

CAMERACRAFT



CAMERACRAFT

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The revival of interest in photochemical imaging was inevitable once digital photography took over both the consumer and professional arenas. It's not something we are obsessed with, as we know that nearly all the images produced by our readers are created using digital cameras and printed digitally.

The inclusion of a silver imaging portfolio and our brief roundup of available film types reflect a small upturn in the fortunes of specialist brands. I know that many photographers who have been working with nothing but digital, whether amateur or professional, are talking about the idea of setting up a small darkroom again. Certainly it's on my own agenda. It seemed inevitable in 2005 to sell the entire contents of a darkroom including the film drying cabinet, the flatbed 20 x 16" print dryer, the resin coated print dryers and a very large glass fibre wetbench with deep sink. It went, including a fine Fujimoto enlarger, for rather less than the sink alone would cost to replace now.

In the light-tight room I now have a small studio (it was a big darkroom) and thanks to its original use, I have been able to do things like the point source LED images of lens bokeh discs in this issue. Those were made with a single LED torch, and a mask with a 1.5mm hole. In the blackout a beam of light showed me exactly where to locate the camera to get the maximum effect.

Are there lost skills? I bought an enlarger from a professional who closed his darkroom a year after I did. I'm curious to know if my prints would be any good; would my hands dodge and burn instinctively? Could I load a developing tank in total darkness and pick up its parts first time, remembering the exact position I placed them in?

It's partly this curiosity to discover whether old skills persist which, I think, drives the revival of silver imaging and wet processing. Now all I need is a film camera...

– *David Kilpatrick*



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Old advice still holds true: Everest 1953

Suggestions to Photographers

It's not often that a book reviewer needs to put on special reading glasses and type out part of a book. In the latest and truly wonderful Thames & Hudson volume celebrating the 60th anniversary of the conquest of Everest, there are three facsimile pages of yellowed, folded typescript.

These pages are the suggestions to the team's camera users written by Basil R. Goodfellow. They are by far the hardest part of the book to read and indeed our only criticism of the content. The 240 pages are packed with original images (well reproduced despite the age and challenged quality of some sources), personal accounts and expert essays.

It's a book which should fascinate any photographer, and there is no need to be an outdoor kind of person. No mountaineering skill is needed to appreciate it. Indeed, just sitting inside during a British springtime looking out at the snowdrifts reminds us that we may not be going to Everest, but the mountain seems to be intent on coming to us.

The book does this very well. Its subtitle is 'Original Photographs from the Legendary First Ascent', written and edited by George Lowe and Huw Lewis-Jones, with a foreword by Sir Edmund Hillary and contributions by a team of writers.

Advice to follow

Goodfellow, who was Secretary of the Joint Himalayan Committee and an experienced photographer, kicked off by advising the owner of a new camera bought for the expedition to practise *using it in the dark* until all the controls are familiar.

Next, he offered advice on keeping the camera clean – those bellows could be dust-

traps. There were no Rocket blowers around, and he warned against just blowing. "Don't use your breath, which is full of droplets", he wrote. The solution? To release air from the lilo inflatable beds used by the expedition.

"The lens should be cleaned rarely, and with great care. A little dust on the lens does not matter, but fingermarks should never be allowed..."

Much of the advice covered exposure metering and the user of filters with the panchromatic black and white film of the era. For example, the valleys have dark pine trees, and he recommended using green or medium yellow. The orange or red filters which many would think ideal for alpine photography are not on his list – they create far too dramatic a result.

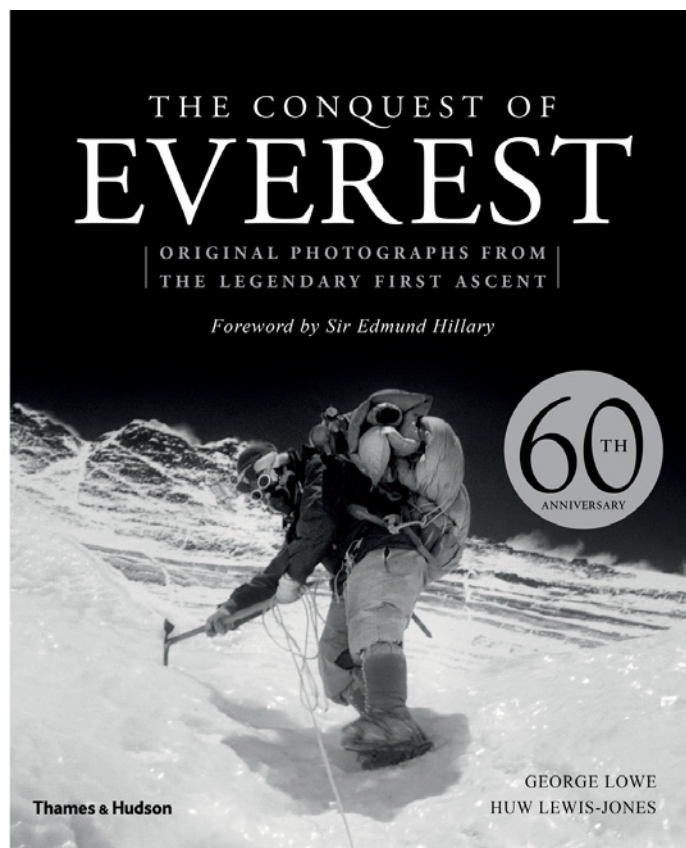
Today, many photographers mistakenly pack ultra-wide lenses for mountain trips. Basil's advice is better:

"Remember that to make the most of a subject in a mountain setting, e.g. a camp, chorten, or group with a background of fairly distant peaks, use a long-focus lens and stand well back. The mountains then look their real height."

Tripods were not part of the kit for mountaineers, just hand-held cameras, and he advises resting both elbows on your knees while sitting. The cameras were 35mm, and the final prints to be made were 24".

Avoiding mid-day sun, and taking pictures mainly in the two to three hours after sunrise and before sunset "when the shadows are long", is timeless advice.

More dated is his suggestion that if the camera allows, settings of 1/200th at f6.3 should be used with the b/w Kodak Panatomic-X fine grains film. "Even at this speed it is difficult to hold the camera



steady when out of breath or in wind.

"To be certain of getting action shots, keep your camera slung around your neck, preferably inside your outer clothes (to stop the shutter freezing up). Accustom yourself to getting the camera out, taking off a glove, opening the camera (shutter, stop and if possible focussing should have been set beforehand) and shooting the picture while on the move without checking the movement and rhythm of the party. On easy ground one can sometimes catch up the other an ahead on your rope by 10 feet and gain a few seconds to take a picture of him still in motion without his knowledge."

As this was the beginning a new era in photography, he covered the new medium – "Compared to black and white, colour film is much less versatile and more difficult to use. Exposure must be exact, or not more than half a stop out at the most. It is best to work according to the tables supplied with the film... it is important to take three shots, one at the calculated exposure, one half a stop either way; there is plenty of film". The reason he gave for this was more the inaccuracy of camera

settings, than the difficulty of measuring the exposure.

He recommended a UV filter for altitudes over 6,000ft "otherwise in Kodachrome all the subtle colours of the distance, and all snow, are overlaid with bright violet".

The colour film was all slide stock, so he advised not only shooting duplicate frames, but practising with b/w to learn exactly how the camera's viewfinder relates to the final result. Negatives could be straightened and cropped in enlarging – slides had to be perfect as framed.

Mountain scenes per se were not the object. "One mountain looks much like another to a layman", he wrote. "What the public wants is pictures of people. Especially of the climbers. There will be a demand for camp scenes, shots of climbing action, oxygen gear, scenes in storm and wind, shots giving an impression of hardship, and all that".

And, indeed, his advice was taken – those are exactly what make the book compelling. 📷

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For our update in this issue we have not seen any landmark developments despite the historical importance of first quarter launches in the Japanese camera industry. There has not been a major trade show on the scale of photokina and it's been a period of consolidation not innovation.

Sony has taken a major share in Olympus, and the two former rivals hint at future co-operation. Kodak has launched MicroFourThirds in the Chinese market, potentially a big turnaround for a corporation knocked for six in recent years.

Significantly, both Sony and Canon reduced rather than increased the pixel count of new models. The Canon EOS 6D full-frame camera weighs in at 20 megapixels rather than 21 or 24, and the Sony Alpha 58 APS-C camera hits exactly the same 20 megapixels rather than use the 24 megapixel sensor which is now coming up for two years old. It seems that persistent complaints that higher resolution sensors with more visible image noise may have got through to both makers.

The most noticeable trend in the market has been towards compact cameras with fixed prime or zoom lenses and larger sensors, chosen instead of DSLRs or mirrorless interchangeable lens models. Sony's RX1 full framer is unchallenged as yet for sheer sensor size (and camera cost) but Nikon's latest Coolpix A puts a fixed 18.5mm $f2.8$ lens on a 16 megapixel DX sensor and Sigma's DP Merrill line-up has been expanded with the DP3 and its fixed 50mm $f2.8$ portrait lens. Fuji improved the X100 with a new X100S offering higher resolution, and in a smaller sensor format, upgrade the X10 to the X20 the same way.

The biggest surprise – at least to us – has been the failure of Sony or any of their customers to use the 20 megapixel 2.7X factor or one-inch CMOS sensor that arrived with the RX100 in June 2012. This sensor outperforms its larger brothers, relative to its pixel pitch, and the format is

CAMERACRAFT UPDATE



As a fitting inclusion here, to go with our pinhole portfolio, we have the new £300 Ilford Photo Harman Titan 10 x 8 pinhole model. 150mm (5.9in) focal length cone. The chemically etched pinhole has a diameter of 0.52mm (0.0205in). It carries a fixed lens aperture of $f288$ and a 94.7° angle of view.

As we go to press, we have the new Nikon Coolpix A camera to look at. First impressions – 16 megapixels and a 28mm $f2.8$ lens equivalent work really well.



Also in the office is the Nikon D7100 24 megapixel APS-C DSLR with no anti-aliasing filter. First impressions are mixed; maybe it needs really good lenses to do the sensor justice.

Not yet seen or tried, the Canon EOS 100D is the smallest ever DSLR. Like the slightly better specified new EOS 700D, it uses the same 2009 design of 18 megapixel sensor, one used in more Canon cameras than any other type.

We have had a chance to used the Canon EOS 6D, which has an entirely new 20 megapixel full frame sensor (see facing page). This seems to be a worthwhile advanced on even 5D Mark III quality.



ideal for pocketable cameras with potential for serious enthusiast and professional use. We fully expected to see other cameras using this same sensor appear at photokina, but none did. After photokina we waited. Nothing was announced. It will soon be a year since the RX100 was developed. It is not like Sony to miss out on sales of a sensor to other makers, or fail to spread it through two or three models in its own range. But that is the case. As we go to press, the only way you can get this sensor is in the RX100.

One of the factors driving fixed lens camera development has been the improvement in performance of sensors, especially very high resolution ones. The 2.7X factor of the Sony 20 megapixel CMOS indicates that a 145 megapixel full frame sensor will arrive sooner, not later, along with 65 megapixel APS-C. Such high resolutions only work if matched perfectly to a lens of superb quality, the approach taken by Sony with the RX1 and by Sigma across the range of DP Merrill models.

Given this, you can then crop the image and pick out very small regions for selective enlargement. The important size for final use in the near future will be the 4K cinema or TV standard, doubling the pixel count of HD1080, which also happens to match the image size needed for a good full page reproduction or a large computer screen. It's around 8-9 megapixels, or 3600 x 2400 pixels. This is also the size which on-line picture agency Alamy has adopted as its new baseline.

The full frame camera of 2015 could have an image 15,000 x 10,000 pixels. The scope to crop would be better than even the slowest films of the past in 35mm terms, matching instead the versatility of something like slow transparency film used in a 6 x 9cm camera.

Many relatively low-cost cameras can stitch panoramas together so quickly you don't notice that 40 or more images have been taken and combined to make a single 20 megapixel

or larger view. The same cameras may have built-in GPS, with compass direction and an inclinometer. There is no reason they should stop short with a one-directional panorama. In future, you should be able to shoot a scene in four quarters, or patch it from many shots Hockney-style, and get a corrected single image out of the camera much as you can from *Photoshop*.

Lens quality

Alongside advanced in sensor and software to process their output, we are seeing a quantum leap in lens quality. It's only three years since Sony put their 70-400mm on the market and a new generation model with different coatings has arrived. Sigma's range is being revised across the board, with the unveiling of their software to reprogram the focusing calibration of new USB-compatible lenses. This shows that in expert hands a camera and lens combination can be set up to produce near-perfect focus at every distance and zoom setting. It's a long way removed from just entering one simple plus or minus value for each lens you use.

They took the step of building their own new lens testing device, using the Foveon sensor for its ability to see and measure colour aberrations. Now every single lens is being tested individually. We have had a 35mm *f*1.4 new Sigma HSM to try out, and it's hard to see how any lens could be better centred.

Fifty years ago, the German and Japanese optical industries fought for the new expanding interchangeable lens market. You could find dozens of Japanese brands alongside German names like Isco, Meyer, Steinheil, or Schacht. Despite all the reputations involved and the skills of hand machining and assembly many of these lenses were barely able to record a sharp image with reasonable contrast. Coatings were poor and glass choices limited.

Today we have relatively few



lens makers but exceptionally good lenses. Korea's Samyang will surely move into gear soon with better dedicated mounts and possible autofocus. We have yet to see what China produces independently, even if Chinese-made cameras and lens assemblies are now found everywhere under familiar Japanese names.

There's little doubt that the performance of enthusiast level photographic equipment in 2013 is far removed from what it was only ten years ago when the current digital takeover really started.



*A combination of the new Canon EOS 6D and the Sigma 35mm *f*1.4 made the adjustment from straight raw to the result below not only easy, but pixel perfect in final quality. Both are state of the art products.*



HIGH & LOW

by David Kilpatrick

Your view of the world is determined by your height. It does not matter whether you occasionally wear six-inch heels or spend a lot of time lying on the sofa with your eyes around knee level. Your brain understands this and normalises your world from any habitual viewpoint.

Try using stilts indoors – or even those six-inch heels if you are male and have never tried platforms – and it's amazing how disorientated your view becomes. The effect is not so noticeable outdoors and most powerful in small interiors with a low ceiling. It doesn't take much to lift your height-related viewpoint enough to alter your relationship with everything around you including other people.

You probably know adults who are a foot shorter or taller than average. We are all used to a wide range of heights, and as children we have progressed from floor level, experiencing a view of the world changing slowly as always familiar.

Photographers need to be aware of all these factors and how they affect the perception of pictures. While working on this issue I noticed the strong use of low viewpoints by Greg Daly and Paul Glendell. This in turn reminded me of talking to the late Tom Hustler, one of Britain's better known society photographers whose career started in the 1950s. Tom was very tall and explained how this had helped him as a photographer when new eye-level cameras became popular in place of the waist-level held twin lens reflex.

His favourite subjects were débutantes, actresses, singers, dancers, society brides and models. Without exception they wanted to look appealing and he wanted to photograph them that way. Adopting



Low viewpoints: with a Hasselblad SWC, above, to place the Berber rider against the sky (DK). Below, by Paul Wenham-Clarke from his project on Irish travellers living under London's Westway. The girls, despite the adult dress and styling, are only ten years old and the room is a mobile home. Sony World Photography Awards short-listed.



35mm SLRs earlier than many contemporaries who stuck to rollfilm for this type of work, his height placed the lens well above the eye level of even fairly tall subjects. This angle, looking slightly down on a face, is not always flattering but it triggers a positive response in adult viewers (especially men, if the subject is a woman). The higher viewpoint is recognised subconsciously and makes the viewer feel dominant or protective.

Adults respond to several factors when confronted with children. The relatively large size of the head, compared to the body, is augmented by the large size of the eyes in the face. The higher adult viewpoint increases both impressions. The same factors when present in a portrait make the subject appear more child-like, appealing to maternal and protective masculine instincts alike. It does not have to be obvious. Just having the camera lens a couple of inches higher than eye-level, at a typical portrait distance, makes a subtle change to the perspective and shape of the face.

This was not Tom's entire secret. He had the extrovert personality often needed to get great pictures from people while working fast. But there's no doubt that like that other very tall photographer of beautiful people, Norman Parkinson, he used his height to advantage.

David Bailey used the reverse phenomenon brilliantly in the 1960s. With TV cameras generally mounted well above head height, and eye-level cameras taking over amateur photography, he used the waist level viewpoint of the wide angle Rolleiflex combined with a frame-filling close position to view many of his subjects

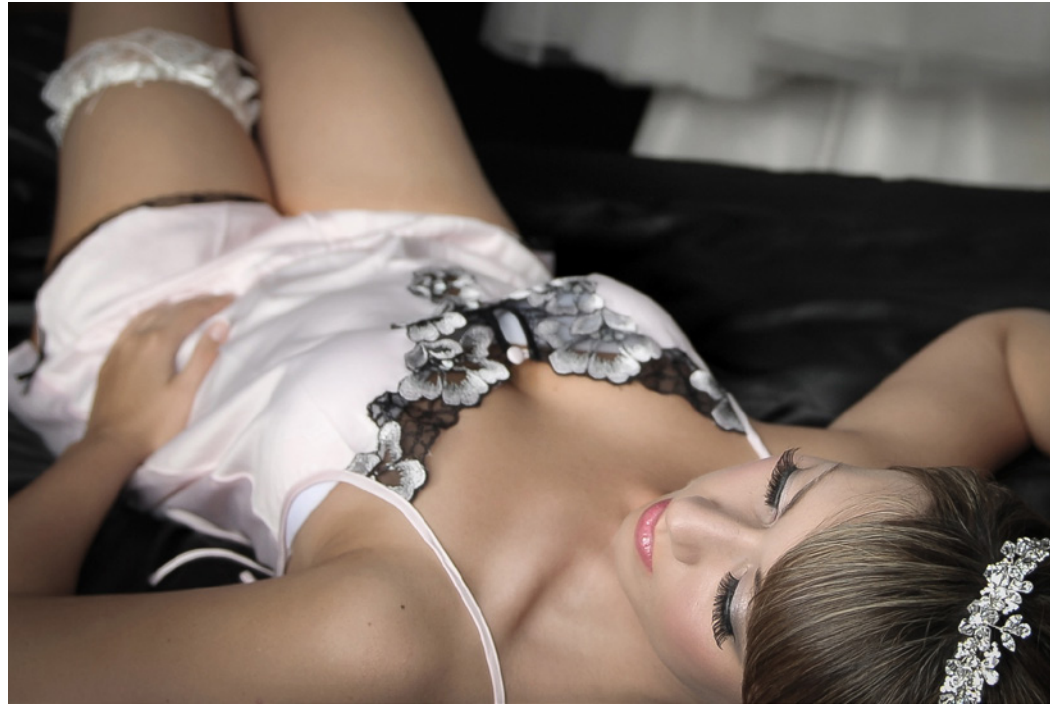
from a child's height. It's this angle which made the famous portrait of the Kray Twins look so threatening.

Photographing male portraits from below eye level increases the appeal to women. It's also a heroic or dominant position, one we see on most pictures of rock stars on stage (shot from the 'pit') or political leaders mounting a podium to be above the heads of the crowd. It works with women who want to avoid the submissive angle, as Margaret Thatcher knew very well. Get the cameras aiming at you from ten degrees below and you will look strong.

Distance reduces these effects greatly, while working very close increases them. It's one of the secrets of photojournalism. Confronted by a personality seen through a 24-70mm lens in a busy situation, you can change how they look in your shots by squatting or kneeling for a few seconds or finding a slight elevation. Rigid camera cases are not popular these days however useful for standing on. Many news and celebrity photographers have a step-stool and some even a stepladder in the car. These are not just to see over the heads of the other photographers or hotel walls.

If you are working with a 70-200mm or a longer lens you may still need the ladder, but your camera height will not change the way the subject comes over to the viewer. A wide-angle zoom is the most manipulative tool, as very close camera positions produce a perspective within the features of a face the viewer will again react to subconsciously. They know well enough when you are 'right in the face' of the subject and when you are working from a socially normal distance. At very close positions, just lifting or dropping your camera a few inches makes the difference between a big forehead or a big chin.

Since this relationship is strictly between the face or head, and the camera, physical height is not always necessary. Very effective and



Photographing your subject lying down, from this angle, has a similar effect to a high camera position (by Tim Spiers). The scale of the head relative to the torso and legs is controlled by camera to subject distance, in this case requiring a crop from full frame. Below, a low camera position gives the figure a classical statuesque quality (by Peter Trenchard). Both images were merit winners in the Master Photography Awards 2011, see www.mpauk.com.



seductive images can be made with a reclining or lying-down position, forehead close to the camera, and this is a popular technique for so-called 'boudoir' photography as it works with female figures that are not flattered by a standing view. It's not unknown for male portraits and the James Bond pose with arms folded and pistol at one shoulder, looking up towards the lens, is essentially the same.

One of the best ways to secure this particular portrait view is to get the subject to sit on a sofa or chaise-longue and look over the back of it towards the camera, shooting from a standing position. This also involves reclining or resting an arm on the back, sometimes resting head on arm, which solves a whole set of posing problems in one go.

When taking any portrait, it is worth working with the subject sitting and standing, and to vary the camera height between rolling-on-the-floor level and standing on steps. The range of psychological perspectives achieved will include some which appeal to the subject, friends, family or client.

Though it's not part of my theme here any picture taken straight on (eye level) is likely to be a success if you flip it left to right so it looks exactly as the sitter sees themselves in the mirror. They never see a

mirror view from any higher or lower angle.

All the variations in camera height have been made much easier to achieve with the introduction of live view rear screen composition, and articulated screens. You can use most of today's digital cameras for waist-level, chest-level, ground-level, eye-level or arms' length over the head composition and you don't even face the orientation or mirror operation issues which medium format SLR and TLR users have in the past when trying some angles.

The waist-level, or child's eye view, is especially welcome as for many years regular SLRs made this a little less accessible. It makes both male and female three-quarter and full length shots look the way we remember adults for childhood. That includes what I can best call the statuesque female nude. There's only one problem, LCD screens rarely orientate easily for vertical compositions from waist level.

The wider world

I've concentrated on high and low viewpoints for people shots so far, because this is really where a constant awareness will help you. The use of low and high viewpoints is more the valuable in landscape, street, reportage and all other types of work. In some of Paul Glendell's monochrome work later in this issue (*see pages 115-118*), low viewpoint makes the leather workers appear to be in a constricted space although the windows prove it's a normal height of room. His use of both low and high camera positions works well.

In the decade when I earned a living from industrial and commercial photography, 1978-88, I can't emphasise too strongly how important was the use of high or low viewpoint. The camera (and the photographer) were often quite literally on the factory floor and things like tower cranes or oil rig flare booms were open invitations to find a unique angle. Health and safety regulations require planning and the right safety equipment



The exact height of the camera relative to your subject can be critical for controlled composition. Here, both the focal length set on the 24-85mm lens and the camera position change the lighter horse's head and ear level from below the mountain peaks, to against them, and finally to above them. This was done with the help of a stone trough near the wall (Alfabia, Mallorca).

today, even if *National Geographic* staffers can scale Dubai skyscrapers for effect!

You may even need, in the UK, to complete a training course and obtain a certificate to work in some locations. A good example would be a

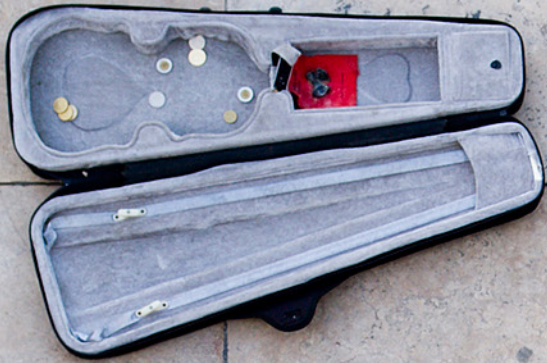
track level view of a train. In Britain you need a personal track safety (PTS) certificate to work 'within the boundary of Network Rail tracks'. No such thing was needed back when my studio partnership worked for the makers of the clips

which hold rails on to sleepers. This change in attitude has affected photography greatly. Would I now be allowed to place a camera, with fisheye lens and infra-red trigger system, in the middle of a steeplechase course to catch horses coming over a fence? When I did exactly that in the 1980s no steward even questioned what I was doing, beyond warning me that the camera might be trashed if a horse landed on it.

So, low and high viewpoints beyond the range of portrait and general work may prove a little less easy to access. My approach now is to go straight for any potential camera position which offers a dramatic view. It's amazing how many people will aim the camera at the horizon, and never think to aim it vertically down or up unless the subject is a church ceiling painting or a canyon.

To help with this, I have two methods for securing semi-aerial views. One is a plain old monopod used in conjunction with a wireless remote (infra-red) shutter release and an ultrawide or fisheye lens. The camera's rear live view screen is set to aim downwards, the ball and socket is preset to a good angle by testing, and pictures can be taken from five feet above head height. The second is a much higher Manfrotto lighting stand, extending to 15 feet, used with a wired release and optionally with a 7 inch Lilliput HDMI monitor cabled to the camera and mounted on the stand. This can be used with longer lenses and secure surprisingly high apparent viewpoints in crowds at events.

You can buy purpose-made camera poles which are far more solid but less portable. My rigs can be carried around by hand. With the introduction of the Canon EOS 6D in particular, WiFi connected smartphone and tablet (Apple or Android) remote viewing and control has become possible. If you can get your camera elevated you can adjust all settings, compose, focus and shoot using your handheld device without any cables.



Angles on people: it's unusual to find an overhanging viewpoint, but Buda's Fisherman's Bastion provided exactly that for the busking fiddle player. The camera was aligned carefully to keep the limestone paving square. The traditional Mexican (not mariachi!) harp and requinto trio would normally appear in a tourist snapshot as above. By getting the camera below waist level and using the ceiling as a background, a portrait focusing on a single player has more impact and atmosphere.



Impossible views

You can't dig a hole for your camera or lift the floorboards all that often. But there is another rather crude but effective method for positioning your camera's viewpoint below ground level.

This technique can also be used to place your camera in another room to photograph an interior when there is a solid wall in the way, and to secure apparently impossible still life views in the studio.

You need only one thing – a sufficiently large mirror.

The geometry of shooting into a mirror at about 45° allows you to get a perspective and angle which would be blocked by the ground or floor (or a wall). You can never achieve a more dramatic view than could be obtained with a camera and wider angle on the ground. See diagrams to explain why.

A perfect image requires a surface silvered mirror or a single reflecting surface, where regular glass mirrors have rear silvered and produce a faint secondary image. It is however worth remembering this method as an image in mirror walls or doors may be just as sharp as you need. If you're shooting with a mirror on the ceiling you probably don't want it to be all that sharp...

If you can't shoot from below floor level, you can often shoot from below stage, catwalk or podium level. Getting down to the floor will give an extra low viewpoint when other photographers may be standing up to be more on the subject's level.

Remember that lakes, puddles and even parts of vehicles can have mirror-like qualities too, especially if you get your camera right next to the surface. The key to effective reflections in water is just this. The higher your camera above water, the less any reflection will show. I carry a table-tripod support and use the live view screen to allow ground level shots. It avoids getting the camera or my hands wet and muddy (all too common where I live).



Carefully squashing daisies but keeping beyond the margin of a protected wildflower bank at Rievaulx Abbey in Yorkshire. Photographers should never wear suits. Ground-level view matters!



This picture of National Children's Day in Turkey was taken just before the introduction of articulated rear screens with live view, using a Sony Alpha 900. I used what was then a familiar approach, setting the 24-85mm lens to its widest angle, and lifting the camera as far above my head as possible while guessing the composition. This is how press photographers used to work all the time. Now, most cameras let you compose the image with the rear screen angled down.

Floor perspective

Architectural photographers are very aware that normal tripod heights (waist to eye level) can give undue emphasis to the floor or foreground in perspective while reducing its information value. A room interior may be better photographed with the camera closer to the ceiling, and a drop front (fall) applied either by cropping or by using a shift lens. The high viewpoint with lens 'fall' makes more of the view show the floor and furnishings (say two-thirds of the height of the image) where a low viewpoint emphasises the ceiling instead. Ceilings do not sell property except in very rare cases!

For this reason, while exteriors are often shot using a rising front and a low viewpoint to reduce the emphasis on the foreground, interiors are shot with a tripod well above eye level and a drop front or corresponding crop. In large buildings look for mezzanine levels – they can be ideal camera positions.

My example on the right shows a large public space, but the same principle works for domestic interiors. If you are selling a property, try getting your camera well above head height and your wide-angle views of rooms won't look exaggerated.





Above: this market shot used the Sony Alpha 900 again, with a Sigma 16mm fisheye lens. A tripod-based Manfrotto lighting stand extended to over 3.5m high supported the camera, which had the horizon levelled before extending the sections of the stand to match the midpoint of the view (the crest over the town hall door).

Left: working with the Sigma SD10 camera when it was first introduced, I photographed the Musée d'Orsay in Paris using the 12-24mm Sigma lens at 12mm. The topmost floor level gave a view which emphasises the layout of the museum and shows visitors. Shooting from ground level makes the old glass station roof the main theme. This museum permits photography, including (when I was there) the use of a tripod.

Below: for the best reflections, get the camera level with the water surface. This also makes full use of small areas – like a road puddle.



RECREATION

For one day every year, visitors to the English town of Nantwich in Cheshire would think that they had been transported back in time.

Amongst the black and white half timbered buildings that line the streets the troops of The Sealed Knot civil war recreation society muster, to do battle commemorating 'Holly Holy Day', the Battle of Nantwich and Parliamentarian victory over the Royalists.

I had not planned to shoot the event; I am a professional commercial photographer, and was on the way back from an appointment with a client. Seeing that recent snowfall might add a more authentic feel to any images I dashed into the house and grabbed my camera bag.

By the time I reached Mill Island parkland, where the battle was about to commence, a large crowd had set up camp, so trying to get a decent shot was going to be a battle in itself. I am very much an advocate of shooting 'on the fly' and find that this method, although challenging, can be very rewarding.

The trick is to keep your kit fairly compact; I had a Nikon D3 with my 70-200 f2.8 lens in a Lowepro Toploader case –



A tightly cropped image, focussing on the misery of engagement and removing any evidence of an on looking crowd.

A blend of Photoshop and Silver Efex Pro.

about as compact as you can get for this type of camera – spare battery and cards and a Fujifilm X100 with its fixed 23mm lens under my jacket on a rapid strap. That was it – perfect for squeezing in and out of crowds of people, spectators and bystanders. Not the burden of a big pro bag with loads of kit that weighs you down and knocks people flying when you turn around in a confined group environment.

The final sepia image in this article (of the troops marching into Nantwich, along the historical Welsh Row) was one of the first images taken with the X100 by just stepping out into the road right alongside the marching army and choosing a very low angle of view. This can add more drama to the image and also make most of the distracting buildings in the background appear not so prominent in the shot. It also brought the melting snow on the road into play, adding another element.

Likewise the soldier holding the helmet was simply a quick grab shot with the X100, a camera which is ideally suited to this kind of photography being small and compact with superb image quality. It is perfect for whipping out and capturing the moment.





Above: preparing for battle, troops await orders, while the smoke of a cannon discharge masks some modern houses in the background. Facing page, bottom left: tight shot of a soldier's headgear, shot from a high angle to cut out members of the crowd, but to also show part of the uniform and footwear detail. Bottom right: close-up of a soldier's body, showing powder flasks, a tight crop also eliminating members of the public. Below: standard bearer – cannon smoke and careful Photoshop work mask any clear evidence of the 21st century despite the crowds beyond.



Right: another tightly cropped shot, concentrating on the Captain giving the 'fire' orders in the centre of the image, again the tight crop removes the modern buildings in the background along with the viewing audience. Processing again as with all the images were a blend of Photoshop and Silver Efex Pro.





Left: one of the army sides doing battle leaving the field of anguish, with the drummers being the key focus of the image. As you can tell from the look of the bowed heads from the troops, this was the defeated Royalist party.

Below: soldiers in a dangerous looking version of modern day rugby scrum.





Marching into town, the troops are shot from a low angle to add drama to the image and lessen the distraction of the buildings in the background, while the melting snow in the foreground informs the viewer of the time of year this was taken, and likely weather conditions when the battle itself did take place, January 26th 1644. Post production: NIK Silver Efex Pro.

The bulk of the other images I shot were on the Nikon D3, weaving in and out of the crowd, shooting between bystanders' heads, over play park climbing frames, and in between event structures. When people see you with a big camera with a big lens on it they do assume that you may be with the press, or covering the event. A quick and polite "can I just get a shot?" by and large results in them letting you slip in to grab a few frames, without them missing any of the action either.

With large re-enactments such as this, there is a lot going on, in and around the battlefield, so it's always a good idea to be permanently on the move, looking for new angles and subjects. The action can be quite fast paced especially when you have fifty or more soldiers with pikes up the air, cannon blasting

and cavalry on horseback getting into a dangerous looking version of a rugby scrum. Having a good sense of anticipation and event awareness is the key to a successful shoot.

I actually did get a nice run of images of a cannon being lit and fired, just by watching the process first and getting a pleasing angle of view and then waiting for the next firing to take place. It helps if you set your camera to high speed continuous, to capture the key frames. I have seen many good shots in situations such as this lost and wasted because of just a little lack of planning or foresight in choosing the best camera settings.

Ashford Daly Photography

Website: <http://www.ashforddalyphotography.com>

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Nikon's rear screen live view is a handy tool to help you get high angle shots with a lens zoomed to 200mm held over the top of someone's head. It does take some practice and a fairly fast shutter speed even with image stabilisation. I would recommend manually focusing the shot distance first as autofocus in live view mode is slow and prone to miss even with the latest camera models.

If this had been a planned shoot, I would have arrived early as there had been activities and troops gathering in the town all morning. There would have been plenty of opportunities for portraits and detail shots. But planning to cover such events may lose

you a unique view of your own. During the 'battle' there was a so-called professional photographers' area on the side of the field where a few were duly camped out, waiting. All their shots of the battle will be from that point of view. Take heart if you don't have the pro pass, it can work in your favour being able to walk around and event, rather than stuck in one spot with little time to think on your feet and go to the action.

Finishing the images as shown here involved some *Photoshop* retouching, and then creating a separate layer in NIK Silver Efex Pro (a monochrome conversion plug-in) then merging the two to taste; this I felt gave a more authentic feel to the images, whilst still remaining true to my style and hallmark of processing and editing.

– Greg Daly



Argument without resolution: what is a prime lens?

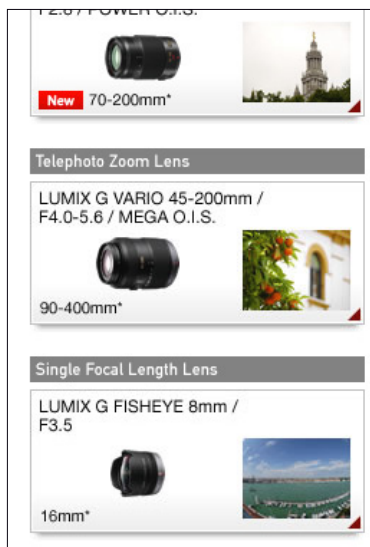
A prime lens is or was the first or main image-focusing component of an optical system, as opposed to a secondary or supplementary lens. Today we use the term to mean single focal length, but that's not the original meaning.

A teleconverter is a secondary lens (whether front afocal or rear), a close-up lens is a supplementary lens. Both are used with a prime lens (the main imaging optic). Yes, a close-up lens (which is *not* a filter) can also be a prime lens if you use it to form an image on its own. A 10 dioptre CU fixed to the front of a bellows unit focuses over the same range as a 100mm lens head.

A convertible Symmar or Sironar of past generations consists of front and rear groups – the front group is the prime lens, able to form a sharp corrected image in its own right, while the rear group though similar does not work well as a prime lens on its own. Today's large format lenses are more highly corrected, and are no longer made as convertibles marked with two focal lengths.

Technically, a zoom may consist of a prime lens and modifying groups, like the first examples of variable focal length telephotos (J H Dallmeyer, the Adon) where the front element is the image-forming lens and the rear element is a negative lens (could not form an image on its own, and therefore not a prime lens) moved to change the overall focal length.

Modern zooms are so complex you could not expect to remove a group and still have a functioning lens, so they are a 'prime



lens' in the original sense – many are also usable with converters or close-up lenses. Today the only time you could ever need to refer to a zoom lens as *the* prime lens (not *a* prime lens) would be when using a converter. This just confuses people, so it's best never to use the term 'prime lens' correctly.

All fixed focal length lenses are prime lenses, all convertible lenses contain a prime lens and a removable secondary lens (or group), zooms become prime lenses when they have the option to be used with a secondary converter.

The misuse of 'prime' to describe fixed focal length is now about 50 years old. Before zooms arrived it always was used to mean the principal lens in a convertible system (and that could include optical instruments, telescopes, microscopes as well). These systems are no longer around. The meaning of 'prime' has changed.

It gets tedious to have to use 'fixed focal length' or the pedantic term 'unifocal' (versus varifocal and parfocal) when everyone knows exactly what is meant by prime today.

That is, of course, except the few who think it means *really good* like prime beef or prime real estate. That remains a completely wrong use of the term – and it doesn't mean wide aperture, either. Or that the lens has a red ring or a gold band or a little blue Zeiss badge!

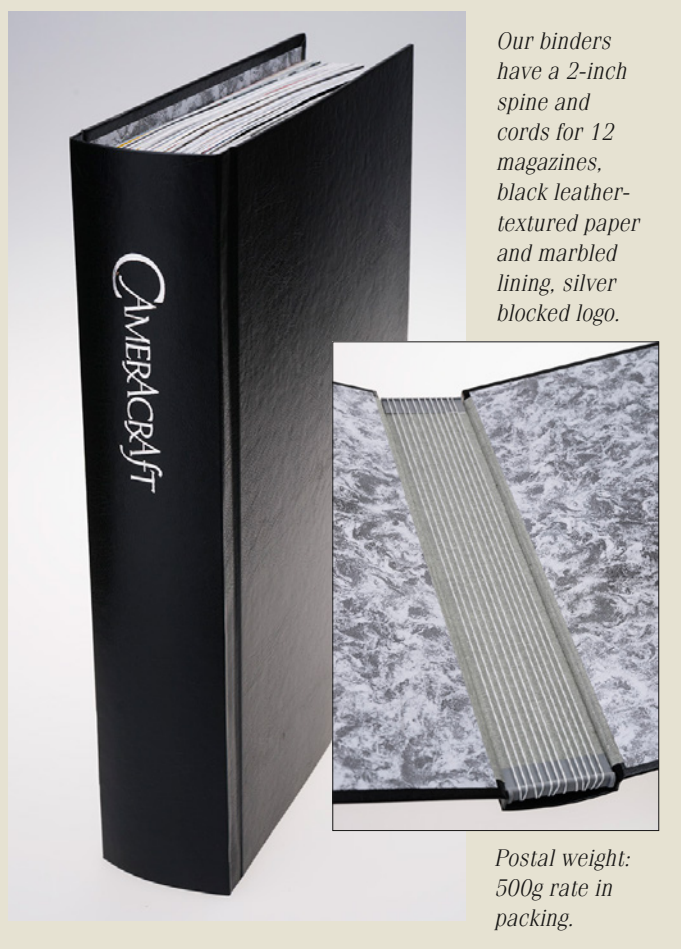
Sources: Sidney Ray, Geoffrey Crawley, Zeiss and too many others to mention. Illustration: Panasonic's lens web page carefully avoids the use of the term 'prime'.

Bound to succeed

Cameracraft is published quarterly partly to give the editors time to produce good quality issues, and to reduce the impact on our readers' finances. We want you to keep *Cameracraft* and watch how the content builds to cover a wide range of topics. In the process you'll have a snapshot of photography as it is today. We are writing for the future as well as for the present!

There have been photographic part-works with binders and no advertising in the past – monthly or even fortnightly in the heyday of part-works. Today it can easily cost £60 or \$100 a year to subscribe to many European monthlies.

As a quarterly, we provide a quality product with as many editorial pages in this issue as a much larger advertising-supported title. Our Cordex magazine binders will hold 12 issues, or three years in each bookshelf volume, and are black kraft on board with a silver foiled spine logo. You will want to look back on our editions in future, and we will not fill your entire house with piles of magazines to do this! See our web page www.iconpublications.com/cameracraft for details of how to obtain your Cordex bookcase binders.



Our binders have a 2-inch spine and cords for 12 magazines, black leather-textured paper and marbled lining, silver blocked logo.

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DÉJÀ VIEW



Though these pictures are both modern, the teeth of the upper jaw of a hippopotamus seen above may be over 100 years old. They are, as any dentist would surely agree, very fine teeth well designed for the business of grinding up grasses and vegetation.

I sold a mandola to a high school teacher in Galashiels, and when dropping it off, saw two huge skulls (rhino and hippo) forming part of his garden rockery. They had been old biology lab exhibits, dumped by the school and rescued from a skip. I asked to borrow them and made two matching fine art monochrome studies (inset, right).

Visiting a safari park on Spain's tourist Costa Blanca, Shirley Kilpatrick photographed a captive hippo being fed with basketloads of stale bread rolls, thrown into its mouth by the keeper and tourists.



Whatever the fate of wild hippo shot by some Scottish big game hunter in the past, it died with its upper molars free from decay. The zoo hippo's rotted stumps and missing teeth tell the story of its care in captivity. The old skull is a sad relic, but the living example far sadder.

– DK



CAMERACRAFT PORTFOLIO

No 3

JÜRGEN LECHNER



PINHOLE PHOTOGRAPHY FOR THE 21ST CENTURY







These images were taken on medium format film with an Ovnipan Camera Obscura, a circular pinhole camera that has six pinholes equally spaced around its periphery, covering all 360° of the scene.



The film plane is an inner cylinder that covers a panoramic format of 6 x 20cm. All six pinholes are uncovered simultaneously, when the shutter is rotated. Ovnipan is made by Joaquin Casado of Barcelona.





BEYOND THE PINHOLE: LECHNER'S BLEND OF TECHNICAL CRAFT AND ART

German photographer Jürgen Lechner is a modern master of the art of pinhole photography, where images are captured without the use of a lens.

The pinhole camera predates photography. Rooms constructed with a small hole and no other windows have been found in buildings or descriptions dating back almost 2,500 years. Anyone with an old house with solid window shutters will have seen the image of the outside world cast vaguely on to the wall through a gap or a knot-hole.

The lensless pinhole camera is a more recent development, as from the 16th century onwards glass lenses were routinely used for all types of camera obscura, whether a viewing room or a portable sketching device as used by Canaletto. When photography was finally developed, fifty years after the light-sensitive potential of many substances was known, it was not with the help of pinholes but with the largest aperture lenses possible.

A modern pinhole camera will often have a hole cut to form an aperture smaller than $f160$ depending on the focal length (distance from film plane to the pinhole plane) and film size. With larger film sizes, apertures such as $f440$ can record surprisingly fine detail, but always with the smooth look of the bokeh-free image and its endless depth of field.

Jürgen uses 5 x 4" pinhole cameras from Zero (Hong Kong specialist maker) and Robert Rigby (UK photo dealer). For these cameras, the precision pinholes are off-the-shelf items and no engineering skill is needed. He also has a custom-made 10 x 8" and an Ovnipan multi-pinhole panoramic blender camera.

"In 2006 I decided to go back to the roots of photography, to rediscover pinhole photography with a "Camera Obscura" – which has become my preferred



Above: Jürgen with Ovnipan pinhole panoramic blender.



Zero (left) and Jürgen's well-used Robert Rigby 5 x 4" pinhole cameras. Both come in a range of body focal lengths with matching pinholes.

means of taking photographs. I studied the works of different artists, including painters who influenced my current work. A good photograph takes time, I often visit places several times to find the conditions I need for a special photograph. Working with a pinhole camera means an immense depth of field, a huge image circle and a long exposure time. All has to be considered. I love this "slow" photography, being

one with nature, engaging in deep introspection, getting movement in the pictures, like the action of water or branches in contrast to non-moving objects to reach more tenseness. I do black and white pinhole photography only, as I think it is more mysterious, more insistent, more quiet and suits the method better than colour photography."

The shots are taken using Kodak T-Max 100 or Fujifilm

Acros 5 x 4" sheet film. Digital files are then produced using a Hasselblad Flextight X5 scanner, ensuring ultimate quality and the widest possible dynamic range.

"The X5 scans are perfect for my requirements," says Jürgen. "I made a couple of tests with other scanners, and there was no competition: the X5 is very fast, very cost effective and it gives me high resolution files along with the details I need in the highlights and shadows."

The 10 x 8" Camera Obscura has a pinhole with a focal length of 180mm. "We've equipped this with a slide feeder with two holes," he explains, "so that you can compose your image on a ground glass screen using a 6mm hole and then drop in the far smaller pinhole for the actual exposure."

Jürgen's next project is a 2014 *Camera Obscura Calendar*, while five of his Camera Obscura artworks have been given awards at the 25th Chelsea International Art Competition in New York. He has also exhibited in New York, San Francisco, Tashkent (Uzbekistan) and Ulft (Netherlands). He is a member of BBK, the Federal Association of Artists of the Fine Arts in Germany. It's been an interesting journey from school photography studies to a photo lab apprenticeship and a career as a freelance photographer from 1989. His next exhibition is during *Huntenkunst 2013*, Ulft, Netherlands, May 24th to 26th 2013.

Jürgen offers signed editions of his prints made on Canson Rag Photographique Fine Art paper, up to 11 x 14" print size thanks to the scanning methods, and says that he has had reproductions up to A2 size which have worked well.

For more details see:
www.juergenlechner.de
www.bobrigby.com
www.zeroimage.com

GETTING UNDER YOUR SKIN

Paul Glendell

Photographers are often accused of seeing only the beauty that is skin deep. Paul Glendell is a photojournalist who has remained very true to his first steps twenty years ago, exposing magazine readers to aspects of the environment far from the armchair or the airline seat. His eco-photography caught the first wave of eco- and agri-tourism, leading to success in more commercial fields.

With the Leica as his chosen instrument, Paul has been a late rather than early adopter of the digital medium. His M8 and now M9 cameras may capture colour when needed, but his roots draw strength from black and white.

What we didn't know is that Paul has a second string. He's also a craftsman making solid leather cases for Leicas, to last a lifetime. Looking for the best traditional hides he found that the only surviving oak bark tannery in Britain was on his Devon doorstep. Visiting the tannery, he found more than the raw materials



for his hand-stitched cases. He found a world so little changed that owner Andrew Parr's office featured a filing system demanding square feet of desk space not gigabytes of disk space.

Tanning has been carried out in Colyton for hundreds of years. The firm of J and FJ Baker and Sons Ltd, who now run the tannery, are the only company in Britain that still makes leather in this way, a physical task carried out the old way in old buildings. The work is hard, smelly and messy – assault on the senses for any visitor – but produces high quality leather for which there is still a flourishing market.

As a champion of sustainable and natural production, Paul saw the potential to document this dark and difficult subject. The result has been, in 2013, a major photography exhibition at the Royal Albert Memorial Museum (RAMM) in Exeter which opened in late March and runs until June 23rd.

It consists of 35 black and white

Above: Richard Facey, who died in December 2012, had worked at the tannery for 45 years. Below: Andrew Parr, the owner of Baker's Tannery.





images taken at the tannery in Colyton. Paul also created an audio slide-show for the BBC, running at the exhibition (*see web link*).

Paul's photos have appeared in *Time* and *Life* magazines and most UK newspapers. He is regularly commissioned to produce audio slide-shows for the *BBC News* website, ranging from this story to the conservation of rivers in the South west of England. He has undertaken many commissions for charities including The Woodland Trust and his photos and features have appeared in *BBC Wildlife* magazine. For *In Britain*, the magazine of the British Tourist Authority, he has produced numerous features on activity holidays.

Between 1992-93 he was based for a year in Bratislava, Slovakia, where he set up Ekofoto as the first environmental photographic library in Eastern Europe. He worked regularly for the Czech newspaper *Prognosis*. His images have been exhibited in Britain, France, China, Slovakia and Hungary.



Paul's website: www.glendell.co.uk
 Royal Albert Museum details: www.rammuseum.org.uk
 BBC Audio Slideshow: www.bbc.co.uk/news/in-pictures-14442109



Colour images – top: hanging the exhibition at the RAMM in Exeter. Centre and bottom: Classic Cases real leather case for Leica M9, with detail of the strap lug corner clasp. For information on the cases – used by fellow Leica owners worldwide – see website www.classiccases.co.uk



Facing page, top: when the skins first arrive they are soaked in lime-pits to loosen the hair. Upper centre: the oak bark comes from woodlands in Wales. Lower centre: tanned leather waiting to be curried by hand (adding oils and grease). This page: top, a skin is lowered into a pit of oak bark liquor. It will remain there for a year before the tanning process is finished. Bottom: cleaning the de-hairing machine.

BEYOND THE FRINGE

Bokeh is an abused word. As I write this, a Pentax user forum on Facebook is holding a 'bokeh photo' contest. The very concept of a 'bokeh photo' is evidence of how much the meaning of an subtle Japanese word has deteriorated. Bokeh or *boke* (written on the right using the characters *bo* and *ke*) is a lens *quality* – like colour transmission, micro-contrast, vignetting, or field flatness. It is present whether you use a lens at *f*2 or at *f*22. It doesn't mean out-of-focusness. It means the fingerprint which any given lens imposes on the way the focus of an image looks including the transition from sharp to defocused planes. At any aperture!

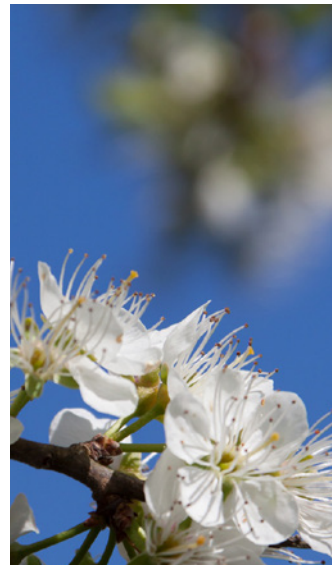
The root of the word means something like 'fuzziness' so it's always related to how the image goes out of focus. You can't talk about the bokeh of a perfectly sharp image from a perfect lens, something like a copy of a painting made on a repro stand. Such an image just doesn't have any.

Bokeh is affected by the other qualities of a lens, including its field flatness and degree of correction for aberrations. Residual astigmatism, for example, will tend to smear the image radially (spreading out from the axis) or tangentially (following a circle round the axis) behind and in front of the focus plane. Longitudinal chromatic and spherical aberrations will tend to make the out of focus image look *green* behind the focus plane, *magenta* in front of it.

This is difficult to remove by post-processing so one solution is to work in black and white. Monochrome conversion always removes colour aberration and fringes, including the subtle effects of colour bokeh problems. It's important to keep files in RGB colour form when converting them to monochrome. If you want perfect neutrality, simply

David Kilpatrick looks at the issues of lens bokeh and colour correction

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Above: rough bokeh and smooth bokeh, but you might not guess the lenses – expensive Canon 70-200mm f2.8L on the left at f3.5 (edge of image), right 18-200mm Canon EF-S at 200mm and f8, centre of frame. It is hard to predict which lenses will produce attractive defocused detail. The Lensbaby 3G is designed for curvature of field and strong spherical aberration, below – note the defocus discs.



move the Saturation control maximum left when converting a capture in *Adobe Camera Raw*; some adjustment of the tone curve, contrast and clarity may also be needed to produce a natural black and white film simulation. The Desaturate menu command in *Photoshop*, used on any RGB image, has a similar effect and again is best used along with careful contrast curve adjustment to avoid a flat dull look.

Because the factors affecting bokeh and depth of field itself are very complex, it's almost impossible to predict how the image from any lens will look. Simpler lens designs intended for larger formats tend to have 'better' bokeh and complex designs for smaller formats are handicapped by their entry and exit pupil positions and degrees of asymmetry. There's a good reason to prefer lens designs which have generous glass diameters rather than shoehorning superzoom specifications into the smallest possible barrel. In my experience the cost of the lens is not relevant. You can get busy, wiry unattractive defocused detail from high end lenses and smooth blur from

consumer designs depending on the settings and conditions.

Often the best bokeh, at the expense of critical sharpness for the subject, is achieved by working wide open. Most lenses have a perfectly circular iris at maximum aperture and some even have a Waterhouse-type stop a little smaller than the maximum diameter of the elements at that point.

Towards the edges of the image with angles much over 45° the sensor no longer 'sees' a circular aperture, but a more elliptical shape, actually a lens in geometric terms because it is formed by two arcs. The out of focus circles of confusion become ellipses of confusion, and the long side of these shapes is aligned tangentially round the lens axis. This tends to show up in blurred detail closer than the focus plane, and not in the background, because of the way other aberrations interact.

You check any lens for its likely wide-open bokeh quality across the frame by looking at it from the rear and turning it from straight-on to a $20\text{--}25^\circ$ angle. You will see the circular aperture gradually change shape and if you go beyond 25° (beyond the edge of the image circle for a lens with normal back focus distance) it will eventually disappear, you won't see even a slit of light.

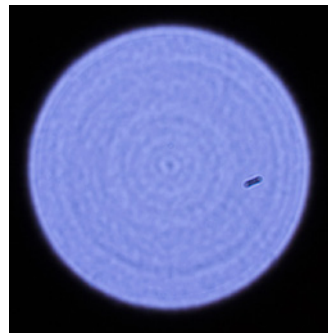
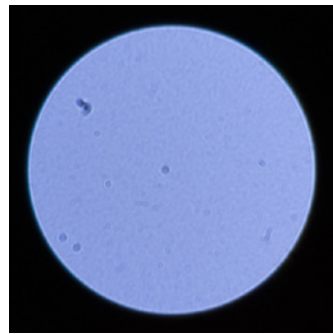
Telecentric lenses, those with a deep register keeping them as far away from the sensor as possible, may show a near perfect circle at all angles the sensor can 'see' it from.

Look at images, learn from the reputation of lenses and from others' experience. You may want a Nikon 100mm or 135mm $f2$ DC, a Sony 135mm $f2.8$ STF or a Canon 135mm $f2$ because these lenses are all designed to produce the most attractive out of focus rendering at apertures from wide open to around $f5.6$ (from $f8$ down, there's little benefit). The Sony STF has a graduated element, darkening to its perimeter, which smooths results in a very subtle way.

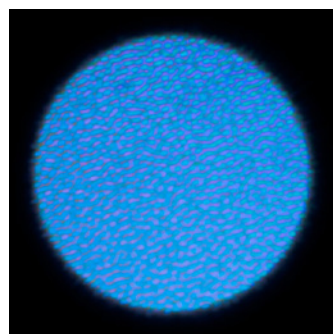
The new generation of ciné quality movie lenses for DSLRs, such as those from Samyang which are very



Above: by boosting Saturation and Vibrance, the colour bokeh shift of a Voigtlander 58mm $f1.4$ at $f2$ is seen clearly.



Point source lens fingerprints created at full aperture, defocused to project a disc – top left, a Sigma 70mm $f2.8$ macro showing high quality final polishing but needing a clean; top right, Sigma 18-250mm zoom shows rings formed by the irregular surfaces of moulded aspheric elements, and one dust particle. Below left, the diffraction coating pattern of a Minolta Portrayer 3 soft focus filter revealed, on a 70-210mm $f4$ AF zoom. Below right, the lens-shaped distorted ellipse projected by a 50mm $f1.4$ Sony lens wide open, corner of shot.



affordable, have a multiblade circular manual iris with no clickstops. The maximum aperture is reduced a fraction to allow for light losses – the regular 85mm $f1.4$ Samyang is designated as T=1.5 in its ciné version. The aperture starts circular and stays that way, allowing a smooth continuous stop-down if you shoot video. This lens is equally appealing for portrait still work.

Judging with live view

New generation full frame DSLRs offer the most scope for attractive differential focus. All of them offer Live View, and this is almost essential for judging focus effects. Optical focusing screens simply don't and can't show the real depth of field at apertures like $f2.8$, $f2$ or $f1.4$. Electronic viewfinder cameras like the

Sony Alpha 99, or in a smaller format the Olympus OM-D, give a perfect preview of focus. The rear screen of a Nikon D600 or Canon 6D will do the same in Live View mode and also help ensure precision focusing at wide apertures, where depth of field may be less than the length of an eyelash.

To partner fast lenses, you may need a Neutral Density filter. I use 4X ND (two stops) which can make the difference between $f8$ and $f4$ but still allow easy SLR viewing. With Live View or EVFs, you can use 4, 6, 8 or even 10-stop ND and the brightness of the viewing system is unaffected. If you want a variable ND filter, remember it has a polarising effect and this is not always kind to skin and hair. Plain NDs are safer.

Lens fingerprints

Finally, you may sometimes notice that if a bright point source is imaged out of focus, a large 'bokeh disc' results. This disc will often have a hard bright edge – a typical result of residual spherical aberration, you can study it yourself using a magnifying glass and the sun. The bright disc may also seem to have a texture or pattern. This pattern is a cast shadow of the optical surfaces of the lens, or any attached filter.

If your lens is traditionally ground and polished, and clean-room new, you could get a clean disc. Any dirt on the lens will show up, and so will the fine texture caused by pressing or moulding aspheric elements. When you see this texture from a typical modern mass produced zoom, it becomes easy to understand why the image never looks as perfectly smooth as the result from a classic high-end hand made design like a Zeiss Planar for Hasselblad.

This technique (a dark room, a single LED source, and the lens put considerable out of focus) can be used to check filters and lenses and things like the 'translucent' mirror of Sony cameras or the AA filter and cover glass of your sensor – if you are very brave!



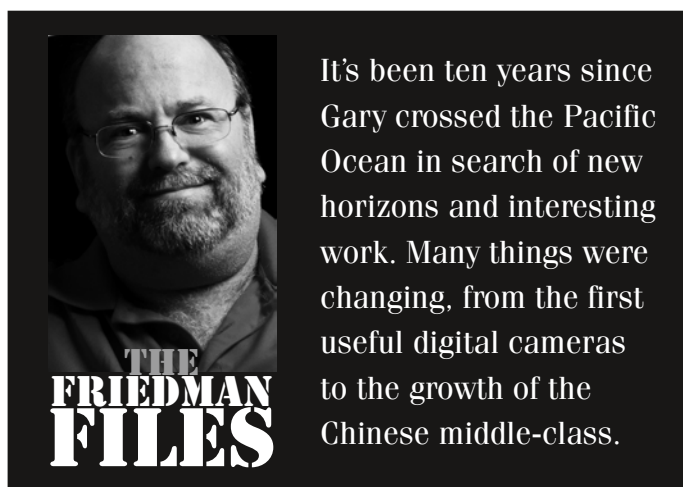
THE FACES OF CHINA

Sometimes life gets interesting after you've lost everything. That's what happened to me after the dot-com crash in 2003, when I was broke and unemployable. Ironically, it gave me the freedom to do something I had always wanted to do: teach English in China for a semester. Not having the money to cover six months' worth of film and processing, I left my expensive cameras back home and took only my Minolta Dimage 7i digital camera – a 5 megapixel camera with the slowest autofocusing on the planet. It ran for mere minutes on 4 AA batteries! I shaved my head and wore an Indiana Jones hat just to make sure people knew I was from out of town. I was a new person embarking on a new adventure.

I thought I had a job before I bought my plane tickets, but when I landed the guy who recruited me had a fallout with the head of the school. "Fallout" involved kidnapping, discrediting, and running him out of town. Welcome to China! Jobless and homeless, I rented a room in a cheap hotel and started networking. After a week I had a full-time offer to teach at two schools – The Beijing Information Technology College, and the Chemical High School. High Schools are often sponsored by local industries, and so take on the sponsor's name. The new job came with an apartment and a stipend, and I was to begin the next day.

Mind you, I had no experience whatsoever teaching a foreign language. And I had only learned about 30 words of Mandarin by the time I got there. Nevertheless, one of the great things about losing everything is you have no fears about jumping right in to a completely foreign situation.

What to do? I winged it. I used the same techniques of increasing reinforcement intervals as had been used by the Pimsleur Mandarin



It's been ten years since Gary crossed the Pacific Ocean in search of new horizons and interesting work. Many things were changing, from the first useful digital cameras to the growth of the Chinese middle-class.

Thumbs Up – This picture, taken under a great deal of stress, ended up being my most virally spread internet meme.

Language course. I'd throw my hat to a random student and start asking increasingly difficult questions, just to find out where their skills were. I was loud and obnoxious and the normally quiet Chinese students weren't quite used to this. When one student answered a question I called on another student and asked "What did she just say?", looking to see if they knew enough to modify the noun and verb to describe someone else (he did!).

By the end of the two hour class the kids had learned a lot of new words and I better understood their skills. I was also exhausted! The administrators soon heard from the students that I was an exciting new teacher, and the school suddenly upgraded my apartment the next day. Score: Gary 1, China 0. Not bad for a "big nose" – the mildly derogatory term used there to describe westerners.

About three-quarters of my time was spent on this



job – either teaching, grading papers, or planning lessons. The rest of the time I got to explore, take pictures, and try to fit in. I took great delight in documenting even the most boring details of everyday life (including food and toilets. I must have started a trend in the ‘food’ category.). I took pictures of just about everyone I met or ran into, not realizing that years later these images would become valuable because of the rate at which the old China would disappear, being replaced by the fruits of capitalism and the emergence of a middle class.

My people shots

Many people have asked me how I managed to get such great shots of strangers. The answer is I almost never shot candids. As has been my habit whenever I travel, I seek to make eye contact first, perhaps get to know them a little bit (miming has a tremendous vocabulary!), and then ask permission before I ever picked up my camera. Then I show them the image I just took, ask for a thumbs-up or thumbs-down (a universal gesture signalling approval), and this would warm them up for the next shot. At the end of our encounter I’ll ask for an email address, and dutifully email the pictures to that person the same day if I could. This is how to be an ambassador and make a friend – even if you don’t speak the language.

Occasionally this miming behavior was a source of amusement for my subjects. One day after I had taken a picture of two Chinese women, they started to make fun of my miming and imitate me. I took a picture of their reaction, which ultimately became the greatest internet meme I’ve ever shot.

This picture has been tweeted and emailed countless times as a universal icon of approval. The picture has been used in motivational posters, blog banners, and at least 50 other places on the internet without approval (according to the reverse image lookup service tineye.com).



“These Beans are OK”, “Sister and Brother Portrait” and “Old Fisherman”. These are all examples of the kind of shot you can get when you ask permission first via the Miming Method.

Someone sent me a pencil sketch of that image. When I was giving a seminar in Amsterdam one of my attendees pointed out that the image was being used in some teenage motivational postcards that were being given away. Hard for me to say “Stop using my images to promote such positive attitudes!”, and at the same time if I were to pursue damages it would work out to be about \$0.57 an hour. I let it go.

That picture was also a great source of stress, since my Dimage 7i took seemingly forever to focus, and then another eternity to confirm the focus before it would shoot. I kept saying to myself “Take it NOW! NOW!! NOW, DAMN YOU!”. It’s a miracle I got the shot at all. Yet another example of technology turning what should have been a happy moment into high blood pressure. Shortly after this incident, Minolta announced the camera’s successor, the Dimage A1, which I promptly ordered and had shipped to me. My stress went down after that.

Too many opportunities

Once I got into the swing of things teaching, I quickly learned that this was the land of opportunity for native English speakers. As part of China’s rampant conversion to capitalism there was also a great need to communicate better with its trading partners. And the Chinese government had proclaimed a war on “Chinglish”, and was pushing for 3 million of its citizens to be fluent in English by 2008, the year they would host the Olympics. So everywhere I went I was offered jobs teaching at weekend schools, or tutoring adults toward a certification exam, or substitute teaching a Business Ethics class for Sinopec (China’s national petroleum company). I accepted as many opportunities as my time would allow, and burned out a few times as a result.

Seeing the huge demand for English speakers, and the weak mechanism by which English



A study in auspicious colour – man on the edge of a boat.

teachers were being recruited (witness how I got here in the first place!), I partnered with the guy who recruited me and we tried to start an English teacher recruiting business. We would do things properly: interface with the schools, train the teachers (instead of throwing them in cold), and run it professionally. Turns out China makes it very difficult for foreigners to start companies. And our first attempt to bring a batch of teachers over to teach the next semester ended very, very badly.

SARS and change

This was the China of 2003 – back before they had joined the World Trade Organization, before their currency was openly traded, before there was traffic in Beijing, and before they started cracking down (ha!) on pirated Hollywood movies. In fact, 2003 was the year when traffic problems began in Beijing.

It was when the SARS respiratory virus epidemic hit.

At first it was denied by the government in classic Soviet style while the virus spread uncontrollably. People stayed away from the taxicabs and the subway (the two primary means of transportation there). But because there was a middle class for the first time since Mao, people had the funds to buy their own cars just to get around. And they did, seemingly all at once, and then overnight Beijing's highways were inundated with traffic and smog.

No city planner could have foreseen that, and of course once you have a car there's no going back. That all happened when I was there. A month before my trip ended, I was at a networking event where I met one of the American lawyers who was responsible for getting China's government

to do an about-face on their handling of the SARS epidemic – seemingly overnight they acknowledged its existence and took steps to quarantine people. A triumph of casual diplomacy.

My life changed completely after that trip. After the English teacher recruitment débâcle I decided that any new business I undertake must not rely on other people. I got married (to an American, if you must know) while I was still broke. And I started licensing images and writing books on the Minolta cameras thinking there might be a market for such a book if it were clear and well-explained.

It's now been 10 years since that trip, and I'm very anxious to return to see just how much things have changed.



Gary's blog on his China experience (which goes into a lot more detail – including what happened with the English teacher recruiting business) is still available for reading at <http://bit.ly/12ulbre>. It's also available as a tablet-friendly downloadable PDF and a physical book.

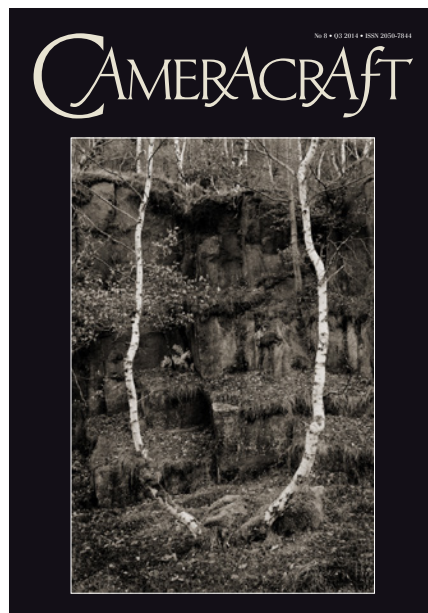


No Diapers – the concept of diapers haven't caught on yet. Clothes have critical areas cut away for easy access. Babies are free to do their business anywhere around the house.



Most street food is yummy, including this fertilized egg which you can break open, dip in salt, and then eat as a snack.

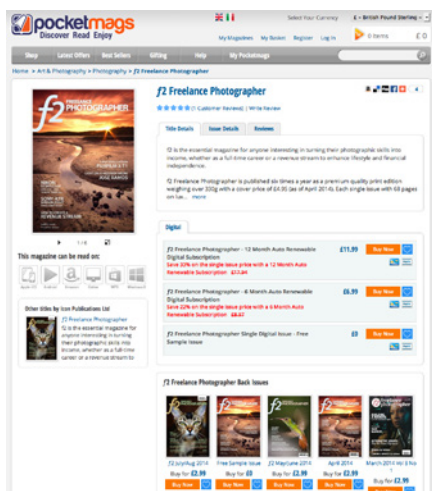
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Part of the ethos of Cameracraft comes from the idea that even if only a thousand copies are printed, it's free of all advertising and paid for by the subscription alone. Though articles are included which deal with equipment and cover the important news from each quarter, it's almost from a retrospective viewpoint.

Cameracraft was partly inspired by the San Francisco based Camera Craft, started at the beginning of the 20th century for a new generation of photo enthusiasts which blurred the boundary between the amateur and professional. Looking back at copies, we found the contents of even a single volume gave a snapshot of the technology and art of the time. Gary Friedman is our US Associate Editor on the West Coast, and our readership is evenly split between the UK and the world in general.

The latest issue of Cameracraft, No 8, was mailed out on July 23rd and we have just 200 further copies available for new subscribers.

Master Photography is our magazine produced for members of The Master Photographers Association, the only UK group for photographers recognised as a 'Trade Association'. MPA did, in fact, start as a Trade Union over sixty years ago with its emphasis on securing better terms for media, forces, corporate and government photographic staff. Today, it mainly represents owners of High Street or home-based studio studios serving the public and local businesses.

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. It is now a vital part of celebrations which may cost tens of thousands and take place hundreds of miles from the couple's home ground. The same process is also changing portrait photography, as high value commissions involve full day shoots at special locations.

MPA is expanding rapidly in Singapore, Malaysia, Indonesia and mainland China but the magazine remains focused on the UK market. The content is of general interest to anyone intending to become a full-time photographer, or to qualify as a licensed Master Photographer and progress to the two higher levels of distinction, Associateship and Fellowship. It is included with MPA UK membership, but anyone can subscribe directly to the magazine.

THINGS TO MAKE AND DO

Originally packaged with a Japanese part-work magazine, the Gakkenflex 35mm Twin-Lens Reflex camera has returned to a wider audience as the **Recesky**. Unlike the original unusual and limited availability body, the Recesky is to be found on Amazon, eBay and no doubt elsewhere for anything between £8 and £15 (\$12-£25), including postage from Hong Kong or China.

Having found the black variant on eBay at the lowest price point, it seemed worth a go. A camera which offers something a little unusual even when compared to the many varieties of Lomo-esque products available, the Gakkenflex design uses a

It's fun, costs just a little cash and some of your time.

**You can build a 35mm TLR.
Richard Kilpatrick bought one, and assembled it in the studio step by step.**

surprising clarity to the cheap plastic 'ground glass', and of course that satisfaction that you assembled it yourself. With some patience it would even be feasible to create new aperture discs (the lens pushes together) or even add a simple flash sync.

Building took about two hours including photographing the stages and acquiring tea, with no glue or trimming of parts required. Fortunately for me, the builder is also spared application of decals or detailing of tiny scale model pilots, destined to peer through a giant-sized glue thumbprint on their Spitfire canopy... *Recesky/Gakkenflex 35mm TLR. From around £8/\$12.*

simple lens and fixed $f11$ aperture plus 1/80-100th-ish shutter yet offers some degree of focus control and of course, a twin-lens reflex viewfinder instead of the more common eye-level of basic cameras.

The shutter design is crude, so accuracy is unlikely. Plastic lenses guarantee

flaws! The body is reflective inside, will almost certainly leak light, the blade for the shutter is not a flush fit, and the film transport is of dubious accuracy. All the things that make playing with analogue toys are in abundance. Yet there's a definite charm to the return to a waist-level finder, a



The Recesky kit of parts is quite daunting at first, but easily divided into components like the film transport and side panel.



Above: completed side with film advance and 'counter'.
Below: once the side panels are completed, the shutter can be assembled.



Above: The blade is kicked across by a simple lever and spring, actuated by the shutter release.



One side panel installed, as the internal layout comes together. Next, the reflex mirror should be assembled.



The plastic shutter uses a simple spring. Check it moves freely when installing the screw.



Below: Prior to release, the shutter mechanism under tension.



Once satisfied the shutter is moving correctly, the 'camera obscura' is attached with four screws.





Above: The film door is simply screwed together, and then the camera takes shape.



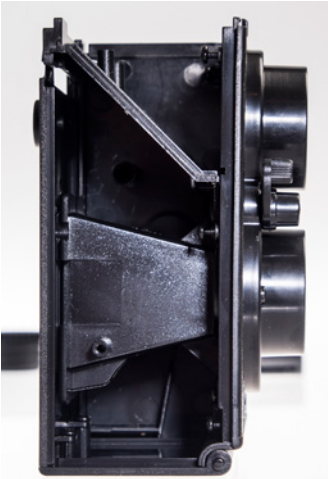
Don't forget to remove the protective plastic from the mirror, before assembly of the ground glass and fitting of the top plate, below.



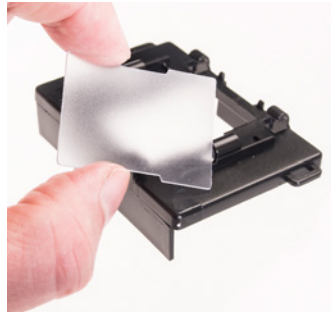
Both lenses are simple push-fit parts; this allows the taking lens to be flipped over and the aperture stop removed for low-light.



Above: A lot of resistance is felt when first screwing the lenses into the body - this is the focus stop being forced past the threads. As long as the alignment is right they will fit properly.



The mirror plate fitted and the film back in place, the second side panel with the film transport can be installed. This fiddly stage is made harder by the need to fit the take-up spool (below) after the side, but before tightening the screws.



And now the body is almost complete, just awaiting lenses.



Minimum focus is around 90cm - the viewfinder screen provides a fair approximation of focus.



Above: The taking lens with aperture stop behind for daylight at 100 ISO.

Below: Align the dots when placing lenses on the body.



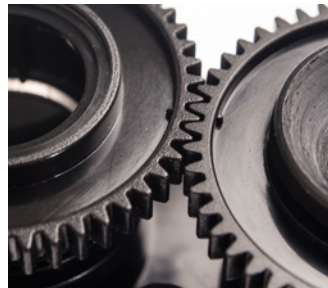
The completed Recesky - a true manual focus, 35mm Twin-Lens Reflex camera for under £10.



Once aligned and checked for movement, the two halves can be tightened up.



The viewfinder shade comes as four components that simply click together.



And now, it's time to assemble the twin lenses. These simply push together, with no screws.



Using a long screwdriver, it's possible to reach the screws partially inserted in the previous steps. Care should be taken not to overdo it and strip the threads.



Above: Harewood House "out of season" - landscape composition on the portrait-format waist level finder is somewhat challenging!

RECESKY

RESULTS



The first roll of Lomography 100 X-Pro Sunset Strip (C41 process negative film) shows that the film wind needs familiarity. Centre sharpness of the simple plastic lens is not unpleasant – the vignetting is perfect for this style and genre. Good light and bright subjects will work well.



SILVER SURFING

Analogue film production is in decline. Every season over the past four years or so has seen announcements of discontinued lines from the big manufacturers. Meanwhile enthusiast-driven small scale production continues to evolve, with Lomography announcing new film products alongside firms producing and branding under classic brands like Agfa.

Unusual formats are less likely to be supported with all choices, but there's still a lot out there.

FUJI maintain an active presence, including their unique Instax instant media system. Although Fuji's extensive film camera production seems to be a thing of the past, they brand and market two excellent 6x7 manual rangefinder bodies.

For 35mm systems, the budget and mainstream C41 negative end is covered by easily-obtained C200 and the Superia range from 200 to 1600 ISO. The remaining 120 Superia ranges – Reala 100, and 400 – are due to be discontinued soon. For slide users classic reversal films Provia 100F and Velvia 50 and 100 remaining in production. Provia 400X is due to be discontinued in both 35mm and 120 formats.

Large format users are supported with Pro NS, a 160 ISO fine-grain negative film available in 35mm, 120, 5x4 and 10x8 formats, and Provia 100F colour reversal film in the same range.

Fuji continue to offer b/w Neopan Acros 100 in 35mm and 120 rollfilm formats, though Neopan 400 will be gone soon. Alongside these classic films, the Instant media aimed at Polaroid packfilm cameras such as the 100-series (1xx through 4xx plus variants and backs) remains on sale in silk and gloss FP100C form. Limited

Film survives! You can still load up cameras a century old and more.



stocks of the high ISO black and white FP3000B are around, though this is not currently being imported.

KODAK's demise seems to be reported as regularly as Kodak's own Twitter account broadcasts the continued availability and popularity of their movie stock in particular. A large contribution to this is the almost depressing regularity with which the iconic brand is misused and misunderstood, the bold yellow and red logo that is so identifiable being gradually removed from photographic products in favour of licensing rich-media devices that inevitably fail to compete.

Kodachrome production and processing ended between 2008-2011, marking a cultural shift. Steve McCurry added the last roll produced to his prolific output, though expired stocks lurk around. Of greater impact to the motion picture and stills market was the end of Kodak colour reversal film *entirely* with the cessation of Ektachrome production in March 2012.

The recently revamped Portra colour negative films are available in 35mm, 120, 220, 5x4 and 10x8, at 100, 400 and 800 ISO speeds, and Ektar 100 is available in 35mm, 120 and 5x4, 10x8 sheets. Movie stock is represented with the Vision 3 colour negative media (from which Portra and Ektar are derived) and black and white Tri-X and Double-X.

Monochrome photographers can enjoy T-Max 100 & 400 in 35mm and 120, Tri-X 320 and 400 (the former in sheet formats up to 10x8 as well), the C-41 process BW400CN, plus T-Max P3200 only while stocks last.

For convenience and availability, there are two choices remaining for consumer-targeted C-41 print film – Kodacolor Gold 200 and Ultra MAX 400 in the UK.

ILFORD's extensive range of black and white films remains in production, with HP5, FP4, Pan F and Deltas 100/400/3200 alongside the convenient XP2 Super 400 C-41. Ilford's UK manufacturing facility also produces media for Kentmere branding. HP5/FP4 and Delta 100 is available in formats from 35mm to 10x8 depending on production demand.

For the most part, it's possible to put **Lomography**, **Rollei** and **Agfa** into the same pool, as the manufacturing is generally by Agfa-Gevaert in Belgium. Lomography naturally market one of the most extensive ranges, as they also offer expired and third-party films through their store, and have recently announced new Infrared effect films under the Lomochrome brand.

Like the X-Pro range of colour reversal films sold for C-41 processing and printing, the chemistry of the Lomochrome range is geared

towards easy production with effects; the different range would need an article of its own to cover.

Lomography offer films in 35mm and 120 format, and Rollei offer what must be the last 127 rolls – Redbird 400, Nightbird 800, and E6 colour reversal Crossbird 200, which unsurprisingly is also marketed for cross processing in C-41. In both Lomography and Rollei marketing, 'red' generally implies a backwards negative, exposed through the base.

EFKE – Fotokemika of Croatia – produce black and white films from ISO 25 to 400 in 35mm, 25 to 100 in 120 and 127 and sheet up to 10x8. EFKE offers infrared 35mm, 120, 127 and sheet film with 820nm sensitivity. Infrared film is also available from Rollei and Ilford.

C-41 is generally easy to deal with, though the quality you get from a supermarket minilab is going to be exactly what you pay for.

For one-stop shopping in the UK Midlands, Ag Photographic of Birmingham (www.ag-photographic.co.uk) are enthusiastic and carry large stocks of darkroom chemicals, odd little accessories and media, as well as handling processing including 110 format.

Obscure processing can be handled by Process C-22 (www.processc22.co.uk) in Margate, including Disc film.

In America, Freestyle Photographic Supplies (www.freestylephoto.biz) has a prominent online presence and distributes Rollei media, and Rocky Mountain Film (www.rockymountainfilm.com) handle the obscure formats and specialist processing.

Around the world Lomography (www.lomography.com) offer mail order and real shops.

– RTK

CAMERACRAFT REARVIEW

Objects seen in this mirror may be closer than they look.
A curated gallery of selected or submitted images.

In March Associate Editor Gary Friedman took his workshops to Malaysia (for Sony) and Singapore. The SE Asian photographic scene is vibrant, from art salon to world-class professionalism. The UK Master Photographers Association (www.mpauk.com) now has over 150 members in the region and their annual awards successes have shown technical and creative excellence. Here are four from the latest awards – right, a single shot no matter what it looks like, from Keda Z. Feng; below, from an internet artist who is now known over the world, Vanessa Ho; bottom left, a great sequence by C. S. Ling; and bottom right, the amazing Singapore Gardens by the Bay, as seen by Joseph Goh Meng Huat.







In Britain, the Hexham Photography Group is a collaboration of amateur, professional, art and experimental photographers, founded by Colin Dixon in 1989. The group exhibits annually, and currently has 35 members across the North of England. The 2013 theme was 'Margins'. Colin himself is grounded in large format monochrome and darkroom work, but has moved recently to specialised inkjet printing (Wooded Knoll Margin, Brampton, Cumbria, top). Iain Duncan's enigmatic image above is not a stream – it is an extreme macro of the structure of a broken pebble; "The tiny pebble displayed here is a piece of intertidal foraminiferous limestone, so named after the foraminifera – tiny prehistoric shells – embedded in it. The pebble is no more than 2cm across and yet with the aid of macro-photography yields a quite astonishing variety of shape, colour and texture." Karen Melvin's beautiful but disturbing visual taxidermy, right, seems at first only to celebrate life and colour and movement – until you study it carefully.

CAMERACRAFT
REARVIEW





by Clare Louise

Such is the standard of international professional competition that an image like this, by the British fashion and beauty fine art photographer Clare Louise, was just one of many exhibited in the last Master Photography Awards. It didn't even feature in her top five high scoring entries for the exhibition – at this level, photographers end up competing with their own work. In the professional world, your collaborators – models, make-up artists, stylists, set builders and more – count as part of your skill. But it's only part. Creating the final image calls for previsualisation followed by skilled execution.

CAMERACRAFT

REARVIEW

If you would like your work considered for our Rearview gallery, email a webpage link to editor@iconpublications.com or send no more than three email-friendly attached images. We will request a larger file if you're shortlisted.