a different place with a cell phone in hand than it is with a camera as I am currently learning.

I've tried using a "normal" camera (I'm graduating to a Sony RX-100) but it's hard to be inconspicuous.

Vertical bodies

A camera forces landscape perspective. It's hard to be inconspicuous with the hand gymnastics necessary to hold a camera vertically. And so I am forced to consider and take in the whole wide world. The cellphone held vertically forces a natural cropping to get through to the person. And most people are vertical. A camera seems to be more about relations, broad canvas events, a play, players.

For me the person I photograph is a canvas, the cell phone a brush: feelings are mine, theirs, the mix of both, the paint. But a camera forces more. The smells, other scenes, other sounds, the world, it doesn't stay back. It crashes in through both sides of the frame. The rules of thirds gets amended to one third subject and two thirds noise, until I learn to take in, and then take on, this Cinemascope of demand on

how I fill my frame. I haven't yet been able to get there. My camera photos are rife with distraction. Lines leading away, aliens aplenty. One work around I'm trying out is reliance that pixel count lends itself to enlargement, and enlargement allows distance. So I can go for a bit of the long end on my RX100, and close in on a person from farther. Anyway – Pyramus and Thisbe over by the fence don't really take to a guy 'talking

animatedly on the phone' two feet away, while he aims, shoots, and scores. A little farther away, the articulating frame of the camera allowing me to look down and hold it sideways, and I can get a photograph.

When selecting an image, I am not looking *at* or *for* composition, or even light, so much as emotion. I usually have my cell on burst to catch just the right nuanced expression. Burst mode, and I've got the spectrum, the range of human abilities to ponder or to feel, *in flagrante delicti*. Do I want a mother and child happy, quizzical, engaged, enthralled, avoidant?...a minute's burst can often serve up any and all of the above.

Post processing spans a gap between taking and making the photograph for me. When I'm in post processing it's like baseball. Every pitch changes both strategy and tactic for the next. One pass of an app (remember I'm only using Apple iPhone) and then one more, and correlation and cause with what you originally saw go by the board. Doors open, windows close. And what I want to emerge, the elision between what I saw and what there now is to be seen, between myself as object, and the other as subject of some new visual verb develops.

And there are a gazillion image editing apps for the iPhone. My favorite trick for correcting for bad light is to



push it so far it doesn't so much develop or emerge as generate, and is generated, both...

The first act of post processing is not so much work on one photograph as selection of one or a few from several.

Here I am not looking at or for composition, or light so much as emotion. I usually have my cell on burst, and I do for a reason. Children draw 'a person' smiling with arms up more often than not. We imagine someone with a bland or benign countenance when we think of them without a specific memory or context to force a recall of their expression.

What I'm getting at is there is a mile between how we walk around, and how we think we do, and the limited range of expressions we think we convey, and the wide range – of expressions a mouth or an eye, or the angles of a head, can pass through in a second.

The most common expression is the one we never



think we see, a frown. If I am across from you on a subway, all I have to do is wait and you will shift in your seat, shift in your expression. Perhaps you remember when your kid made you late cleaning up a spill this morning and you frown,

perhaps you are indulging in serious consideration of where and how to place your elbow, and you look to be out-thinking Socrates...

Changing to a regular camera may also force or allow me to abandon apps. Apps

and the use of them with cell phones force a kind of "off the peg" invention. The size of a cell phone screen means that most apps are global, and masking or brushing are impractical, I have had to learn how to work around problems in unconventional ways. If I have a photograph of someone backlit, I can pass the photo through a red filter, and lighten the face when there may not have been enough time to pre-meter on the neutral grey of a sidewalk in shade and the cell phone metered on the average light in front of it.

The goal of a sound tech at a stadium concert is to make what you hear sound like it was acoustic and in your living room. Perhaps, and perhaps in similar fashion, a camera and a post-processing program will allow me to get closer to what was right there in front of me.

So... we'll see what happens with a shift to a camera. Literally. Visually. Hopefully emotionally.



FILTER REFLECTIONS

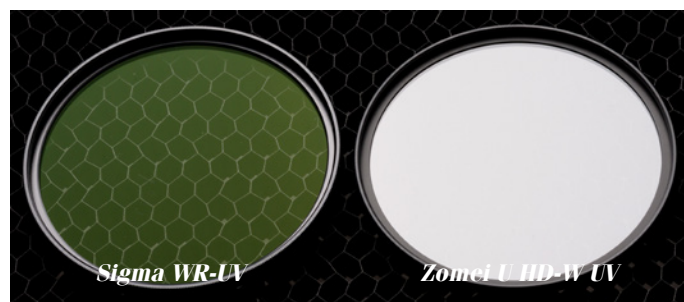
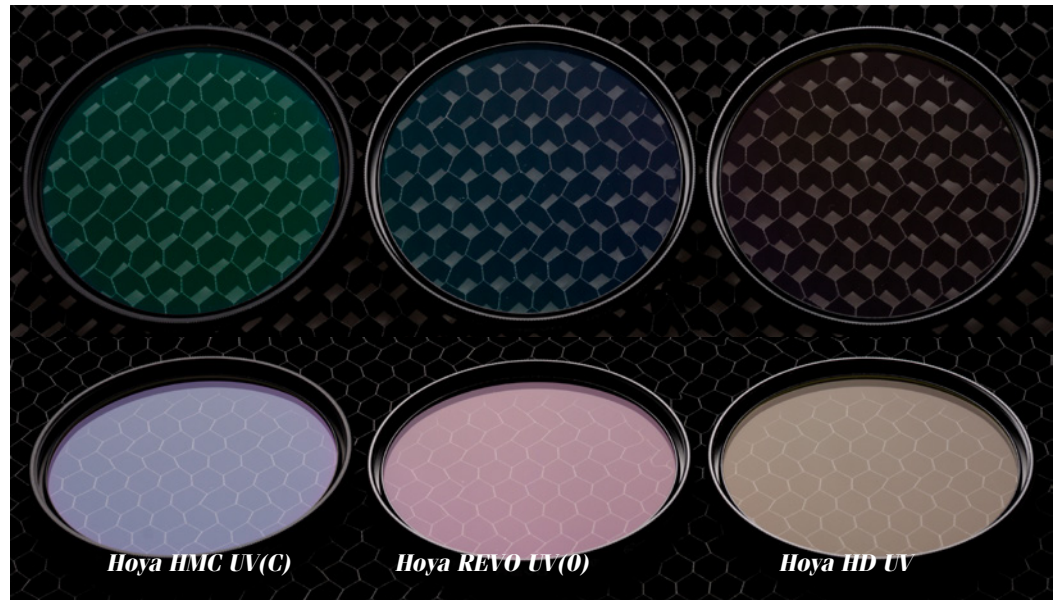
DAVID KILPATRICK EXPLORES THE HIERARCHY OF PLAIN UV FILTERS

If you have never seen an illustration like the ones on the right, it's because very few testers can be bothered to devise ways to show the big differences between filters

For this test, I'm looking only at the coatings applied to filters, because it's the coating which adds most to the cost. Chinese factories are using exactly the same Schott glass as German ones now, though no information seems clear as to whether this is raw glass (melted and then made into filters) or finished sheet material ready to be cut and mounted.

The top picture on this page shows three Hoya filters. Hoya is a glassmaker, and part of Kenko Tokina. Right now there are interesting moves taking place. The same corporation has over the years made many grades of filter – Hoya has been the 'top' brand, Kenko the second line, with numerous independent re-branders following from the same source. However, Kenko is now moving to establish its own name as the top brand. Hoya, in turn, has acquired an overall three-tier (or more) quality grading.

The top double picture shows two angles of incidence/reflection on three popular types of Hoya UV filter. I've placed the filters on my Elinchrom 44cm softbox honeycomb, as this provides a very good dead black field with some visible detail. The light source is a 60cm softbox and this – with the camera equal and opposite – aimed at the filters at around 40° in the lower most reflective line-up. What we are trying to show is the actual efficiency of the multicoating. You will see faint hint of colour, but this is not



the 'colour' of the filter. It's actually the reverse.

If a filter or lens coating looks green to the eye, it will tend to make the picture slightly warmer (magenta). If it looks blue, it will transmit more yellow. This is because the colour of any lens or filter coating you can see is its worst efficiency – this is the wavelength band it is reflecting, and not transmitting. The thickness and complexity of multicoating will also determine how the colour appears to change off-axis. In the top picture, the top row shows the effect on rays passing close to the centre of the image, while the bottom row shows an angle, similar to the outer field of a 24mm lens. This test emphasises the

colour differences, but they are real enough, and combined with lens coatings and vignetting will produce slightly different subtle changes to the outer zone of your images with wide-angle lenses, relative to the centre colour.

The Hoya filters recorded top are (from left) the popular lower cost HMC, the new advanced coating REVO SMC, and the water and dirt repelling new HD which claims the most efficient multicoating. The differences are subtle but the HD does show its neutrality and high efficiency.

In contrast, the lower shot shows two non-Hoya filter choices. The bright reflection is the popular Amazon market Zomei brand basic UHD-W UV. At around £20 versus around

£70 for a similar size Hoya REVO or £60 for a Sigma WR, the Zomei is clearly a total waste of money. I doubt if it is even coated – it claims Schott glass, and does indeed have a very slim and excellent aluminium mount rim. But in terms of coating, it's a heap of steaming light reflections and likely to produce serious contrast loss and ghost light sources when used at night or into the light.

The 'darker' filter is a new Sigma WR-UV. This is a water and dirt repelling, antistatic nanocoated upgrade to the popular Sigma DG filter series – already, in my opinion, one of the best made. Actually, the WR does not seem to have as efficient a multicoating as the older DG, but it's a tougher coating.

It completely wipes the floor with the Hong Kong Schott glass Zomei. That difference is in coating efficiency. A totally effective coating would mean the filter glass was invisible and the Sigma WR and Hoya Pro1 HD both come very close to this.

Scam filters

In Tenerife, I found that the tiny front element of Sony's 16- 50mm SEL kit lens is very prone to show any dust, water drops or marks sharply in images, so I looked for a 40.5mm UV filter to protect it and allow vigorous cleaning (as when hit by spray out on the water).

The final result, and the only one available in that market, was the Digi Optics item shown upper left. This makes ridiculous and meaningless claims like 'Super High Resolution' and 'Day and Night Vision' – some others even claim 'Infra Red Coating'. It says 'Multi Coated'. Well, it's not. It is a cheap piece of plain glass in a cheap mount, and the Asian store owner's initial price of over 40 Euros was easily knocked down to 10. It is not coated at all, as a quick check with reflected light showed. It's easy to tell a properly coated filter as the examples on the facing page show. Not only was it not coated, the glass was so far off from plane-parallel that it softened images visibly.

On return I obtained a Hoya REVO SMC UV(0) for comparison. What a difference! I'd done some coating comparisons in the past, prior to the new generation of water and oil resistant nanocoatings, fluorine treatments and the growth of the big Chinese filter sector. I found an existing Sigma DG, a single coated Rodenstock, a multicoated B+W; obtained new Hoya HMC UV(C), REVO SMC UV(0), and HD Digital; a Sigma WR-UV; and one of Amazon's choices, a Zomei Schott glass slimline UHD-W UV (*which seems to stand for Ultra HD or 4K, and wide-angle*). These were placed on a Colorchecker Passport which provides a good black and also a general colour reference, using the 40° opposed light and camera angle to show the effectiveness of the coatings.

The Zomei – not the one they make which claims 18 layer coating – shows itself to be effectively uncoated and indeed, there's no reference



to any kind of coating in the tech spec. Buy a £20 72mm filter, and that's what you will get, Schott glass and high pressure 3.2mm rim mounting notwithstanding. In practical terms it will produce light loss towards the corners with lenses covering an angle over 80°. You may not believe me, but I can assure you that if you can see a very strong reflection, that component of incident light isn't passing through the filter! It may only be a few percent but it's added to the vignetting of any superwide lens, which is already likely to be between 1.5 and 3.5 stops

As for the most efficient filters seen overleaf and facing, the differences are smaller than the visual reflection test indicates. You should also

test the inside surface of the filter, as they should be coated both sides for best ghosting and flare suppression. The need for the highest level of coating became clear to me when shooting 4K video at night and using a simple multicoated filter – lights in the picture were clearly mirrored as moving, sharp ghost reflections. You can't retouch these out of video the way you can fix a still shot.

Remember that a weak coating is also casting a veil over the entire shot when there is a bright sky or a window, or a white background in the studio. Removing the filter entirely is the best answer – but if you're working in dust, rain or danger of knocks you really do need a UV protector.

Mount variations, left and below: Hoya REVO versus cheap 40.5mm mounts; Sigma WR compared to slimmer Zomei; and below, three Hoya types showing that all are slim to allow use with typical zooms (16- 35mm, etc).

Left, Sigma's practical packaging for the entire size range of WR filters uses no foam and holds the filter clear of all surfaces with a series of concentric ridges.

Below, an array of filter packs as tested – beware any filter you see when travelling, like the Digi Optics with its meaningless claim of 'Day and Night Vision'.



Cheap 'Digi Optic' filter bought in the Canary Islands – claims of multicoating are false. Very poor glass quality and cheap mount.



Hoya REVO SMC UV(0) in the same size as the filter on the left. True UV-cut glass, effective multicoating and water/dirt resistance.



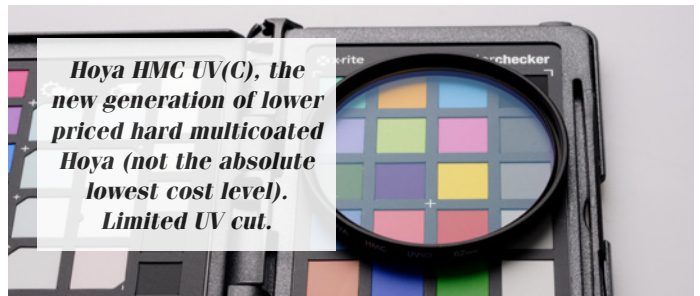
Zomei U HD-W UV Hong Kong made Schott German glass filter. This is, simply, an uncoated filter likely to cause contrast loss.



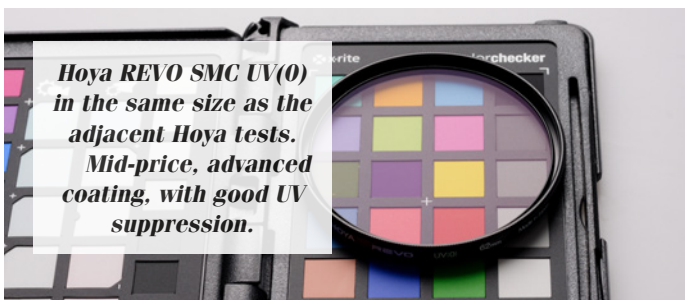
Rodenstock glass UV filter without multicoating. The coating may be single or two-layer; reflections and contrast loss ensue.



Multicoated, superslim B+W UV designed for wide angle zooms. High quality, good coating, but the rim doesn't allow a lens cap to snap in.



Hoya HMC UV(C), the new generation of lower priced hard multicoated Hoya (not the absolute lowest cost level). Limited UV cut.



Hoya REVO SMC UV(0) in the same size as the adjacent Hoya tests. Mid-price, advanced coating, with good UV suppression.



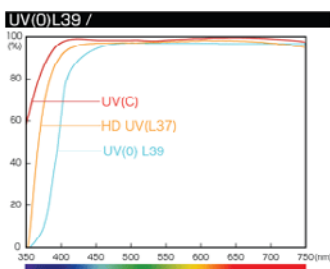
Hoya HD UV – with less UV cut than the REVO, it shares the same dirt-repelling coating and has very thin high density glass.



Sigma DG, one of the first filter types with a new hard multicoating. As the low level of reflection shows, it's the winner for beating flare.



Sigma WR-UV, the new type with antistatic water and oil repelling coating. It's not quite as efficient a multicoating as the earlier DG.



Hoya's graph shows the difference between the new UV(C), digital mid-strength HD UV, and traditional bluesblasting UV(0) glass. A strong UV cut can do no harm – only good

diluted colours or haze. The cheaper Hoya HMC is now a UV(C) filter, which means it is plain glass with a coating blocking UVB and UVC bands, a recent development. The C type filters don't cut the UVA (closer to visible blue). The HD is chemically enhanced, high density UV glass sharp-cut around 360nm. Hoya's graph shows that UV(C) transmits 60% of light at 350nm where UV(0) and HD UV block it entirely. UV(0) is also known

as the L39 specification, always needed for both black and white and colour films. It blocks 70% of UV at 390nm and may show a hint of a straw tint.

But for the best, wait for the Kenko Hydrophilic lens protector. This filter is energised by UV light to activate a water-repelling function (forcing drops to form and run off instantly) and will cost from around £240 in sizes from 77mm upwards –

and it's aimed at the TV and movie industry. We've seen it demonstrated with a spray of fizzy mineral water! Look out for Hoya's new Fusion (a step beyond REVO, in this direction) launched this year.

In meantime, just don't buy £20 UV filters on-line and expect the best...

The tints you see in my images are reflected light, not a filter colour. All the filters are effectively clear.



COMING TO YOU FROM THE CREATORS OF CAMERACRAFT



A full range of f2 digital back issues can be found on the pocketmags.com page, not only the 10 editions produced since Icon Publications Ltd re-acquired the title in April 2014. All the issues produced by EC1 Publishing up to March 2014 are also available for download to subscribers. Left: the forthcoming November/December edition (preview).



f2 is a magazine for anyone, amateur or professional, who aims for the highest values in their photography. Personal values, creative values, value for the future and for many of our readers value which helps maintain their lifestyle and interests.

Recent issues have brought photojournalism to the fore, from Martin Argyroglo's iconic 'Charlie Hebdo' Paris demonstration to Maciej Dakowicz's unexpected Stern assignment during the great earthquakes in Nepal. Our latest issue shows the great efforts of Malta to cope with ever-increasing numbers of shipwrecked migrants from Africa and the east, documented by Darrin Zammit Lupi.

f2 has even higher print quality than *Cameracraft* – the whole issue is printed to the same weight and standard as our central portfolio.

From the next edition (above, though the cover and title will change slightly) the two magazines merge. Readers who have outstanding subscriptions to *Cameracraft* will receive one for one issues of f2, although it is considerably heavier for worldwide postage charges. Readers whose subscription end with this issue of *Cameracraft* can transfer with a new sub, and those who already receive both will have the balance transferred.

You can find more, including back issue availability, at:

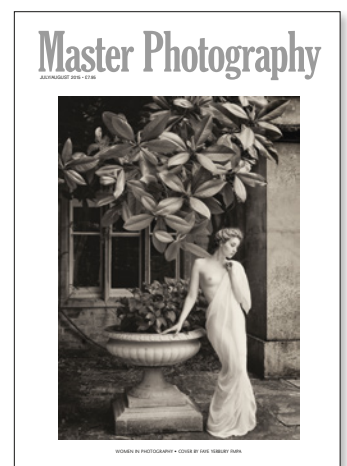
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Master Photography is our magazine produced for members of The Master Photographers Association, a professional group founded in 1952 in the UK and now growing rapidly in SE Asia and China.

In the last few years, wedding photography has changed with a high proportion of weddings held at special venues or destinations, removing the local aspect and giving wedding photography a much higher value. The same process is also changing portrait photography, as high value commissions involve full day shoots at special locations.

Most issues are not for public sale (we put our Annual on sale in limited numbers). The content is of interest to anyone intending to become a full-time photographer. Regular issues include trade-specific information not intended for the public. To receive this magazine six times a year you either need to join MPA, or take out a direct postal subscription via the www.iconpublications.com page (discount is offered for dual subs).





DÉJÀ VIEW

FROM THE WETBENCH AND LUMINA, FORWARD 20 YEARS

Twenty years ago Icon Publications Ltd, publishers of Cameracraft, produced annual catalogues for the Paterson Photographic (which included hundreds of Lowepro bags, Benbo tripods and countless accessories) and their Photographic Chemicals division.

In 1995, we installed a Leaf Lumina, one of the first affordable studio cameras for still life only, taking Nikon manual lenses and producing a file just the right size for a full page. At that time affordable SLR-style digital cameras were only 1.5 megapixels. At a demonstration for students in Edinburgh, the fluorescent lights and scanning camera were set up and a subject created from 'everlasting' helichrysum and poppy heads we had grown. A developing dish was used to hold them. The resulting image, which had lovely colours and textures, was used with a monochrome and colour transition on the catalogue cover for the following year.

In 2015, testing new lighting, a subject was needed. Stored on a high shelf were the same dried flowers and poppy heads. This time a basket was used the lighting was flash. The 50mm macro lens on Sony A7R gave an image big enough for four pages not one. In those twenty years we've seen a dozen generations of cameras and lighting, not to mention computers and printing methods. But the once-forgotten subject survives and now makes a great test for lenses and sensors. Not only that, the descendants of the huge silk poppies survive and have been distributed to several other photographers as an essential garden subject.



CAMERACRAFT PORTFOLIO

No 12

MATTHEW EMMETT



*Green light from a green shade highlights frescos of fruit groves,
hinting at the overgrown gardens outside this deserted Italian castle*

ARCHITECTURAL ARCHAEOLOGY





The ochre and buttermilk tints of an abandoned casino complex in the Italian countryside



Underneath London – a Victorian water reservoir



A five minute exposure at f14 and ISO 320 allowed the vast space to be revealed by Matthew's portable Scurion LED lighting





Seeking asylum – an abandoned mental hospital in Italy with calm cloisters and corridors but the reminders of exclusion alongside seclusion.

The bars of the window, overgrown outside; stacked empty box cabinets where the medical records were stored; and below, one of several operating theatres with the equipment left. After the last lobotomy? Who knows – this hospital pioneered the operation along with electroconvulsive therapy.



MATTHEW EMMETT - IMAGES IN PLACE OF EMPTINESS

Responsible 'urbex' has become part of photographic tourism as photogenic locations, one discovered by illegal entry, are made accessible with permission. Guerrilla urban exploration – even if many of the subjects are far from any city – has been associated with scaling walls equipped with hand-held cameras, often the MicroFourThirds system. As a result, much of the work seen is very casual in terms of how the composition and angles are handled. Distorted rooms, slightly skewed verticals, and unsharpness caused by working wide-open with inadequate zoom lenses are hallmarks of the average urbex shoot.

Matthew Emmett now uses medium format digital Pentax to record them to much higher quality before further deterioration or vandalism. In the past he might have lugged a Sinar outfit up Italian mountain paths but the modern equivalent is more portable. He uses a Pentax 645Z (50 megapixel CMOS sensor) equipped with lenses including the widest available in a regular medium format system, the 25mm. This gives an angle of view similar to a 17mm lens on 24 x 36mm though the Pentax format is squarer. A Three Legged Thing 'Brian' tripod comes along for support.

Every one of Matthew's interiors could be reproduced double page spread, and larger – they would make double page if we had A3 pages not A4. With eight pages in this portfolio *Cameracraft* had to decide how to edit his work. The picture inside the Oculus industrial building (also seen from the outside) is shown on this page but would easily have merited a spread. In fact we could have doubled our number of portfolio pages and shown everything full size.

He does obtain permission when it's practical but sometimes enters without it. There is a code of conduct and absolutely nothing is removed



The Pentax 645Z with 25mm lens, equal to a 17mm on 35mm. Below, Matt on location, and dusty window light.



from sites – the 'leave only footprints, take only pictures' approach.

Many of the photographs are taken in conditions of extreme contrast. Matthew takes exposures for the interior and the windows, and blends them in *Photoshop*. You won't see any halo effects or 'clarity' artefacts – he is not using heavy-handed HDR.

When this approach is unlikely to work, he carries with him very small and light Swiss made Scurion LED lights, popular with cavers and divers. Matthew's experience was in cave photography before his exploration of buildings. For our centre spread, he lit one side of arches walking away and the other walking back, crossing at the far end in total darkness.

"There is a thrill in exploring an environment that allows you to step into a previously unknown world and discover something first-hand, taking your time and noting the details as you go", he says. "Having a camera with me allows me to prolong that thrill long after the building is gone. There really is a strong sense of history present in abandoned buildings, the items left behind like paperwork in a drawer or signs in an industrial plant. Experiencing these places is a great privilege.

"There is a total lack of distraction in the stillness of a derelict building; the sound and movement associated with people or workers has been removed, for me this makes them far more sensory than when they are occupied. Your mind can easily focus on what is around you and takes in so much more. The building's voice is clear and a character and visual aesthetic emerges that was much harder to notice than if it was a busy, populated environment. Capturing this character and stillness comes across well in the photos and is something my audience tell me they love about the work."



www.forgottenheritage.co.uk
www.ricoh-imaging.co.uk

THE DANCER IN THE STORM

Ariana Sophia Emnace is a very talented and beautiful dancer, model and actress I met while shooting a commercial project in Malibu last year. I had been hoping to use her for a shot in my personal work and when I realized I was going to be shooting in LA during a rare storm, I checked to see if she was available. It's always a bit awkward trying to explain to a dancer the vision that is in my head, but she enthusiastically said "yes" when I said I wanted to photograph her dancing in the waves during a storm, wrapped up in a sheet of plastic.

Turned out that dancing in the rain was on her bucket list!

You may wonder why I have picked a quote by Jim Jarmusch to head up this article. It best describes where the concept for this shot came from. It did not just creatively pop into my head. It was born of a tempest of thoughts, experiences and inspirations rolling around in my mind's eye.

The idea of the flowing plastic wrapped around Ariana came from the work of a fine art photographer who does long exposure back and white shots of plastic sheets flapping in the wind. The results are mesmerizing.

I have previously used a variety of fabric pieces the same way I used the plastic sheet in the shot which you will see overleaf – with dancers Nikki White (*upper colour image*), Isha Lloyd, and Lauryn Winterhalder. For this new photo I wanted to try to create a more intense and dark mood because I felt the body of my personal work needed to be tipped a bit in that direction. Life isn't all about sunsets and rainbows – it's how we respond to the darker times we experience that often makes us feel most human. There is also no denying that one of my favorite shots of dancer Stefan Calka (*right*) significantly

THE MAKING OF AN IMAGE BY KEITH SUTTER

"Nothing is original. Steal from anywhere that resonates with inspiration or fuels your imagination. Devour old films, new films, music, books, paintings, photographs, poems, dreams, random conversations, architecture, bridges, street signs, trees, clouds, bodies of water, light and shadows. Select only things to steal from that speak directly to your soul. If you do this, your work (and theft) will be authentic. Authenticity is invaluable; originality is non-existent. And don't bother concealing your thievery - celebrate it if you feel like it. In any case, always remember what Jean-Luc Godard said: "It's not where you take things from - it's where you take them to."

- Jim Jarmusch (MovieMaker Magazine #53)



Precedents and precursors for the image on the next spread – see story for details.



influenced this shot. Lastly this is almost the exact location that I photographed Nikki White at a couple of years ago in the colour shot.

So as you can see, this photo stands on the shoulders of past work and Ariana's artistic expression.

I arrived at Zuma Beach in Malibu 45 minutes prior to Ariana's scheduled arrival, so I could scout out the conditions and find the best place to shoot. I climbed around the point at the end of the beach into Pirate's Cove. Frequently this cove has lots of activity in it but this evening we had it all to ourselves (another benefit to shooting in the rain).

When I got back to the car I was pleasantly surprised to find Ariana had arrived early. Just as we collected our gear the rain started to really come down. We hiked across the beach and over the rocky point into Pirates Cove. I noted that the tide was coming up and got nervous about being trapped in the little cove. I quickly found an escape gully we could ascend if the tide became an issue.

I took out a 400 foot roll of plastic that I had brought and cut off a 40 foot length. As we began to unfold it, the wind filled it like a sail and ripped it from Ariana's hands. It went flying right for my camera and tripod. I tried to run backwards pulling my end of it in hopes of pulling it clear of my gear. I ran smack into a rock and fell on my ass, and my pocket knife went flying.

While falling I let go of my end of the plastic and the entire sheet wrapped around my camera and tripod. Ariana quickly grabbed the tripod securing it and when we both realized neither of us was injured (other than for my ego) we had a good laugh. We wrapped Ariana in the sheet of plastic making a makeshift rain jacket/robe and then we waited

continued page 514





for the rain to lighten up a bit. We waited a long time... a really long time.

Just before nightfall the rain eased, we decided if we didn't shoot now we wouldn't have an opportunity. I planted my massive tripod deep into the sand and surf to stabilize my Sony a7R camera with a 21mm Voigtlander lens (*top*). I tried my best to keep the raindrops off the lens but was forced to frequently wipe them off – the next image down shows the damage they would have done.

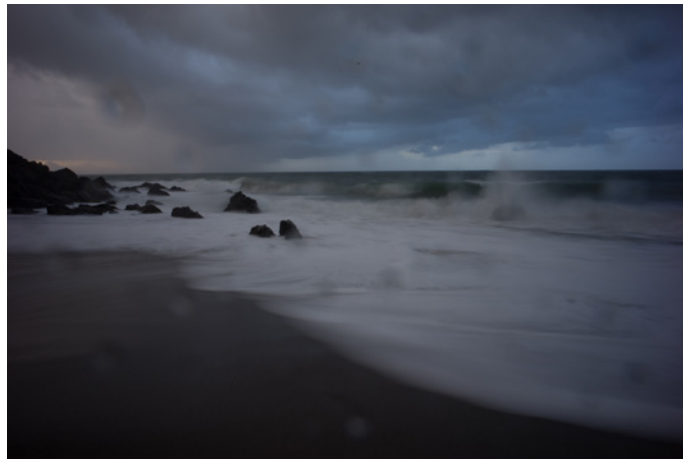
The wind played havoc with the plastic wrapped around Ariana. We shot over 100 images, each one looked dramatically different from the previous. About every 30 photos I took of Ariana, I asked her to step back and I changed the exposure to shoot with a slow shutter speed (around 1 second) to capture a few frames of silky water. One of these frames would become the new background to the shot I chose of Ariana.

We experimented with how the plastic was wrapped around her, she tried a variety of poses and angles, I fought to keep my equipment functioning and to successfully capture the moment. At one point a wave grabbed hold of the plastic sheet wrapped around Ariana and it nearly pulled her down.

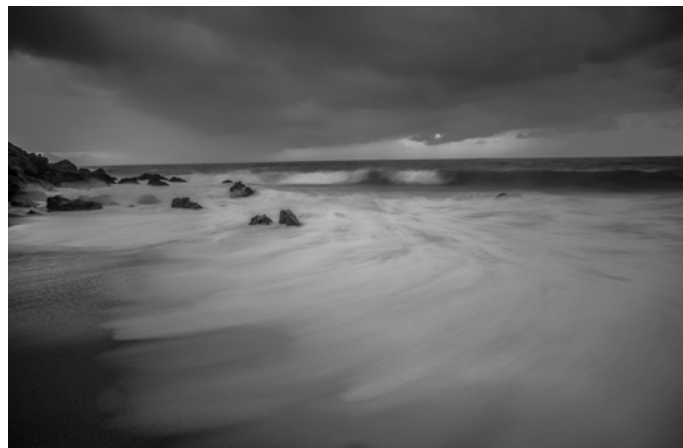


Just as the rain began getting intense and darkness came, our friend Nikki White came climbing over the rocky point to see if we needed any assistance. Feeling that we had captured some great images, we had Nikki help us collect all of our gear and make the soggy hike back to our vehicles.

When I got back to the guest house I was staying at, I changed into dry clothes, dried off all of my dripping cameras and lenses, and spent a couple of hours sorting through all of the images. There are few feelings better than seeing your dreams turn into reality.



Above: the location and the conditions – model, plastic sheet, tripod and rained-on camera, with the shot through my 21mm lens before wiping the water off its filter showing the problems encountered. Below: the one second exposure of surging foam, and the action-stopping capture for dancer Ariana.



Truth or fiction?

After answering so many questions at gallery openings and in online forums about this series of photographs, I need to explain how they are created.

For my personal work, I have never nor will I ever take a photo of a dancer from one setting (be it a studio or other location) and Photoshop them into the landscape of the final piece.

For commercial clients, I have been commissioned to make *photo illustrations* of dancers in outlandish settings, like engulfed in flames, hanging from a helicopter, jumping from a tower – and that's a different thing.

The dancers you see in the landscapes in my personal work series were actually dancing in those landscapes. Sometimes this involves traveling for several days and hiking into the Sierra. Sometimes it involves dancers dancing in hail storms, snow storms or holding poses for 90 seconds in the middle of the night under the Milky Way.

If you have a difficult time believing this (which is totally understandable) just ask any of the dancers that are featured in these photos. I have no interest in manufacturing a series of photos – my personal passion for photography and expression – by sitting in front of my computer.

That being said, there are shots in this series that use techniques that blend a long exposure frame of the background with short exposure frame of the dancer. In this photo, I used a one second exposure of the ocean combined with a 1/250s exposure of Ariana striking her pose in the surf. I personally have no more of an issue using techniques like this than I do converting a colorful landscape into black and white photograph. For me what is important is the authenticity of the experience. Ariana did indeed strike this pose in the waves along the shores of Pirate Cove, in a miserable storm, at sunset...





Dancers in the landscape by Keith Sutter



MYTHBUSTING!

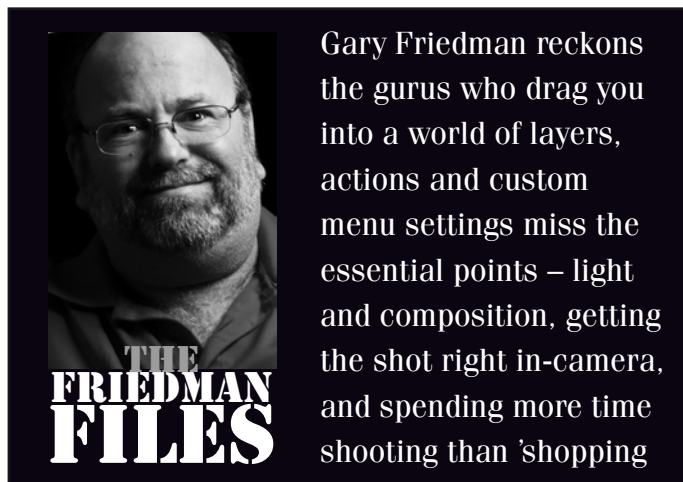
In the last edition our illustrious editor made an eloquent rant about how the world is unjustifiably going nuts over the new breed of overpriced lenses. That article paved the way for this one.

Some background: Most people know me and my work through my camera-specific ebooks. They're a hit with people who buy cameras, as everyone wants to know what all those complex-sounding functions do. And people seem to like my explanations, so that's nice.

BUT there is a deep-rooted myth I've been trying to dispel for a decade now: The implicit assumption that once you learn what all of your camera's features do, your photography will somehow magically improve overnight. The other implicit assumption is "Learning *Photoshop* will make my pictures better".

Well, you've been brainwashed. Buying an expensive camera by itself does not make you a better photographer. Nor will shooting RAW or learning *Photoshop*. These things are a few percentage points in what makes up a great picture. In fact, the two greatest components of a "Wow!" photograph are 1) Light and 2) Composition. If you don't have these two components nailed down, none of the other things will matter. Bad light makes high-price lenses impotent. Neither RAW nor *Photoshop* can do anything to improve the first picture of the cellist. But lighting – well, you can see exactly what lighting does. And for the gibbon in the tree – there's hardly any point in taking pictures from the wrong side in the wrong light. Be patient, wait for the light, and find the best way to use it.

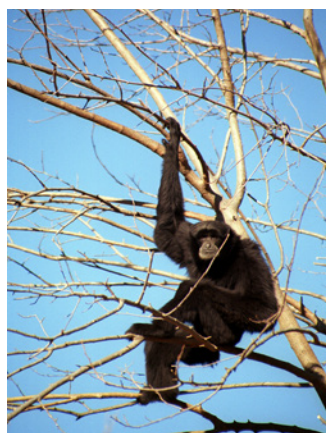
So important are these fundamentals that I had devoted an ENTIRE DAY to teaching it in my 2-day traveling seminars. By the time



Gary Friedman reckons the gurus who drag you into a world of layers, actions and custom menu settings miss the essential points – light and composition, getting the shot right in-camera, and spending more time shooting than 'shopping



Light and composition are the keys to images which work. Above: creating the light. Below: waiting for the light.



Day 1 is over, attendees leave re-examining long held beliefs about what they thought was important in photography. Good.

In an effort to reach more people I had a seminar professionally videotaped, and last month a streaming version of Day 1 was brought to market. Shortly after that the feedback started rolling in. Many raved about it, but the ones that stuck in my mind were the negative ones. The worst of these can be summarized thusly:

"Your course was OK, but I wanted to know what camera settings to use in order to get better vacation pictures!"

Grrrrrr.... I talked about that at length, with lots of examples. I also showed lots of examples where having a fancy camera wouldn't have helped, like the gibbon in the tree. If you're not happy with your vacation pictures, knowing your camera's settings won't help you much. Apparently my message went right through these customers.

On the one hand you could say I failed as a teacher to get my idea across. Or you could, just as correctly, say that some people just don't want to hear it. "Light and Composition seem just too simple, and since I didn't mention any of these oh-so-important camera features, obviously I'm only telling half a story. Will you talk about all that in Day 2?"

Don't be like them. I'm populating this article with lots of examples of great pictures taken with an old point-and-shoot on Auto, as a reminder that in the old days we never had these features or *Photoshop*, and yet we still managed to get great pictures using the very simple techniques I tried to instill in my seminars. The things we are told as being important (resolution, 14-bit uncompressed RAW, High-Dynamic Range feature, no

pincushion distortion in the optics) are meaningless unless your light and composition are strong. If you want to improve as a photographer, that's what you concentrate on.

I'm not the first to complain about this. It's been true forever. Many businesses recognize it and leverage it for immense profit (case in point: most popular photography magazines, gear review websites, and the whole ecosystem that sprung up around *Photoshop*). I think that's one reason I covet my association with *Cameracraft* so much – it's an oasis of vision in a sea of people obsessed with gear.)

So in the spirit of furthering this message, allow me to additionally bust five myths commonly associated with improving photography:

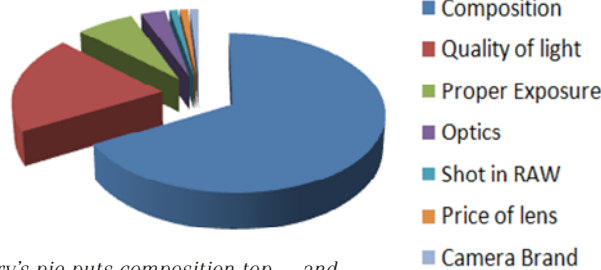
- “A-mode is best for walk-around photography.” – Actually, for walk-around photography I find myself shooting in **Program** mode and **Auto ISO** most of the time. This allows me to get the shot very quickly – letting the camera do what it does best



Shooting in P mode, RAW+JPEG, will produce great results most of the time. Exposure is best fine tuned in-camera ($\pm EV$ control) for sunsets.

while I concentrate on what I do best. Once I get the shot, if I have the luxury of a second chance, I'll ask myself “How can I make that shot better?”

Is the exposure right? Should the background be more out-of-focus so the subject pops more? Should I use a different shutter speed to cause more of



Gary's pie puts composition top... and cameras with tilting rear screens (below, RX100 MkIII, 8.8mm) let you find angles and viewpoints from ground level upwards.

a blur for artistic purposes?” Then I will exit P mode and then go to whatever mode helps me achieve my vision. But I always start in “P” mode because it increases the odds of me capturing a fleeting event quickly.

- “You're not a serious photographer unless you shoot RAW.”

– There's a great irony in this, as only the photographers who really know what they're doing can get away with shooting JPEG only. I usually shoot **RAW+JPEG** all the time just to have a safety net in case something goes wrong. When I get back to my office I'll put the RAW files in a separate directory just in case I'm not happy with how the JPEGs turned out. 99.999% of the time the RAW files never get opened. While that's bad for my disk space usage, over the course of my life I've probably saved two years' worth of work not having to tweak the RAW files so they look as good as the JPEG. Life is short, and I'd rather spend it shooting than tweaking. The quality of today's JPEGs is so good compared to



10 years ago that if your light is good, and your exposure is right for that light, then your images will not benefit greatly from shooting RAW. See my blog posts elaborating on this subject here:

<http://bit.ly/1dvjQgA> and
<http://bit.ly/1g0MzVd>

• *“Expensive cameras take better pictures.”*
– The entire camera industry is built upon this premise. It’s only true if you have nailed your light and composition. Without those, your 50 megapixel Canon EOS 5DS with L-series glass will only take mediocre pictures. And if your light and composition ARE wonderful, then I would argue that, as long as you’re not enlarging to auditorium-sized prints, it doesn’t really matter what you shoot with any more – all of today’s cameras are amazingly good. *National Geographic* photographers are now shooting with the low-light capable 12 megapixel Sony A7s and they print just fine. I’ve had many full-page commercial images printed that I took with my six megapixel Konica Minolta 7D.



Today’s pocketable cameras can tackle almost anything: top, Sony RX100 MkII at ISO 160. Pro cameras go further even with the kit lens. Harraseeket Inn was enlarged to wall size from 36MP from a 28-70mm basic zoom. And zooms are essential for some shots, as below.

• *“Primes are essential for great photography!”*
– See the previous paragraph. What’s actually true is that today’s cameras (bodies and lenses) are so good that in order to see any difference between them, you have to pixel peep with an electron microscope. No reasonable person does that. Some of my best pictures taken with the original Sony A7 were shot using the kit lens. And some shots actually require a zoom!

• *“I think the reason I’m not happy with my pictures is because I don’t understand all of my camera’s features.”*
– Seriously, no. The overarching truth is if your light stinks, so will your pictures. Those features only come into play once your light and composition are good.

Okay, my rant is over. But I still don’t know what I should be doing differently to help get this important message out to the world. Maybe life would be easier for me if I gave up and just held *Photoshop* classes.

– GF



FROM THE FRIEDMAN ARCHIVES



Lava Shot – There are many active volcanoes in Hawaii. The public can only view such flows from a mile away due to safety reasons, so in order to get a close up shot like this you either have hike to the lava against the rules (dangerous) or charter a boat (which is what we did.) These shots look their absolute best when shooting near dusk – that way the background is a bluish color instead of whitish. Also setting the white balance to Daylight instead of Auto White Balance adds more yellow to the image, turning the bluish background slightly purplish. People naturally react to the strong color contrast long before they realize what the image actually is.

NEWS REWIRED

Wire images – a term still used by many – lasted almost a century before internet-based technologies finally rendered the format obsolete. In the early years of micro-computing, *wirephoto* (a trademark of Associated Press until 2004) was to receive the same fevered rush other sectors experienced: to see what the miracle machines could do to transform a slow, laborious and yet vital aspect of news publishing.

For much of the 20th century global news gathering relied on Victorian innovation. Transmission of images over telegraph wires benefited from half a century of prior art, and in the early 1900s Arthur Korn used a selenium cell to measure varying shades of grey – allowing half-tone reproduction and setting the stage for worldwide news gathering.

Incredibly for almost 80 years, the essence of wirephoto transmission and reception remained little different to those early experiments, with operators needed at both ends and time-consuming analogue transmission and paper filing. In the 1980s computer technology and digital imaging flourished, and several firms embarked on projects that could revolutionise the wirephoto and syndication industry.

Swedish innovation

Hasselblad were at the forefront of this. Both the asset management and image gathering aspects would be encompassed in a project that began with a prototype scanner and transmitter in 1984. Replacing the portable darkroom, enlarger and wirephoto transmitter, the new device – named Dixel – would scan transparencies and negatives in colour, and capture text origination and

Richard Kilpatrick brought the news from over 20 years ago back to life by restoring a Hasselblad Dixel image transmitter and picture desk



Above: as recovered from an electrical junk shop. Below: brought back to life with vintage components found on eBay and through networking.



caption information, before transmitting the package either as traditional analogue, or digital via an external modem.

At the other end of the line, the wirephoto operator and teams behind a typical analogue desk would be replaced with a family of computers. The *Image Basket* receives images from remote analogue and digital sources, allows correction of captions, organisation into categories and digital archival. The *Image Tuner* allows a remarkable range of adjustments for the era, and could also acquire images through locally attached devices before sending output to postscript and other proofing systems, or uploading TIFF images via FTP, ideal for desktop publishing environments.

Several standards were developed and adopted, most being focused on providing a portable scanner/fax equivalent for the roving journalist. Hasselblad's attempt was a little different, and stands out for some of the technologies introduced. With limited space therefore, it is the primary product of the short-lived firm "Hasselblad Electronic Imaging A.B." we can look at here. Even deep into the 1980s, the wirephoto system was little more than an evolution of the old Belinograph, scanning an image (or separations of an image) to an analogue signal, which would then expose a sheet of photographic material thousands of miles away. Some solutions for stored images – using punched tape – existed. Hasselblad's focus was centred on not only supporting CCITT wire technologies – it was to introduce digital image transmission and more, integrated IPTC captioning.

To get to the point of challenging not only a format, but an industry of operators and infrastructure that rivalled the strength of typesetters and printers, Hasselblad began

with the Osiris project in 1981. That digital scanner was not a success, but it led to the 1984 trials of a suitcase-sized scanning and transmission station at the Los Angeles Olympics, sending files back to Swedish newspaper *Expressen*. In 1985, HEIAB was formed to develop the prototype into a full system – culminating in the launch of the Dixel 2000, a small, robust combination of screen, 2048 x 2048 colour scanner (the same hardware would become the Macsie scanner, one of the first desktop slide scanners) plus digital and analogue telecommunications systems. The Dixel, retailing at around £22,000, would have been enough for many agencies; HEIAB went further.

Competing systems from Leaf and Nikon would be launched during this period, and Hasselblad's success has to be seen against the context of Associated Press supplying around 1,000 AP Leafax system to picture desk clients free of charge. News International were just one of the UK clients for the Hasselblad, and my system was owned by Raymond's Press Agency in Derby when last in use. Almost certainly supplied as a refurbished system, it was last used in 1994.



Top: the handy location bag. Above: the Dixel scanner back in use. Below: the contents of the last 1994 Image Basket found on the disc.

CCITT AM and FM modulations at different speeds allowed compensation for poor lines and satellite/cellular phones (the Dixel may have been the first platform used to send an image over a digital cellular network, in 1993).

Transmission times vary by method. Analogue times for a full set of separations can be around 20 minutes, assuming all goes well. Digital times were down to two minutes, and in situations where line quality and stability was an issue there was a much greater chance of getting the news out. Robust construction placed the Dixel in harms' way, bringing images from significant global events such as the Gulf War and the Belfast bombings.

To receive and process the digital files from Dixel, which by 1989 was in use by many newspapers in-house as well as by agencies, HEIAB created the *Image Tuner* and *Image Basket*.

Both derived from 80286-based IBM compatible industrial computers, the basket and tuner pre-date the popular image of electronic imaging, with *Photoshop* still an interesting aside called "Barneyscan" – *Photoshop 1* would not ship until 1990. The Basket featured a 306MB SCSI hard disc, 4MB RAM and

Back in action

In use, the Dixel is simplicity itself. The slide carrier has two small lights where the magnetic holder attaches, to act as a lightbox and with free rotation, a planned crop can be easily straightened before scanning. The monochrome screen of the original was chosen for reliability (rival systems offered colour, but broke frequently), and exposure tuning is carried out with a greyscale verification of the image density for each separation – C, M, Y and K are scanned as monochrome files with automatically switched filters in the scanner itself. Captions and photographer/location information are added, which can be sent as text alongside digital transmissions or embedded in the wire image.



a VGA graphics card alongside communications options. Interaction was limited to a modified numeric keypad and a set of menus to display crops, assemble separations into colour, display captions (which it turns out, can be confused due to the way the system keeps them as separate files) and send/receive images.

For the time, navigation through a library of images is exceptionally quick, though editing beyond rotation is not supported. Serial transmission encryption cards, more commonly used for government or military communication, were employed for a proprietary form of image compression, which would become the DIT format and then ultimately lead to JPEG. After 20 years of cross-platform compressed image formats, it is rather easy to forget that once, JPEG didn't exist – and large, uncompressed TIFF files were standard.

This is where the truly innovative *Image Tuner* comes in. The work of Anders Bergman, *Image Tuner* was a pioneering editing application aimed very much at newspaper production at a time when DTP was still a way of automating columns and fonts rather than a complete publishing solution. The same core hardware had a Matrox MVP graphics card and cost around £38,000, with a 251MB HD, serial mouse, keyboard and Multisync monitor.

Although the files used are small by modern standards, the 286 based system is surprisingly quick, with the most intensive operations of cloning and retouching performed in a responsive fashion. Once images are edited, they can be sent for printing, uploaded as TIFF files to FTP servers or directly returned to the Image Basket over the GPIB network.

Time machine

Restoring this system to working order has involved a fair amount of research, yet the most significant discovery of that is that by pre-dating the



Top: Image Basket displays a full screen view, along with the picture caption including incorrect use of 'Robin Reliant' (US readers – like saying 'a Camaro Chevrolet'). Above: exposure and tone adjustment.

age of the internet, very little is recorded or known about any of these wirephoto systems outside of that industry.

Hasselblad's system had a lifespan of a decade, of which half was development into a commercial product. It tailed off after contributing to the technologies that ensured it would be redundant – image compression and digital transmission. To bring the

Image Tuner and *Basket* back to life, both machines had new CMOS batteries installed on the processor cards, all connectors cleaned, capacitors checked for leaking, and the hard discs removed, sector copied images stored on an older Macintosh G3, and then the disk format on the G3 edited to create a mountable file system. As such, the contents are preserved and

versions of the disc with the SST SCSI BIOS, and with a conventional DOS file structure remain. To allow access to settings, the disc images were studied to find relevant passwords. Even tracking down the correct mouse proved interesting, as the once-common Logitech protocol was outdated early in the days of Windows and most have been discarded.

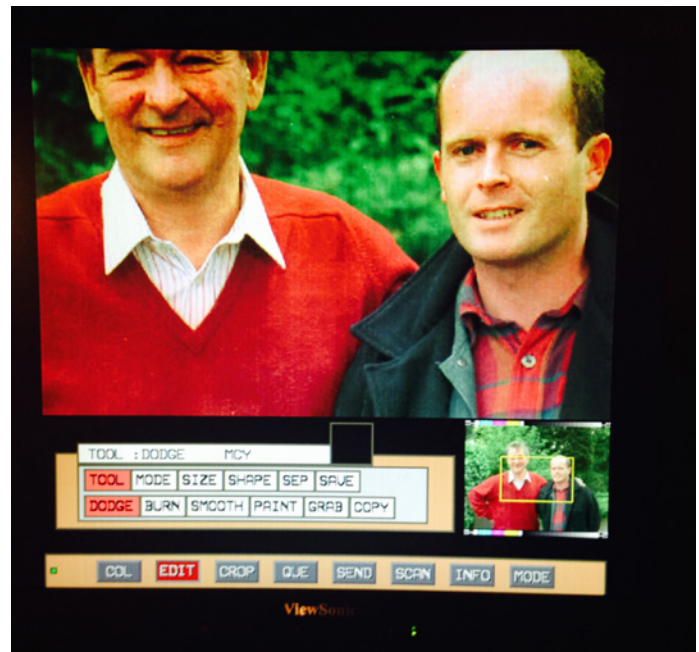


Football manager Brian Clough, found on the disc, demonstrates just how effective the pre-Photoshop retouching system actually was...

The Dixel 2000 units, of which I have two, have required replacement capacitors on the power supplies. The second one remains unrepaired, as a short on a backplane caused a PCB trace to burn out – a duplicate PCB will be made eventually, though as a multi-layer board it will take a while to work out the layout!

If the hardware was to fade into insignificance, the

software and ethos live on. For reasons which remain hard to fathom, Hasselblad's change of ownership in 1996 resulted in the closure of the profitable Hasselblad Electronic Imaging division, and the loss of a significant head start in the industry – where a digital back co-developed with Leaf, and a new partnership with Contax, were cancelled. Many of the team behind the *Image*



Our apologies to the copyright holders. This is academic research.

Basket and *Image Tuner* went on to form Fotoware, and their *Fotostation* Digital Asset Management software, and provided support and systems to their client-base that took advantage of lower cost, off-the-shelf hardware.

Hasselblad's contribution to the near-instant news culture we enjoy today was immensely significant, yet had an incredibly short commercial lifespan and is barely recognised.

CAMERACRAFT REVIEW

In August the Perseid meteor shower was visible and many photographers headed out at night to capture shooting stars. Recently, the Aurora Borealis has become more clearly visible from further south, and for Sarah White of Edinburgh, the two phenomena combined with the unique lights of St Abbs Head – now rather unique vacation

“I set off to watch the peak of the Perseid Meteor Shower as the skies were perfectly clear and only a light breeze. While not the darkest location, the lighthouse on St Abbs Head in the Scottish Borders is one of my favourite spots, and I knew it would make for a dramatic image. Never did I imagine that the Aurora would put on a display for me as well. A truly magical night.”

Nikon D810, 14-24mm f2.8 Nikkor at 14mm, ISO 400, sky 334 seconds exposure at f4. Lighthouse foreground blended in from a second short exposure.



See: Facebook – www.facebook.com/edinburghandbeyondphotography







CAMERACRAFT REARVIEW

Left: by **Ian MacColl** – “I was photographing the birds on the glacier lagoon at Jökulsárlón in Iceland when I saw this opportunity as the small pieces of ice drifted into the ‘mouth’ formed by the iceberg and its reflection. Sony A580 with Sony G 70-400 mm lens at 120 mm, 1/1600th second, *f*7.1, ISO 800 (the settings I was using for the birds).
www.ianimages.co.uk

Right: by **Francis Vallely** – A suitable seasonal image of Virginia creeper and ripe pumpkins, from Dr Vallely of Pately Bridge in Yorkshire.

Below left: by **Peter Karry**, from a one-day photowalk in London, at Columbia Road Flower Market. “I had been advised that the flower sellers did not like to be photographed, though I found the vendors (mostly London Eastenders) to be charming and amenable. It was my first ever visit to this market and I was really glad that I had decided to go there early on the Sunday morning.

Below: Chinese artist Ai Weiwei’s ‘Bicycles’ in the courtyard of the Palazzo Franchetti beside the Grand Canal in Venice seen by **Glenn Turner**. Sony Alpha 900, 135mm *f*2.8, 1/1000th at *f*5.6 at ISO 400.

To enter your images for f2’s YourVision gallery, which has a similar format, email up to JPEGs (2400 x 1600 to 2400 x 3600 in size) with captions to yourvision@iconpublications.com





Playing us out after three years of Cameracraft – Volume One, which may one day be followed another incarnation – is the Border piper Matt Seattle, in a photograph shortlisted for the Olympus Portrait Awards 2014/15 in the UK. The photographer, John Parris, used an atmospheric derelict location he has found, with natural light. The portrait shows exceptional skill in using the full aperture of Canon's 50mm f1.2 lens, on the EOS 5D MkIII set to ISO 1600. Though the focus is on the brass of the pipes, Matt's beard and eyes are just the right sharpness to give a look like a oil painting without any post-process treatment. As we went to press, Matt was touring New England and the US East Coast.

CAMERACRAFT
REARVIEW