Photographica Digest

Western Photographic Historical Society

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2017 Camera Show

Mark Sawyer

The WPHS is delighted to at last roll out its new web site and forum! We'll go over some of the features and how to use them at the September 7th club meeting. The new site will go online a few days before the meeting at www.wphsociety.org. (There is a place-holder site with no content currently occupying the space.) We'll also be migrating the hosting duties from Earthlink to Envoke, the company that did the design work for us. The administrators/keymasters for the new site are Matt Cook, Martin Kebschull, Brian Nemetz, and Mark Sawyer. Our thanks to Dillon McCollum of Envoke for his design work on the site and instructing us on how to keep it up and running smoothly!

Also at the September meeting, we'll be talking about our new show venue for 2018, the Jewish Community Center! It's a bit bigger and cheaper than the old venue, and promises to be a great space for our event. Thanks to Jerry Day for helping scout out this new location!

At our October 5th meeting, Dr. Jose Sasian of the US's College of Optical Sciences will present his talk on "Joseph Petzval's Lens Design Approach" which he originally presented at the International Optical Design Conference, 2017. We'll have several historic Petzval lenses there as well!

On Portrait Lenses

Mark Sawyer

It seems these days so many different types of lenses are referred to as "portrait lenses", regardless of what they were originally meant for. I've argued with self-appointed "experts on large format lenses" who insisted Rodenstock Apo-Ronar process lenses and general-purpose Plasmats were "portrait lenses" because, well, you can make portraits with them. But by that criteria, every lens is a portrait lens (and every lens is also a macro lens, a process lens, a landscape lens…), so the term becomes meaningless.

Historically, lens manufacturers have designated specific lenses as portrait lenses, and these can be divided into four basic generations going back to the earliest years of photography. Each generation had its own characteristics, and its own aesthetic. And while any lens may be used to make portraits, and breaking those rules can be a valid creative choice, knowing the rules and the reasoning behind them helps inform that choice. Here then, is a short history of those four generations of portrait lenses.

The Petzval Portrait Lens (First Generation)

The first lens designed specifically and successfully as a portrait lens was Joseph Petzval's [I]Porträtlinse[/I] lens of 1840, unveiled just a year after Daguerre, Talbot, and Bayard announced the first practical photographic processes. The characteristic that made it a practical portrait lens was its speed, f/3.6, which was critical given the low sensitivity of those early processes. (By comparison, the competing lenses of the day were the Wollaston Landscape Lens (a single-element meniscus), the English Landscape Lens, and French Landscape Lens (both cemented doublet achromats), all which had to be used at f/16 to be acceptably sharp, and Charles Chevalier's Photographe a Verres Combines, which had a maximum aperture of f/6.) The speed of Petzval's lens reduced the exposure time to a few seconds, considerably less than what the other lenses needed, making sitting times much more practical.

It should be pointed out that due to the field curvature and sagittal astigmatism inherent in the Petzval design, only the center thirty degrees of coverage were sharp. This meant using a longer focal length lens to increase the size of the sharp area. But using a longer lens also gave a more flattering perspective of the human face, and even today, most portrait photographers prefer longer lenses for that reason.

The brightness of the Petzval lens made it a popular design choice for portrait lenses well into the twentieth century. It also became the lens of choice for magic lantern projectors and even some modern movie projectors, as it threw such a bright image. Even today, photographers using old processes like wet plate or the Daguerreotype often turn to the Petzvals for their speed. And the unique effects of field curvature (which throws the corners out of focus), sagittal aberration (the "swirlies"), and the shallow depth of field from any wide aperture lens give an effect sought by some (though not all) photographers.

The Euryscops (Second Generation)

For twenty-five years after its introduction, the Petzval lens reigned supreme for virtually all forms of photography, but

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especially for portraits. It began a slow decline in 1866, when Dallmeyer introduced the f/8 Rapid Rectilinear lens, but owing to the Petzval's speed, it remained popular as a portrait lens and stayed in production by major manufacturers into the 1930's.

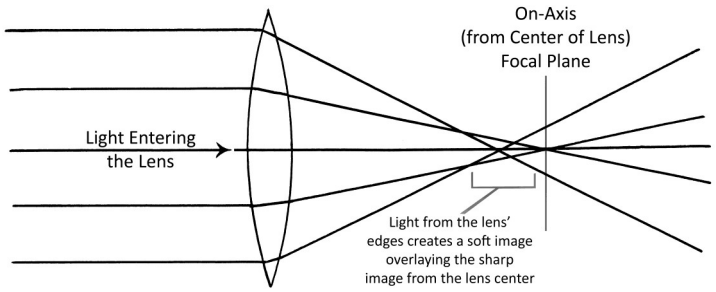
By the late 1880's, the new "Jena glass" allowed Voigtlander to develop a series of Rapid Rectilinears as fast as f/6 (Series IV), f/4.5 (Series III), and f/4 (Series II), known as the Euryscops, but these were still slower than the Petzvals, which had been as fast as f/2.5 since the late 1860's, and the faster Series II and III Euryscops were reportedly somewhat low in resolution. (Note: the original Series I Euryscop was an f/3.2 Petzval, made only in very small sizes, the largest was only 4 inches in focus.)

Although the Euryscops were still a stop or two slower than the Petzvals, the new dry plate technology was faster than the old wet plates, so lens speed wasn't the critical factor it once was. The new Euryscops, especially Series IV, were a huge success, and were sold under many names by other manufacturers and re-sellers, some under license from Voigtlander, some not. You can find Euryscops/Euryscopes/Euryskops Manufactured by Clement et Gilmer, Fallowfield, Hensoldt, Kengott, Krugener, Perkin Son and Rayment, Steinheil, and of course, Voigtlander. Mason, Salex, Sharp and Hitchmough, Staley-Wheeler, and the London Stereoscopic Company also sold lenses engraved as Euryscops, but by makers unknown, while many manufacturers made obvious copies of the Euryscop under other names. Voigtlander began phasing out its production of the Euryscop in the early 1900's, but Wollensak sold its version, called the Versar, well into the 1930's.

The "Artistic" Portrait Lenses (Third Generation)

The third generation of designated "Portrait Lenses" had its roots in the original Petzval formula. In 1867, John Dallmeyer patented a new Petzval variation, the Dallmeyer Patent Portrait Lens. Dallmeyer reversed the two rear elements and tweaked the curves slightly, which made very little difference by itself. But with the new arrangement, the spacing of the rear cells could be changed to introduce a small amount of spherical aberration. This caused the focus from a wide-open lens to spread over a zone, rather than on a flat plane. Dallmeyer's aim was to increase the depth of field, which he did. But the spherical aberration also created what Dallmeyer termed a "soft focus", with a sharp core image overlaid with a softer image focused just off the focal plane.

The lens pictured below displays spherical aberration; note that the light from the outer area of the lens focuses off the focal plane. While the light from the central parts of the lens create a sharp image on the focal plane, the light from the lens edge, focused elsewhere, simultaneously creates a diffused image. This effect decreases as the aperture is closed and conventional depth of field increases. Because the lens has more area at the outer edges than in the center, that will be the dominant image wide open. If the aperture is reduced, blocking light from the outer areas, the lens must be refocused on the newly dominant focal plane to avoid "focus shift".



No one was at first very impressed with the "soft focus" effect, either for the softer image or the increased depth of field, but Dallmeyer's Patent Portrait Lenses were popular because they were fast, well-made lenses that performed admirably at their sharp setting. But by twenty years later, professional photographers had noticed that a soft-focus image was more flattering to the skin, especially of a female sitter, as it smoothed the skin texture, minimizing wrinkles and blemishes. The retouching of such human flaws was becoming a standard practice in photo studios of the day, and soft portrait lenses were usually sold with the promise that they would "reduce or eliminate the need for retouching".

In 1889, Peter Henry Emerson published Naturalistic Photography for Students of the Art, advocating for photography as an art, and suggesting a slight softening of the image to create "a picture, not a photograph. The use of soft lenses took two directions about this time; the birth of soft-focus Pictorial Photography, arguably the first academic "fine art" movement in photography, and the fashion of softened portraits in commercial photography, and both were in full swing by the dawn of the twentieth century.

While Pictorialism went off in its own direction, creating such soft, atmospheric works in unusual alternative processes that could hardly be recognized as photography, professional photographers adopted a trend towards more "artistic" portraiture with usually a touch, or sometimes a wallop, of softness.

The popularity of soft portraits with the public could be seen in the lenses being sold to professional photographers. The

Wollensak Optical Corporation of Rochester NY was growing to become the largest photographic lens manufacturer in the world, and for decades, their "Royal Portrait Lens" (1906, a soft focus Petzval later renamed the Vitax), the Verito (1911, a very-soft focus pictorialist lens) and the Velostigmat Series II (1911, with adjustable soft focus) were advertised as their "Big Three" lenses. Each had soft focus capabilities with its own signature.

Every major manufacturer offered soft focus options: Dallmeyer continued with its Patent Portrait Lenses through the 1930's but introduced new soft designs: The Dallmeyer-Bergheim, the Dallmeyer-Banfield, the Mutac, the Dallmeyer Soft Focus, and the Dallmeyer Portrait Anastigmat. Gundlach offered the Hyperion Diffusion Portrait lens, and the Gundlach Achromatic Meniscus. Bausch and Lomb had the Portrait Plastigmat, the Portrait Unar, and a Petzval Portrait Lens with adjustable diffusion. And Taylor, Taylor & Hobson offered Cooke Portrait Lenses in Series I, IIa, IIb, IId, IIe, and VI, as well as the Cooke Portrait Anastigmat and the Cooke RV/RVP/Achromatic Portrait series. The list could go on and on…

Each model of lens had its own look or signature, according to how its particular design influenced the spherical aberration. Wollensak suggested a good studio have each of its "Big Three" lenses so the photographic artist could choose the right lens and look. Many photographers owned more than one soft portrait lens because each gave a different effect, and Alvin Langdon Coburn owned (by his own varying accounts) six to twelve different Pinkham & Smith Semi-Achromats because each had its own personality.

One odd piece of historical trivia was the re-emergence of the Landscape Lens as a dedicated Portrait lens. If you recall the beginning of this article, the original competitors to the Petzval Porträtlinse were the Landscape Lenses. Those needed to be used at very small apertures (f/16 or less) to be sharp, but now that softness was popular, the look they gave wide open was in demand. Once the opposite of the Portrait Lens, the Landscape Lens now[I] was[/I] a Portrait Lens!

And the list of Landscape Lenses offered as portrait lenses is long: the Spencer Portland, the Pinkham & Smith Semi-Achromat, the Kershaw Soft Focus Lens, the Karl Struss Pictorial Lens, the Kunst-Portrait-Objektiv Plasticca, the Oscar Simon Kronar, the Kodak Portrait Lens, the Rodenstock Imagon… well, you get the idea. And other portrait lenses, like Wollensak's Verito or Bausch and Lomb's Portrait Plastigmat, were designed to also work as Landscape Lenses when their front element was removed.

Following World War II, tastes and fashions began to change and the soft look gave way to the sharpness that people expect even today. A few of the large format soft focus lenses hung around a while; Wollensak re-worked their Verito into the Veritar, and Kodak introduced the Kodak Portrait Lens in 305mm and 405mm, for 4x5/5x7 and 8x10 respectively, but these were gone before 1960. Voigtlander discontinued its classic Universal Heliar in 1970. In Japan, Fujinon and Congo offered their own new designs of soft focus lenses through

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the 19__. The last of the classic soft-focus lenses, the Rodenstock Imagon of 1928, was discontinued in the 1990's.

Modern Portrait Lenses (Fourth Generation)

While the first three generations of portrait lenses were almost exclusively large format lenses, smaller formats, especially 35mm, dominated photography from the 1950's forward. And to speak of modern photography lenses, for portraits or not, is to speak of 35mm or smaller digital formats.

From around the end of World War II through today, the design parameters of portrait lenses are typical of all modern lenses, regardless of intended use: high resolution and contrast with saturated color across the whole frame, a flat field of focus, and minimal aberrations of any sort. Thus the "kit" zoom lens standard with most digital cameras is considered adequate for portraiture or almost any other style of photography. By this standard, quite a few lenses could qualify as "portrait lenses", and indeed, Nikon USA's web site lists 47 different lenses as "Portrait/Event" lenses, while Canon USA lists 42 of theirs as "Portrait" lenses. Still, the serious portrait photographer should choose a lens of roughly double the "standard" lens focal length for a more pleasing perspective, (shorter lenses make the nose appear larger and the face somewhat bulging), and a wide aperture to throw a busy background out-of-focus, to be less distracting from the subject.

Epilogue (The Current State of Affairs)

Along with recently renewed interest in retro-photography such as film, instant "Polaroid-style" cameras, alternative processes, medium and large format, etc., there is a small but growing interest in the older style of portrait lenses. The Lomo company has released several "Petzval Portrait" lenses (though they don't follow the Petzval formula) for digital cameras, while smaller independent companies like Tamron, Lens-Baby, Sima, Spiratone, Kenko, and Yasuhara Momo still or recently have offered soft focus lenses for 35mm film cameras and DSLRs.

Most major manufacturers offer soft focus portrait lenses for the 35mm format: Canon has the EF 135mm f/2.8 Soft Focus Lens, Pentax has the 85mm f2.8, FujiFilm has the 85mm f4, and Minolta makes a 100mm f2.8 and an 85mm f2.8 Varisoft. These use a moving internal element that can be positioned to create a sharp image or introduce spherical aberration in a varying amount.

Also aimed at today's portrait photographers are a style of lenses specifically designed for improved "bokeh", a popular but much-misused term referring to the appearance of out-of-focus areas. In 1999, Minolta introduced a the 135mm f/2.8 "Smooth Transition Lens" uses an odd design, two separate iris apertures with an apodization (APD) element used to eliminate airy disks caused by diffraction. In 2014, Fujifilm introduced a similar lens, the 58mm f/1.2 Fujinon XF R APD. Nikon offers two similar lenses based on non-APD moving elements, the f/2 105mm and 135mm DC (Defocus Control) lenses.

For the large format film photographer, Cooke Optics introduced the PS945 in 2002, their first large format lens in fifty years. A modern version of the Pinkham & Smith Visual Quality soft focus lens designed as a portrait lens for the 4x5 format, only 100 of these lenses were produced, with a second production run in 2009. Demand today is such that used PS945's can sell for as much as new ones. And for those few of us who use even larger formats, well, there's always ebay! The hundred-year-old lenses have warmer souls anyways…

2018 PHOTOGTRAPHY SHOW

Martin Kebschull

Well, I am excited to announce plans for next years show. Firstly, it will be on Sunday 3/18. A number of factors were taken into consideration. U of A school calendar, other competing shows, and event space availability. Which leads me to the second major piece of news, we are under contract to hold the 2018 show in a new location, the Jewish Community Center (JCC) on the south-east corner of River and Alvernon. We have used the previous venue for a long time and had quite a few great shows there.

However, due to rising costs, we barely broke even with table sales and attendance at the last show. As such we (board of directors) decided to look at different options for 2018.

We carefully weighed a number of competing venues, and the JCC came out on top based on just about all factors.

Jerry Day, kudos, for bringing this location to our attention, and getting us a POC there.

The price will be 2/3 the price of the others. The room is slightly larger (but not overly so) than the previous event venue. Parking will be sufficient. We can setup the show without renting extra tables. The event space, facility and concessions are very nice/modern. We can expand relatively easily. Finally, the event staff is very professional and accommodating.

There will be some differences. As this is a new venue for them, we have a chance to attract a new crowd of guests. The

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JCC is a very active community center with a large number of folks coming and going. As such we will get exposure to a lot of folks that might not have heard about us before. Also, we might be able to attract walk-ins.

Everyone (guests and dealers) will need to enter and exit from the main entrance. This includes setup/takedown. As such we will have to be a bit more rigorous with identification of dealers and guests. The details will be sorted in the coming months (badges, stamps etc).

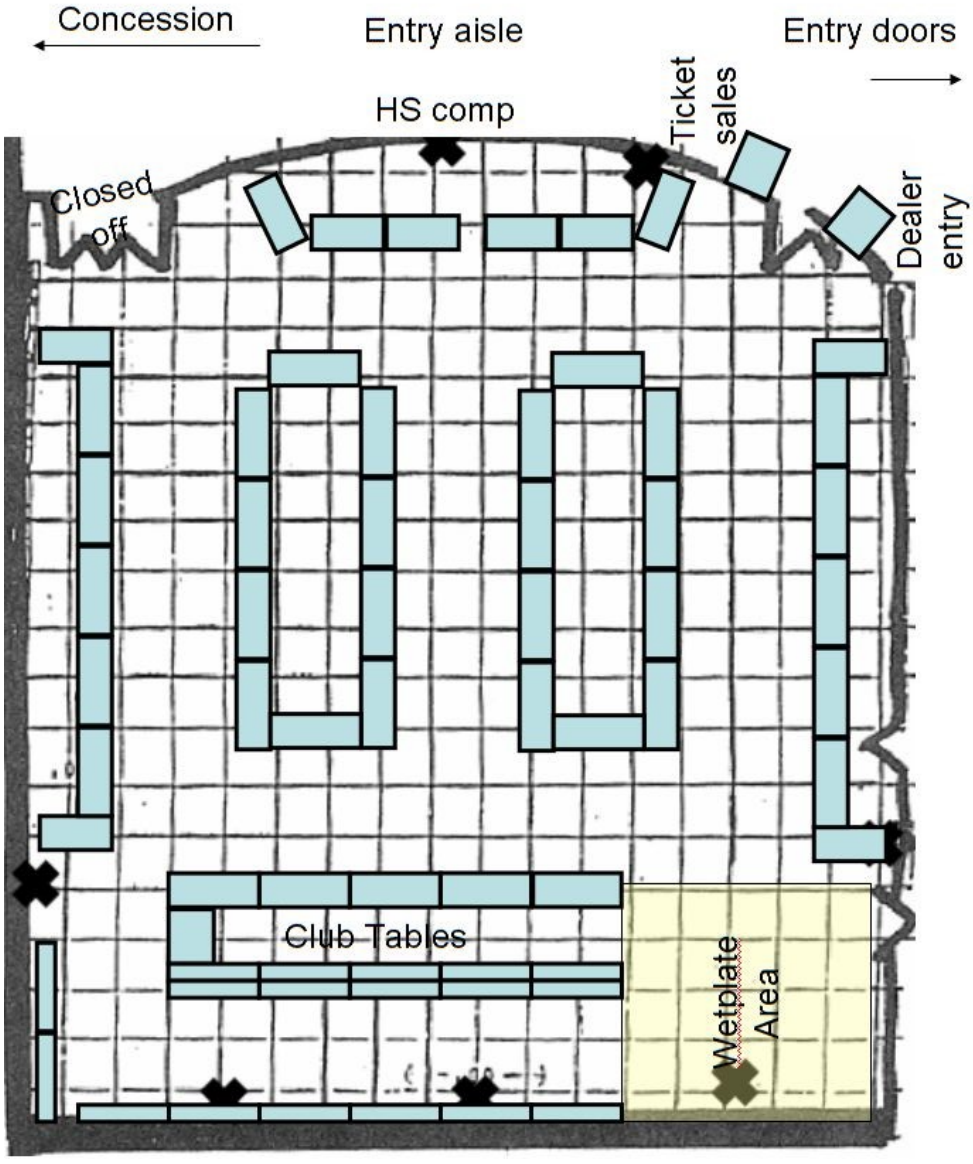
This is a smoke-free facility inclusive of the buildings, grounds, and the parking lot. There is a concession stand that will be open, with a separate eating area. Food is allowed in the event space. The building is a Kosher facility. There will be an updated dealer briefing available on the new website.

The floor square footage is slightly larger than our past facility.

The preliminary floor layouts (see below) show that we can accommodate as many as 44 vendors and 18 club tables. Also, the majority of tables will be 8ft (previous shows had 6ft dealer tables).

I mentioned expandability. There is an adjacent room to ours which can easily be added to our space by retracting an adjoining wall. The facility coordinator will pencil us in for that space and will give us notice if there is the potential of some other event taking it (i.e. we have first dibs). This option is exciting which give us last minute flexibility. There is the possibility of being able to combine our show with another photography group/club (Club Camera?) They have used this facility (the smaller room) regularly in the past and might be interested in joining us. This may be a step forward into making this a bigger show than just us!

More details to follow in future issues, on Facebook and on the new web site.



Western Photographic Historical Society
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Upcoming Events and Exhibits

Sep 7th	Monthly Meeting
Oct 5th	Monthly Meeting: Dr. Jose Sasian of the US's College of Optical Sciences will present his talk on "Joseph Petzval's Lens Design Approach".

We'd like your help in developing new programs especially product presentations. Please contact Matt Cook, Program Chair, at mattcook24@gmail.com

Attention WPHS Members

The club is interested in purchasing your camera collection. Please contact me at:

Imre dePozsgay

520-544-7784

Monthly Meetings

Next WPHS Meeting September 7th

Join us at a new meeting place, the Ward 6 Tucson City Council offices at:

3202 E. First Street, Tucson.

Consignment and member camera sales, show and tell and a brief program are featured every month (except the last two summer months). The meetings run from 6:00 PM to 9:00 PM with show programs beginning at 7:00 PM.

All are welcome!

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