The Death of Beautiful Rendition and 3D Pop on Modern Lenses

BY NASIM MANSUROV | 363 COMMENTS
LAST UPDATED ON FEBRUARY 21, 2019

With the release of high-quality modern lenses that are made to satisfy our insatiable appetite for sharpness, it seems that they also come with a curse. Unlike older classics that shone with their stunning look and feel, along with their beautiful rendition qualities that resulted in particularly attractive photographs with subjects popping out of the scene (also known as "3D pop"), it seems like modern lenses are no longer equipped to give us this magic – they are made to look flat and dull, lacking the character of the old classics. In this article, we will go through a number of different images shot with modern lenses and compare them to their classic counterparts and see how they do. Grab a cup of coffee, sit tight and put on your glasses, because you will need them. And yes, that even applies to those with 20/20 vision.

Note: Since this is a rather controversial subject, I highly recommend that you read the whole article through, *especially the last paragraph*.

It is a known fact that many photographers lust after the latest and greatest gear on the market. While it is understandable why one would want the latest generation DSLR or mirrorless camera, it might be a good idea to hold off on the latest versions of lenses. Why? Because modern lenses are only made to yield the best sharpness possible. This means that they are essentially over-corrected for astigmatism, spherical aberration, chromatic aberration, distortion, vignetting, coma and many other aberrations, some of which are yet unknown to mankind. As a result, we end up with big, bulky and heavy lenses that have way too many lens elements. And if you know anything about optics, you should already know that more elements rob of light, tonality, micro-contrast, depth and feel – things you cannot gain back or recplicate in post-processing. This is very serious to the level that we can safely make the following claim (backed by evidence presented below, of course): *modern lenses trade beautiful life-like rendition and 3D pop for ultimate sharpness*.

Table of Contents

The Lies of Lens Manufacturers

For the past 10+ years, camera manufacturers have been continuously lying to their customers. They are making modern lenses with all kinds of new lens elements that are supposed to correct for different lens aberrations. Never before we were faced with so many confusing lens elements that require an optical dictionary to make any sense out of them: aspherical, low-dispersion, extra low-dispersion, super low-dispersion, high-refractive index, fluorite, etc – you name it! And that's not even counting all the crazy coatings like: nano, super integrated coating, SWC, HD, eBAND, Spectra, T*, BARR, so on and so forth. It looks like lens manufacturers are engaged in deception and confusion tactics to make people as unaware of what they are doing as possible. And it seems to be working quite well for them too. Just take a look at how profitable lens manufacturers have been getting, pushing all that "super duper" meaningless glass. On top of that, we now have manufacturers like Zeiss, who are appealing to all the sharpness freaks, by making lenses that have as many lens elements as there are people who believe in spherical earth theory, resulting in optical junk that weighs more than the camera itself and costing as much as a used car. Photography websites are paying too much attention to meaningless things like sharpness and bokeh, while forgetting about things that truly matter in photography: *tonality, life-like rendition, depth, 3D pop, micro-contrast and color precision*.

Lastly, I still cannot get over the fact that all modern lenses no longer use lead as part of the chemical formula when making glass elements. Lead glass is far more efficient than non-leaded glass when it comes to its refractive index, so if manufacturers continued to use as much lead as possible when making lens elements, we would not have to add those robbing corrective lens elements that make our images look dull and unreal. I am not sure what EPA and FDA was thinking – it is not like anyone would be eating those lenses in the first place! And who dumps their lenses in trash? I don't. And I know of many others that don't. I can statistically prove that photographers don't just trash their lenses – we mostly resell or keep them.

It truly boggles my mind to see such trends in our industry! Enough of ranting, let's jump to images and side-by-side comparisons to prove that modern lenses are junk compared to their older counterparts. Let's start with the death of the 3D pop.

Death of 3D Pop – Too Many Lens Elements

As stated above, modern lenses rob them of special qualities that result in life-like images. While all images are two dimensional, when shot with enough subject isolation, it is possible to create a 3D effect, where the subject naturally pops out of the scene,

giving it depth and dimension. This is obviously not quantifiable or measurable, which is why you won't see discussions on "3D pop" in various reviews, but they are easily seen in images. Let's start by discussing a photograph, so that you can understand what I mean exactly by "3D pop":

Notice how the cat "pops" from the scene with a 3D-look and feel that cannot be replicated on modern lenses
NIKON D750 + 85mm f/1.4D @ 85mm, ISO 1000, 1/200, f/4.0

The above photograph was captured with the classic Nikon NIKKOR 85mm f/1.4D, a stunning lens in every way. While the lens is not very sharp wide open, don't discount its resolving power capabilities – stopped down even slightly, the lens is insanely sharp! But that's what a normal review would have you focus on – "sharpness". What about its other optical characteristics that make it a far superior lens compared to its new replacement, the Nikon 85mm f/1.4G? First of all, it has a unique way to draw subjects, something very few other lenses can. Immediately, you can see stunning depth and phenomenal rendition in every photograph and the above image is the proof of that. Even at f/4 (stopped down to bring more of the cat into focus), the cat clearly pops out of the scene, while the background appears beautiful with stunning bokeh, which helps draw the viewer's attention into the center subject of the scene. The colors of the cat and the greenery right next to it appear life-like, as if the cat is right there with you. The photograph was taken late in the afternoon and the light bounces everywhere, making tonal transitions impeccable.

Modern lenses are incapable of producing such depth and 3-dimensionality for a number of reasons. The main reason is the number of elements – *too many corrective lens elements rob light, making subjects appear dull and lifeless*. The Nikon 85mm f/1.4D has a total of 9 lens elements in 8 groups, which is already a bit too high for a prime lens (ideally, you would want a lens that has between 5 to 7 lens elements max), but it is still better than what its replacement, the Nikon 85mm f/1.4G has to offer – a total of 10 elements in 9 groups! That one extra element on the 85mm f/1.4G design was completely

unnecessary, but Nikon included it to add more sharpness through corrections, which obviously make subjects more flat in comparison. That's why many photographers refused to upgrade to the newest version, because they saw how dull it was compared to the classic.

The Nikon 85mm f/1.4D is not a sole example of a beautiful lens design that results in so much depth. Even the Nikon 50mm f/1.4D classic added a dimension to photographs its modern counterparts cannot:

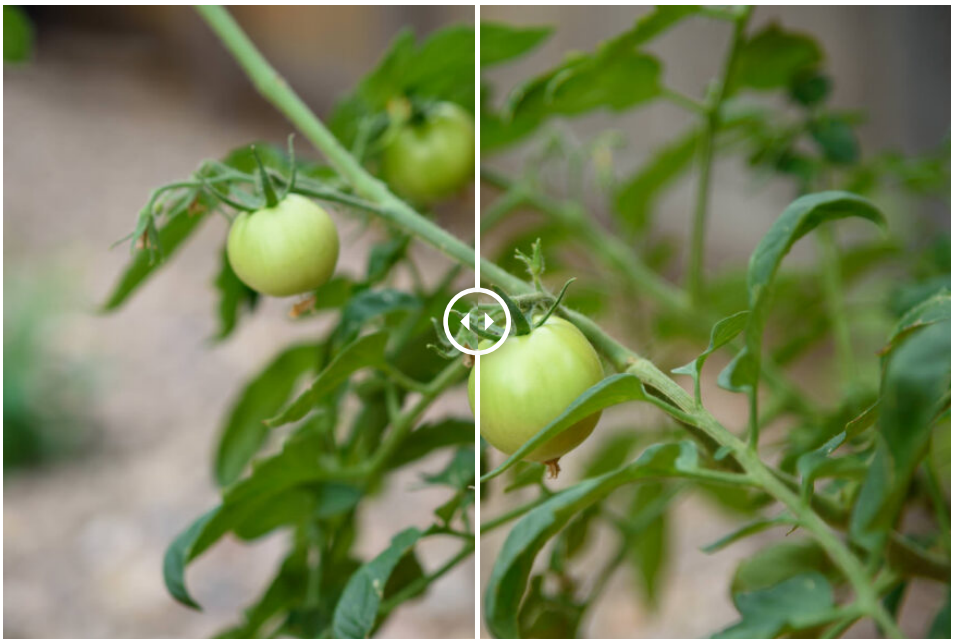
The now "classic" 50mm f/1.4D only had 7 elements, which resulted in a much more natural rendering of the scene and exceptional ability to separate subject from the background. The newer 50mm f/1.4G and especially the 50mm f/1.8G are bad, lacking such characteristics and looking very flat in comparison
NIKON D750 + 50mm f/1.4D @ 50mm, ISO 400, 1/200, f/2.8

Look at how smoothly focus transitions from sharp to creamy – the subject looks stunning at f/2.8, while the background adds both depth and tonality to the image, creating a very life-like 3D effect. Even the out of focus regions of the cat (specifically its darker fur spots), has distinct lines that do not appear "muddy" and "washed out", something we often see too much on modern lenses. Having shot with the Sigma 50mm f/1.4 Art, I saw so much of this behavior in photographs, that it was seriously disturbing. The Sigma 50mm f/1.4 Art is a beast with way too many corrective lens elements, making it a lifeless and dull lens that is only capable of rendering flat images in the field. I am yet to see a beautiful image from this lens for that reason alone!

Prime Lenses vs Zoom Lenses – Glass is Evil

The biggest optical abusers are, without a doubt, zoom lenses. They are particularly evil when it comes to robbing subjects of light, texture and depth. Don't believe me? Put a zoom lens and a prime lens side by side and you will immediately see a huge difference between the two when it comes to 3D pop, rendition, tonality and texture. Once you see how bad zoom lenses are, you will only want to shoot with prime lenses, period! I know

these are very bold claims, which is why I prepared a couple of side-by-side images for you:



Which image do you think is from a zoom and which one was made by a prime? The answer should be very apparent – the "before" image (the one with the brighter corners) was shot with the Nikon 24-120mm f/4G VR zoom lens, while the "after" image was shot with the Nikon 85mm f/1.4D. I took this photo at 85mm on the 24-120mm and right after capturing the shot, I immediately noticed how lifeless, flat and dull it looked when compared to the image from the 85mm f/1.4D. If the images are too small to judge, why don't you try opening them in full size using this link from the 24-120mm f/4G VR and this link from the 85mm f/1.4D.

It is very clear that the image from the 24-120mm f/4G VR looks very flat – take a look at the out of focus regions, where the lens is not even capable of showing enough out of focus detail. Everything looks mudded and washed out. Now take a look at the center of attention – the green tomato. It looks dirty and ugly, with a mixture of colors that weren't even there. It is as if the lens is adding color that wasn't there in the first place. And that makes sense, with a total of 17 lens elements in 13 groups, this lens will never be able to produce what a simpler 9 element lens can. The above is an example of why zoom lenses are so evil. Zoom lenses are only capable of making 2-dimensional images that look flat and lifeless. Keep in mind, that when it comes to glass, top quality to crap quality, they all have dielectric capacitance, which makes up energy, which makes up light! To make it simple, if you want to create beautiful images, never use zoom lenses and especially avoid using lenses with too many corrective lens elements.

And please, don't even get me started on superzooms. They are the curse of modern optics...

Lead Glass vs No-Lead Glass – Makes a Huge Difference

Did you know that lens elements that contain a big amount of lead have a much higher refractive index compared to non-lead glass? It is a well-known fact and the reason why older lenses used to be simpler in optical design! The thing is, when you have lead glass, you don't have to worry about correcting spherical aberrations as much, because unlike regular glass, lead glass can transmit more light and automatically correct most aberrations out there. Lead is why some of the oldest Nikon glass used to weigh so much, but think of all the benefits they gave us – stunning depth in images, indisputable tonality that cannot be obtained with modern lenses, and such amazing levels of micro-contrast and clarity. Take a look at the below image to see what I mean:

The amazing NIKKOR Micro Ai-S 55mm f/2.8 clearly shows how much modern lenses look "flat" in comparison, lacking the "3D pop" and micro-contrast. As you can see from the sample image, the 55mm f/2.8 looks stunning even stopped down to f/4. showing its unique ability to not only pop the subjects from the background, but also in its ability to render natural-looking out of focus areas.
NIKON D750 + Micro Ai-S 55mm f/2.8 @ 55mm, ISO 560, 1/200, f/4

The old Micro Ai-S 55mm f/2.8 classic is a very small lens and yet it packs 285 grams of weight on it thanks to lead-filled glass, while the modern 50mm f/1.8G is so much lighter at mere 185 grams. The difference is very clear when you shoot with both side-by-side – the 55mm f/2.8 has stunning rendition with a 3D pop that the 50mm f/1.8G will never be able to produce, no matter how much you try. Take a look at the above example with the same Bengal cat. Stopped down just by one stop, it yields sharpness unlike any other modern lens and it packs so much depth and clarity! The cat is beautifully isolated from the background scene and the lavender colors stand out very clearly from all the greenery as well. On a modern lens, it is hard to distinguish those colors because everything gets thrown into the mix, making images very muddy and ugly. This image has so much tonality to it – look at every shade of color and you will see that nothing gets mixed up anywhere. Even though the cat is not back-lit, the lens does such a phenomenal job at color renditions, that the cat just pops out of the scene. This is yet another

showcase for the stunning 3D pop we never see on modern lenses.

Here is another example of a lens that has quite a bit of lead in it:

Another case for a stunning life-like rendition of Nikkor classics – the NOCT is capable of creating stunning depth and sharpness that cannot be rivaled by modern lenses
NIKON D750 + NOCT Nikkor 58mm f/1.2 @ 58mm, ISO 250, 1/100, f/1.8

Without a doubt, the NOCT-Nikkor 58mm f/1.2 is a stunning lens in every way and there is no modern lens that can do what this lens is capable of, including the ability to render life-like subjects. While it might not be super sharp wide open at f/1.2, stopping the lens to just f/1.8 produces results that will satisfy any pixel-peeper out there. Just take a look at how much detail there is in the cat photo above – you can literally see every whisker and piece of fur, and if you look at the ear details, you can even see the individual blood veins inside the ear! There is a lot of color separation we witness here, from brights to darks, everywhere in the scene. Even the green trash bin in the background appears beautifully smooth and there are no distracting bokeh elements or rings to be seen anywhere. The cat pops out of the scene and it almost looks like it is walking right at you – that's how powerful a lens can make an image appear. Capture a few shots like this and put them in an international photography competition and you will be guaranteed to win, especially if the judge is going to be knowledgeable enough to understand everything I have discussed so far in this article (Note: just in case, send the judges the link to this article, so that they know what to look for).

Modern Prime vs Classic Prime

Let's take a look at another example of how bad modern lenses are compared to their

classic counterparts with less elements. Take a look at the below image of the same cat, captured right after sunset:

Ugly rendition of a modern prime, the Nikon 105mm f/2.8 VR Micro. Notice noisy out of focus areas, dull colors and lack of tonality previously seen on other images in this article
NIKON D750 + 105mm f/2.8G VR Micro @ 105mm, ISO 2500, 1/250, f/2.8

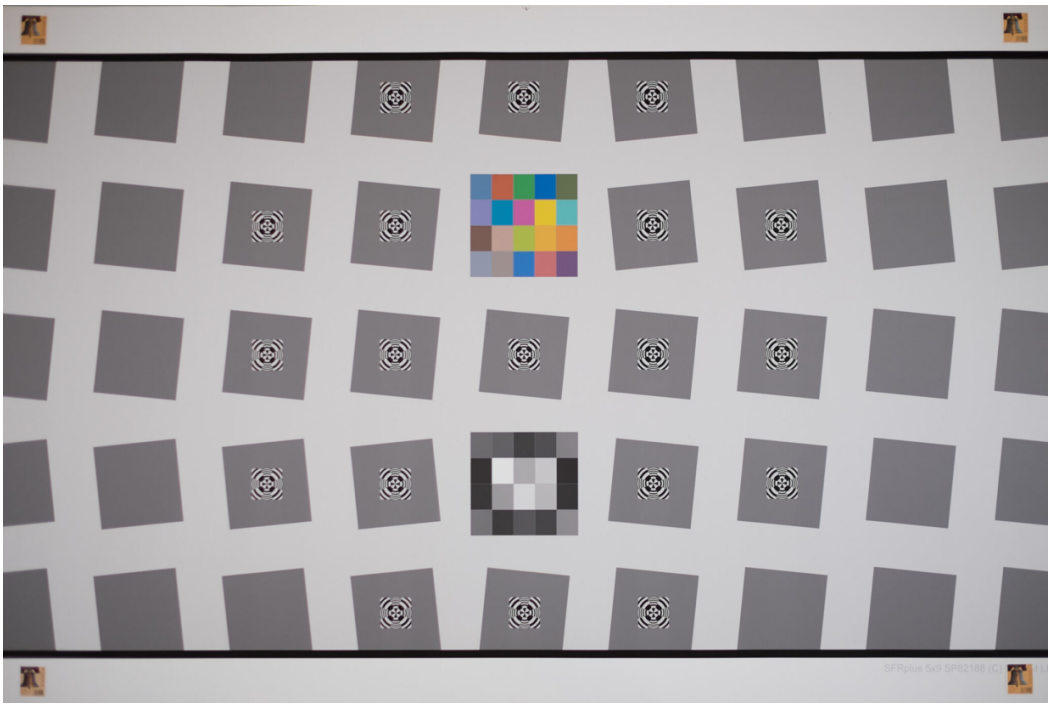
It hurts my eyes to look at this image for a number of reasons. First of all, this was shot with the modern Nikon 105mm f/2.8G VR Micro, a lens with 14 total elements in 12 groups! That's a heck of a lot of elements for a prime, don't you think? Especially when you compare it to the classic Nikon 105mm f/2.5 lead glass that only has a total of 5 lens elements! You would think that a lens with 3x the number of optical elements would yield stunning images, but that's definitely not the case. I am not sure what Nikon was thinking with such a complex optical formula, but it is clear that they messed up, especially when a lens with only 5 elements can easily outperform its modern counterpart in every way. If you have ever shot with the legendary 105mm f/2.5, you would know exactly what I am talking about!

Grand Unified Theory of Everything

On a somewhat unrelated note, I am happy to report that I stumbled upon the Grand Unifying Theory of Everything (physics) while doing research for this article. If you aren't familiar, the biggest problem in physics today is that quantum mechanics and general relativity (small-scale and big-scale physics) aren't compatible when you're dealing with high-gravity, small-scale environments, like the singularity in a black hole. And when two theories aren't compatible, you know that one (or both) must be wrong.

It sounds like very complicated stuff, but I realized how simple this problem really is when you just approach it intuitively. Think about a camera lens, and how it works. As I've just shown, lenses with very few glass-to-air surfaces have far more 3D pop and micro-contrast than the newest lenses on the market that various corporations are trying to sell.

But how could this be true when light is the fastest-moving object in the universe — which is exactly what quantum mechanics "claims"?



No, this effect would only be possible if light wasn't the fastest object in the universe — if there was something faster that raced ahead of the light, then rebounded on the glass to block part of the incoming light. And that something is the ether.

For all of history, from the Ancient Greeks to modern-day scientists inspired by Nikola Tesla, the fact of the ether has been well-known. But when "scientists" like Albert Einstein started talking about general relativity, corporations lapped it up. Why? Simple. The existence of the ether means that people can harness free energy via the natural power of the universe. But if corporations can convince everyone that it doesn't exist, oil and energy companies across the world can rake up hundreds of billions of dollars every year.

The existence of the ether has been well-known for millennia, but it wasn't until my simple glass-to-air thought experiment that normal people could understand how simple it is. Even Nikola Tesla agrees: "Explaining the workings of the universe without recognizing the existence of the ether is futile." Since neither quantum mechanics nor general relativity is necessary given the existence of the ether, their supposed incompatibility is a non-issue (although it wasn't my intent, my glass-to-air thought experiment also explains why magnets and magnetism work — something that even corporate-backed scientists like Richard Feynman said they couldn't easily explain).

Sorry to go off on a tangent, but this really shows the duplicity of today's camera and lens corporations. They have known for decades that the ether exists, and that their new lenses would be low-contrast and ugly. But profit drives everything in this world, which is why today's lenses are so unusable.

Summary

Let's wrap up the above information into a simple summary: only buy classic low-element prime lenses with lead glass elements – everything else is junk, as proven by the image samples and comparisons in this article. Sell every modern lens you have (you should have no problems with this, as long as you keep stating that it is "sharp"), especially if it has more than 9 lens elements. Unless you want flat, lifeless images that lack 3D pop, depth, dimensionality, clarity, micro-contrast and tonality, you should never touch zoom lenses, especially superzooms – don't trade beauty for convenience. Why bother spending all that money on modern lenses, when classic lenses from 10+ years ago are so much better in every way? Those corrective lens elements (especially plastic aspherical lens elements) are the work of the devil and should always be avoided at all costs. And lastly, don't be a victim to modern day marketing – there is absolutely no need to buy expensive, high-end lenses. Aside from sharpness, they add nothing else to your images, period.

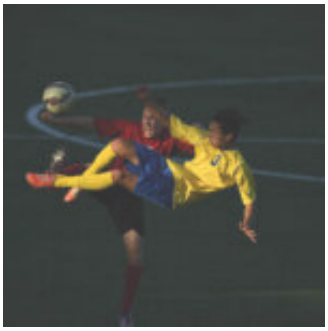
P.S. I hope our readers realize that this article is a satirical piece, aimed at poking fun at those individuals and websites that post nonsense information about lenses and their "unique" qualities. In an upcoming article, we will reveal some facts and hopefully put some of the above arguments to rest. If you had fun reading this article and you can relate to some of the terminology and claims used in the article, please share your thoughts below :)

SUBSCRIBE

RELATED ARTICLES

Nikon D5300 Image Samples

Nikon D90 SDXC Compatibility



Nikon D5 Sample Images

The Most Desired Future Nikon Lenses

Pre-Order Links: Nikon Z50, New Lenses, Battery Pack

Nikon D300 vs D300s

DISCLOSURES, TERMS AND CONDITIONS AND SUPPORT OPTIONS

FILED UNDER: CAMERAS AND LENSES
TAGGED WITH: NIKON, SUPERZOOM, PRIME LENS, ZOOM LENS, SATIRE

About Nasim Mansurov

Nasim Mansurov is the author and founder of Photography Life, based out of Denver, Colorado. He is recognized as one of the leading educators in the photography industry, conducting workshops, producing educational videos and frequently writing content for Photography Life. You can follow him on Instagram and Facebook. Read more about Nasim here.

Join the discussion

363 COMMENTS Most Voted

Johnny
August 5, 2020 6:42 am

Came for micro contrast. Got conspiracy theory about corporate quantum physics.

8 Reply

Robert H
March 5, 2020 5:13 am

Hi Nasim,

Did you post the upcoming article where you reveal some facts and hopefully put some of the above arguments to rest? I cant find it anywhere and would love to read it! Partly because I am new to this website (and so glad i found it, thank you!) and can't fully ascertain what aspects of what you wrote are satirical and which aspects aren't!

Thanks
Rob

6 Reply

trask
July 3, 2018 1:48 am

I'm just here for the cats.

4 Reply

> **Dr. Robert Svensson**
> Reply to trask November 28, 2020 12:23 pm
>
> YES! I love that little brownish spotted cat! She is wonderful.
>
> 0 Reply

> **Paul**
> Reply to trask December 16, 2020 3:05 pm
>
> This is fascinating. I'm a beginner in photography. Can you suggest any equivalent canon lens? I would love to try them
>
> 0 Reply

Henrik
December 19, 2020 11:48 am

What a load of crap. Why not just write what you think and then back it up? Idiot.

2 Reply

Roman
Reply to Henrik February 27, 2021 5:54 am

Whoa there. Nobody is coming to confiscate your lenses. I prefer my fd lenses over munch effect lenses well before I read this article.

0 Reply

Doron Tshuva
June 23, 2020 2:42 am

I got to test this with a zoom lens and a vintage jupiter 135 and it's clear to be true. The sigma is sharper but so flat at the same photo.

So now i want to but the non ai nikkor 200/4 but found out its bigger and got more weight than the Sigma But the Ai-S is lighter and smaller but had 5 elements and not 4 like the non ai.

Does that matter so much (the extra glass) or since the element are probably thinner they are better?

I can find an answer if more glass means more elements or more mass of glass.

Are "Pancakes" better?

2 Reply

Bakayaro
April 24, 2019 9:59 pm

We need those article to make the old lens market alive, thank you.

1 Reply

DaniloKusta
August 1, 2018 10:34 am

So all this article was just a joke? :(– I just found out yesterday about the 3d POP and micro contrast, and feeling I just found out about a rather "new and photo life-changing" subject, I have been reading for two days about it, even changing my lens investment plans. I read the Angry Photographer and articles of Yanick Khong, but as I read I just felt confused, like that feeling something about them don't convince me 100% (Angry Ph's personality is somewhat difficult).

I read this article with a lot of interest, since it is very well written, and it supported with facts everything I just studied about lenses ("Glass is Evil"). As for my photography, I'm not neceserilly a thinker that "expensive=better", I just want to achieve a look I thought "L series, G Masters, ART lines" would give me, that storytelling feeling you see in photographers (like Instagram account @Because People Matter, or Steve McCurry, for example).

Since I'm in the search of a lens that would give me that "something" I thought was sharpness, and then learned what I needed was micro contrast and 3d pop, I passed from thinking I needed the Sigma 85mm 1.4 ART for a portrait lens with that "something I thought was sharpening", but after learning M-C and 3DP, I discovered the Mitakon Speedmaster 85mm 1.2 lens. Of course, for me it's a big change in lens, the Mitakon will be a more risky shot, since manual it's not my strength (for now!) and it's completely different than the Sigma, which gives me confidence. It's not that I was planning to throw away al my (few) lenses, but I thought that I can risk and try something new in my photography.

But when I read the LAST PARAGRAPH, and realized it was all a joke, I'm more confused than ever :(. Must be the 2 day on a row reading about a new topic. Don't get me wrong, joke aside or not, it's an incredible article. But now I'm not sure about nothing. Is micro contrast and 3d pop true? Mitakon will give me that magical something? or stick with Sigma?

I appreciate if you could help me a bit to get out of my confusion. Anyway, nice article man!

@DaniloKustaPhotography

1 Reply

Nasim Mansurov Author
Reply to DaniloKusta August 1, 2018 10:40 am

Danilo, don't fall for that trash. There is no such thing as too much glass making images look worse. Don't waste your money buying old or some rare lenses and stick with modern lenses that perform.

1 Reply

Roman
Reply to Nasim Mansurov February 27, 2021 5:57 am

Old lenses have kept up with my workflow just a small well as my new rf lenses. I wasn't trying to find out why and

0 Reply

Valentin Voinea
July 26, 2017 12:53 pm

Nasim,
From my experience, after purchasing first the Sigma 35mm f1.4 Art and the Carl Zeiss 35mm f2 (both lenses bought after reading your excellent reviews), I can say that those two lenses produce images that have NOTHING in common (aside from field of view). I am no expert in lens design, but there is something that gives the images of the Sigma 35mm f1.4 Art lens muddy colors and FLAT rendering that made me sell it asap. (by comparison to the Zeiss, of course).
I have been following photography life for some years now as well as having subscribed to the Angry Photographer's youtube channel less than 2 years and I can say there is value everywhere!
But this article brings nothing but more controversy in the photography arena that needs no more.
And yes … I am one of those fools that can see micro contrast in photos and perceive it as three dimensional.
I am awaiting the part 2 of this article but my experience speaks for its self.
Respectfully,
Valentin

1 Reply

> **Nasim Mansurov** Author
> Reply to Valentin Voinea July 26, 2017 6:14 pm
>
> Valentin, hope you will enjoy the articles that are coming up :) While some lenses do render images differently that might appear more "flat", it has nothing to do with the lens element count or its glass content. If that was the case, then all Zeiss Otus lenses would only yield flat-looking images…
>
> 0 Reply

Mr Big
July 25, 2017 8:33 pm

I'm so sorry to be the one to have to say this but, none of the images posted in the provided samples are exhibiting what we'd call the 3D effect.
Granted, many of then them have nice colors, and the cat sure is lovely. Though most of them are either flat, or lacking with respect to the infamous 3D look.

With that said, the so-called 3D look which is sometimes touted as being magical, is not merely a matter of isolating subjects within the focus plane, but more specifically a combination of optical effects that give the illusion of depth to the viewer. To which I'd add, the effect is so subtle, that it is often perceived as a mystery. And in many cases, leaving certain viewers oblivious to its presence. To which I'd add, it is possible that the author may be subject to also.

1 Reply

Nasim Mansurov Author
Reply to Mr Big July 25, 2017 11:48 pm

Mr Big, I fully agree :) I think you should re-read the article, especially the last paragraph.

And your second paragraph definitely hits home.

0 Reply

Pavlos H
Reply to Nasim Mansurov February 13, 2021 10:37 am

I was scratching my head the whole time. Satire was confirmed when you made the decision (aka the apophasis as we say in Greek) to go on the science theory (theoria) angle, especially bringing up ether… ;) Poor Ken…

1 Reply

Marco
July 24, 2017 8:45 pm

Hi Nasim,

Funny but somewhat disingenuous. In the comments of your review of the Zeiss Distagon T 35mm f/2 ZF.2 you wrote this on January 8th, 2015:

"Microcontrast is not always better on Zeiss lenses, but the drawing style / 3D look / beautiful colors usually are. It is hard to say where the depth comes from, but I think it has to do with the combination of optical design that has a bit of natural vignetting. Zeiss lenses have German glass in them, even though most Zeiss lenses are assembled by Cosina in Japan. That German glass is color neutral and is made by the same company that makes optical glass for Leica, Schneider and many others. Others cannot really compete with Germany's history of glass molding, it is nearly perfect. That alone is what makes Zeiss lenses so special…"

How you can gush about the special depth and 3D pop of the Zeiss 35 ZF.2 and then ridicule others who found and wrote about the same qualities is a bit strange. Seems to me their theory about glass degrading light makes more sense than your random musings about 3D pop coming from uncorrected vignetting and the German history of glass molding. Just saying…

Marco

1 Reply

Nasim Mansurov Author
Reply to Marco July 24, 2017 9:17 pm

Marco, I did not try to ridicule anyone on microcontrast, 3D feel or colors in the article. Microcontrast exists, but not just because a lens has less optical elements. Images can have a 3-dimensional "look" to them, but that's a very subjective matter, as some people see it while others don't. Personally, I believe that depth is added to images using a combination of light, camera to subject distance, aperture / depth of field, composition and natural lens vignetting. Some Zeiss lenses and other glass like Nikkor 55mm f/1.4G have beautiful vignetting that can make an image appear this way and I stated this in my reviews, as you have pointed out. Color neutrality exists – German-made Schott glass is the most color-neutral in the world and it is a well-known fact that if you use a lens with such glass and compare it to any other lens, you will see visible color differences (at the same time, color can be adjusted in post-processing for any combination of lens and camera). More glass does not degrade light or make images appear "flat". That's a myth and a lie.

We will be discussing this and other topics in our upcoming article.

0 Reply

Y. K.
Reply to Nasim Mansurov July 25, 2017 7:46 pm

You said:
"More glass does not degrade light or make images appear "flat". That's a myth and a lie."

Since when are your musings facts, empirical, or verifiable?
In fact, the former head of Nikkor lens assy. Nakamura commented "the lower element primes render depth the best, even at the (trade off) of higher resolution"

You in fact know nothing about optics whatsoever

0 Reply

Y. K.
Reply to Nasim Mansurov July 25, 2017 8:01 pm

Glass is a capacitor, you fool, unless you think MIT is wrong
www.youtube.com/watch...ckpQW9sdUg

Did you think electrical and optical were two diff. things?

Cute, and dumb.

0 Reply

Pete A

Reply to Y. K. July 26, 2017 11:15 pm

Air, like glass, is an electrical insulator (obviously), therefore it is also a 'capacitor' — as becomes blindingly obvious during a thunderstorm!

"Electrical" and "optical" are indeed two different things. Optical refers to the electromagnetic spectrum of visible light, in particular: self-propagating, therefore far-field, electromagnetic waves (using the wave model) or photons (using the particle model). The energy of each photon = the Planck constant (h) times the frequency of the photon (f):
$E = hf = hc/\lambda$, where
c is the speed of light, and
λ is the wavelength of the photon.

A static, electric field, does not generate photons, neither does a capacitor. When the electric field strength exceeds the dielectric strength of the insulator, the insulator becomes an electrical conductor. [https://en.wikipedia.org/wiki/Insulator_(electricity)]

For those who believe that it is the capacitance of glass that causes degradation of image quality, you need to fully explain why the metres of thickness of the insulator air, between the subject and the image plane, degrades the image far less than does the small thickness of glass lens elements. Good luck with that because it's completely the wrong model for explaining optical transmission (or any other type of transmission theory).

0 Reply

Saturn N.

Reply to Nasim Mansurov July 26, 2017 1:52 am

Nasim, respectfully, both your satirical article and your comments after are leaving me with concerns, rather than insights. You say you didn't try to ridicule anyone on these topics, yet regardless of intent you did in fact write an entire lengthy article that served little purpose except to pointedly ridicule Yannick Khong (in particular) for a viewpoint that you yourself acknowledge is subjective. Before you continue with this subject in future articles (which very well may include valid and interesting insights that add to the discussion), I think you need to understand that you are not on a moral high-ground at this point, and you might want to step back and reconsider your course. You are essentially bullying someone for holding beliefs that differ from your own. To make it stranger, as Marco pointed out, you've previously discussed the same qualities that Khong (et al.) does, acknowledged that lenses do differ in these qualities, yet attempted to satirize those who prioritize and prize these qualities, and defended your lampooning by suggesting that your ire is directed at the idea of element count and lead content being the source of these qualities. This is clearly disingenuous, since this article's satirical commentary focused on sarcastically playing up differences in rendering, with the actual contention being that they weren't truly present, or at least not to a degree you consider significant. That has nothing to do with the source of rendering differences; you are attacking the differences themselves, and those who perceive them. It may not be what you "tried" to do, but it's what you've accomplished here. If it's truly not what you *wanted* to do, I

think you should give some serious consideration to your approach. I expect your reaction will be that I've misunderstood you, that it was in fun and your *intent* was good, but everything you've so far said leads me to think you've misunderstood your own self. You might also say this wasn't directed at anyone in particular, but the points and terms you focused on made it clear who inspired this, and your commenters recognized it and acknowledged it with what they added to the conversation, even if none of you mentioned him by name.

A couple quick notes on the subject of rendering differences in lenses: 1) When the "cult of microcontrast" (:)) speaks of 3D pop, depth, flatness, and so on, what they're mostly referring to is the ability to convey form, which is a legitimate element of two dimensional imagery. I never see it put this way, but I think it might be the clearest explanation: all lenses render shape, but they differ in the degree to which they render form (and those differences are the bulk of what you've spoken of in the past when mentioning the depth and pop you notice in lenses like that Zeiss 35, with vignetting, distortions, and likely other things sometimes contributing). 2) Your overlay comparison between the zoom and prime is actually a really excellent example, but of what Yannick describes, not of the viewpoint your satire intends to promote. If you understand how form differs from shape, and you look for that instead of for vague ideas like "pop," you can see that the prime in your example is indeed rendering form to a greater degree than the zoom is. (Whether it's significant is subjective, as you said.) That's pretty much all Khong contends, regardless of what you think causes it, and you demonstrated that he's describing a real thing. Think of how an artist would make a pencil drawing of a circle and a sphere. The difference is in the shading that conveys the form required of a sphere. Artists of different shading skill will render spheres that differ in how convincingly they convey three dimensional form through a two dimensional medium. Lenses differ in this regard in a way that is almost identical, but the difference is more subtle.

I think you and Yannick are two people who basically agree on the general substance of the matter, yet you're separated by disagreement over surrounding details and perceived importance, and perhaps also by a language barrier created by the vague terminology being used to describe subtle things that few ever look for. Such a minute disagreement is nothing to take a mocking tone over. If you will, set aside preconceived notions and imagine, just for a moment, that I might know what I'm talking about, that what I've said is true, and that your position on this could be imperfect. If the rendering differences discussed are real, as you've previously said they are, and they're affected by differences in lens design and materials, as you've previously suggested and even demonstrated with the examples within this article, then how does the sarcastic, attempted-satirical tone you've used to address this topic make you look as both a writer and a voice within the photographic community? What kind of person are you presenting yourself as? That's not an answer you have to give me, but I hope it's one you'll consider and give to yourself. The attitude in this article doesn't clarify anything, it only adds more noise and division to a community already characterized by those things.

1 Reply

Saturn N.

Reply to Saturn N. July 26, 2017 1:54 am

(And of course the angry photographer :D but he's been mentioned plenty here and I don't even want to get into that can of worms, lol! :D :D)

0 Reply

Nasim Mansurov Author

Reply to Saturn N. July 26, 2017 2:38 am

Saturn, first of all, thank you for your feedback and detailed comment that explains your viewpoint, I really appreciate it.

To make it clear, I never said that microcontrast does not exist, or that there is no 3-dimensionality in a photograph. What I specifically highlighted in the article was related to claims that it is the lower element count of lenses, or their lead content that makes images 3-dimensional. Claims that modern lenses are junk based on their element count or glass content is ridiculous to me, plain and simple. And this article was not written by me alone – a number of PL team members looked at images side-by-side and came up with the idea based on what we could not see.

As for the zoom and prime lens differences and presented image samples, they are all a spoof – everything is swapped and changed, and most images were taken by the Nikon 24-120mm f/4G VR, while others were taken by modern primes that are supposed to yield flat-looking images. Although this is the first time I am revealing this information, I will present this in more detail in an upcoming article to show how easy it is to fool others. So if you thought that a prime rendered better than the zoom, it was actually the other way around.

What creates dimensionality in a photo is not how many lens elements there are in a lens. Light, form, subject, camera to subject distance, aperture, depth of field, camera to background distance, vignetting, composition, colors, saturation, framing, etc – these are some of the main reasons that add to depth or dimensionality in a photograph, not leaded glass vs non-leaded glass or the number of elements in a lens. It is the same discussion of photographer vs gear – those 12 inches behind the camera that truly matter. Is optical formula important? Yes, it is. Are color neutrality and microcontrast of a lens important? You bet. But these are not what make a photo. Unfortunately, some people believe in myths and make wrong choices as a result. We see it in practically every industry – from audiophiles who swear by expensive cables that supposedly make a huge difference in sound, to photographers who believe in magical properties of lenses. Interestingly, they also tend to use the same verbiage such as "depth", "dimensionality" and "tones" to describe how one piece of gear is so superior compared to another. And yet when challenged to present evidence or scientific data to back up their claims, they struggle.

The above article is a mixture of facts and myths presented for further discussion on the matter. Please don't think that it is made to show any superiority or higher ground. We just want to present some facts, side-by-

side comparisons with commentary and let the audience decide. And if any of our team members are wrong about any of what we say, I will publicly apologize and correct that information. In fact, who knows, maybe this will lead to far more educational content than we had anticipated.

I hope this clarifies things a bit more. If you have any other questions or concerns, please let me know.

0 Reply

Robert

Reply to Nasim Mansurov July 29, 2017 2:30 am

Hi Nasim,
I'm glad you said the following in your previous reply "As for the zoom and prime lens differences and presented image samples, they are all a spoof – everything is swapped and changed, and most images were taken by the Nikon 24-120mm f/4G VR, while others were taken by modern primes that are supposed to yield flat-looking images", because I was doing A-B comparisons of the full-sized images, and apart from some slight colour and vignetting differences I kept on asking myself "what's this guy smoking?"
I think that this kind of topic is very subjective, much in the same way that the proponents of vinyl records rant on about "the vinyl sound has more depth". Only scientifically conducted experiments can shed any truth about the subject and would show that there's a lot of psychology involved in interpreting images.
Besides, with the ever-increasing use of Photoshop to produce images that the art-wankers will be satisfied with, any perception of image quality difference is all academic.

0 Reply

Sjaaksjako

Reply to Saturn N. August 5, 2017 1:27 am

Well Spoken! Thank you.
It's comforting to read words like these on the web.....

I'm really interested to see the follow up article by Nasim, which I expect will clarify everything.

0 Reply

Nicolas

Reply to Nasim Mansurov July 26, 2017 2:43 pm

Lenses actually do absorb light that's a well known fact. That why for movies they use transmitences and not apperture for example.

Now modern lenses typically come with modern coatings that greatly reduce that effect. That's why modern lenses can have more elements and still maintain a good transmitence: the coatings are better.

From my own experience 3D pop comes from a combination of sharpness, micro contrast, colors, light and in focus/out of focus transitions. The lens, format, camera, jpeg/raw processing, and also the screen and viewing distance all participate to the effect.

I have noticed that my oled TV screen does actually make many more image look 3D for examples than my other screens. And I noticed that my work screen are especially bad and would make almost any image look dull.

I experienced that doing post processing can also increase the effect or destroy it. Default rendering of Fuji or Olympus for example tend to flatten pictures and that you can correct that by going through the raw and edit it differently. Fuji or Olympus can make subject pop is there lot of bokeh, but for scene where everything or most things are in focus, their way of rendering jpeg, that tend to try to find details everywhere make the final rendering more graphical, less lifelike and less 3D.

I have noticed that some lenses tend to give more pleasurables pictures than other and some more 3D look than others. That may be subjective but for example in Pentax I clearly notice the difference with FA lenses rendering and DA rendering. FA has less constrast, tend to come with various color aberations and to have a softer rendering. The DA lenses tend to be more constrasty, get more aggressive gradients and to be extremely resistant to flare. While I appreciate the DA flare resistance and the DA constract for landscapes, I tend to prefer overall FA lenses, in particular for portraiture where the rendering of FA lenses tend to please me more.

This pop exist for sure. This pop is influenced by many factors, that for sure too. To a degree the lens is part of the factors. But that’s only one factor. Some old lenses do exhibit it, that for sure again. But that’s not a given for me.

As if modern expensive lenses are worth their cost, well it depend of the criteria. But you can perfectly make great or outstanding photos with quite basic and unexpensive lenses anyway. It is quite true that outside of displaying 100% crop the small differences between lenses is not that obvious and you’d better invest in improving your technique, your eyes, composition, taking more care of where the light does come from… than from taking more perfect gear…

Of course that only a tendancy, it vary from lens to lens. But clearly lenses are not neutral in their rendering. And different people will prefer different type of lenses.

Anyway, for me the difference in appreciation of pop for the same image depend of course of the person itself, we are all different, but also from the viewing conditons and in particular the screen used.

0 Reply

Marc Synwoldt

Reply to Nicolas July 27, 2017 5:02 am

Kudos, Marco, for what strikes me as one of the more balanced and common-sense-founded reactions in this thread. I particularly like the way you stress that perceived image quality is a result of both objective (empirically demonstrable) and subjective qualities (personal preferences and, yes, tastes). And while microcontrast, 3-D pop, depth rendering, or whatever you may want to call it is real, to me at least, people will differ considerably in their perceptions of it.

Personally, I've seen or felt I've seen it in images rendered by several Pentax-DA lenses, down from the cheapo DA 50mm F1.8 (6 elements), through the DA 35mm F2.8 Macro Limited (9 elements) to my most expensive lens, the DA 15mm F4 Limited (8 elements). Along with vivid colour rendition and flare resistance, I think it is a highly desirable quality in a lens, even if the lens is not the only factor in achieving it, and I'm perfectly happy to sacrifice some nth-degree corner resolution to get it. And I cannot shake the feeling that these important qualities, in particular microcontrast, are not getting the attention they deserve in traditional laboratory-based lens testing.

3-D pop seems to be more present in my prime lenses, although my DA 10-17mm and 55-300mm zooms (10 and 12 elements, respectively) do a remarkably good job in maintaining at least some of it, while it is virtually absent from my now largely disused 18-55mm kit lens. And I recall laboratory tests slamming the DA 10-17mm as a lackluster lens, and praising the DA 18-55mm as one of the better kit lenses. Go figure. (Yeah, I know there is that thing called sample variation, but still.)

0 Reply

Marc Synwoldt

Reply to Marc Synwoldt July 27, 2017 5:08 am

I meant *Nicolas*, of course – how foolish of me to confuse the names! Sorry for that.

0 Reply

Nicolas

Reply to Marc Synwoldt July 27, 2017 2:51 pm

DA lenses are great. Small light, not too expensive and with great constrast as well as great flare resistance. That's a good compromize.

0 Reply

LOAD MORE COMMENTS

LEARN

- Beginner Photography
- Landscape Photography
- Wildlife Photography
- Portraiture
- Post-Processing
- Advanced Tutorials
- Best Cameras and Lenses

REVIEWS

- Camera Reviews
- Lens Reviews
- Other Gear Reviews

PHOTOGRAPHY TUTORIALS

PHOTOGRAPHY BASICS
LANDSCAPE PHOTOGRAPHY
WILDLIFE PHOTOGRAPHY
MACRO PHOTOGRAPHY
COMPOSITION & CREATIVITY
BLACK & WHITE PHOTOGRAPHY
NIGHT SKY PHOTOGRAPHY
PORTRAIT PHOTOGRAPHY
STREET PHOTOGRAPHY
PHOTOGRAPHY VIDEOS

RECENT TOPICS

- Moving to Mirrorless, Advice needed
- Night Rounds
- Mirrorless Multi-exposure – RAW or JPEG
- Instant cameras
- Last post dates in forum
- Prints from Proof Sheets
- Can't access account settings
- How to appraise used gear

- Price of ai-s lenses seems to have skyrocketed!
- Unable to download tutorials I purchased

SITE MENU

Beginner Photography
Lens Database
Photo Spots
Search
Submit Content

REVIEWS

Camera Reviews
Lens Reviews
Other Gear Reviews