Prime Lenses vs. Zooms
by Robert Monaghan

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Prime Lenses vs. Zooms?

Prime lenses have a single focal length (e.g., 20mm f/2.8 lens). Zoom lenses offer a variety of focal lengths over a given range in a single lens (e.g. 70mm to 210mm/f3.8).

Prime lenses and zoom lenses come in both manual focus and auto-focus mounts. While there are still a few manual focus 35mm SLR cameras being made, more and more of the cameras being sold are auto-focus models too.

Many manual focus prime lenses are no longer being made by OEM and some third party lens manufacturers. Even in autofocus mounts, the number of prime lenses seems to be declining year by year. Zoom lenses are out-selling prime lenses by five to one!

Is this happening because zoom lenses are better than prime lenses? And if so, how are they better? If not, why are zooms taking over from prime lenses in amateur photography?

Zooms - the Pros

Why are zooms so popular?

Convenience! You can vary the zoom controls, rather than having to move from your shooting position.

If you are shooting slides, zooms help you crop in the camera, ensuring an optimal composition on the slide.

Zooms can be relatively cheap. For example, you can buy some zooms that cover 28mm to 210mm f/4-f/5.6 for under $100 US on the used market. Prime lenses would be a lot better quality-wise, but also a lot more expensive and heavier in your camera bag to carry around.

Many zooms also offer a limited close-focusing capability (mis-labeled *macro*) that may reach 1:4. While quality is not as good as a true macro lens, this feature is very handy and costs little more to add to a zoom.

Expensive professional zooms are now available that are optically very good, at a relatively fast speed (f/2.8), and rugged construction, albeit at a high price.

Finally, some cameras now only come with zoom lenses as their default lenses.

How many Primes is a Zoom Worth?
Proponents of zooms often argue they replace 3, 4, or more prime lenses. For example, the common 85-210mm zoom replaces an 85mm, 105mm, 135mm, 180mm, and 200mm set of prime lenses, right? Perhaps not. In most cases, few photographers would carry both an 85mm and 105mm portrait lens, or both a 180mm and 200mm lens. And 135mm is currently a very unpopular prime lens among most amateur photographers. Most of us would probably carry a 105mm portrait lens and a 200mm telephoto, perhaps with a 1.4x macro teleconverter (for 140+ and 280+mm options). One trick is to keep track of where you shoot your zoom lens. Are you constantly bouncing off the long and short ends of your zoom? If so, you might be better served by a either a longer range zoom or a mix of prime lenses. Similarly, if you are losing a lot of photos due to camera shake, you either need to use your slower zoom with a tripod or consider faster zooms (pricey, if available) or faster prime lenses. Similarly, a 20-35mm zoom probably doesn't replace carrying 20mm, 21mm, 24mm, 28mm, and 35mm lenses. Again,

most of us would probably carry one or two lenses in this range, such as 24/35 or 21/28 rather than all five prime wide angle lenses.

Even when I am carrying a zoom lens for minimum bulk and weight shooting, I often like to carry a fast (f/1.8) very light-weight normal lens. Yes, I have had zoom lenses jam. Yet I could still carry on shooting, thanks to a backup prime lens in my jacket pocket. I also like to have a small fast wide angle lens (often 21mm or 24mm) available in my other jacket zip pocket to extend my range too. Oftentimes, these smaller prime lenses end up on the camera thanks to their small bulk and weight on my tired neck, while the heavier zoom ends up in a pocket until needed. At other times, I just bring along my Olympus XA clamshell camera with 35mm lens to serve as both a backup and modest wide angle camera.

In short, I think there is a middle ground, and *the trick is to combine both zooms and prime lenses in your photographic bag of tricks so you get maximum advantages from the time, money, and weight expended on using each one.*

Pros of Prime Lenses and Cons of Zooms

Unfortunately, even the better zooms of today can't replace yesterday's prime lenses. The optical quality is less of an issue than it used to be, but prime lenses still often have half the elements and therefore less flare versus zoom lenses and greater contrast. A prime normal lens with 6 or 7 elements will have much less flare than a zoom lens with 12 to 15 or more elements at the same focal length setting.

Professional quality OEM zoom lenses are typically rather expensive, heavy, and of modest speed (e.g., f2.8). Cost of a top quality 20-35mm f/2.8 zoom is often more than the 20, 24, 28, and 35mm OEM prime lenses it replaces! Moreover, the primes would all be at least a stop and sometimes two stops faster!

Do you use a lens hood on your zooms? Few people do. Zoom lens hoods are usually only marginally effective at the widest point, and useless at the longer focal length settings. Otherwise, they vignette. You could buy a compendium lens hood (e.g., Hama), but few zoom users do so, right? Yet we all know that zooms are generally more prone to flare than similar quality prime optics, if only because they usually have more and larger optical elements.

Primes generally focus much closer than zoom lenses.

Zooms are heavier around your neck than individual prime lenses mounted on your camera.

Prime lenses are also often much faster than most zoom lenses (e.g., f/2 prime versus f/2.8 or f/3.5 zoom maximum aperture).

If your zoom dies, you are stuck. Unless you have backups, you probably can't take any photos within that zoom's range.

Those Missing Depth-of-Field Markings on Your Zoom

Is something missing on your new zoom? Does it have depth of field engravings? If not, are you going to carry around a book of depth of field tables to set hyperfocal distances? Or you could use the depth of field preview button to fake it, if your camera is one of the fewer and fewer models that still has a depth of field preview button.

If you have prime lenses, you probably carry several prime lenses to replicate the zoom's range. If one lens dies, you can still take pictures with the other prime lenses.

Zooms also typically perform worst at the widest setting (for wide zooms) or longest setting (for tele-zooms), precisely where you need the best performance.

Zooms have large filter thread diameters, mandating a collection of equally large and expensive filters or use of a professional size filter system (e.g., Cokin, Ambico).

Most prime lenses don't rotate the end of the lens, so polarizing and gradient filters don't have to be reset when used. Many zooms have outer rings that rotate, requiring resetting polarizers or gradient filters when used. So besides being often bigger and more expensive, filters on zooms are also often harder to use.

In short, prime lenses have a lot of benefits that even the best and most costly of today's zooms can't replace.

Variable Aperture Zooms versus Handheld Lightmeters
How do you know what your zoom's aperture is if it varys over the zoom's range from say f/4 to f/5.6? If you are using a handheld lightmeter, spotmeter, flashmeter, or incident lightmeter with slide film, you need to know the true aperture to set the speed. See the problem? This fact is another reason pros who use incident light meters or flash meters often prefer fixed aperture zooms...

Sad Facts About Flare

The following exerpt is from our page on lens flare:

In the accompanying Lens Flare Test Results Table, some 70-odd lens flare test for some older prime 35mm lenses are reported. The average lens flare was just under 1.5%. Thanks to multi-coating, a number of multi-element normal lenses had flare levels under that of a single lens element (i.e., flare under 0.6%). By contrast, the average flare for zoom lenses was 3.9%!

Flare levels increased as you stopped down both a Canon prime 50mm f/1.4 lens and especially any of the zoom lenses tested. Multicoated lenses showed lower average amounts of flare, as you would expect. Surprisingly, a Soligor 55-135mm f3.5 zoom had lower flare levels than an OEM Zuiko 50-90mm f3.5 zoom! Unfortunately, the best flare performance of the Vivitar 80-205mm f3.8 zoom was worse than 90%+ of the prime lenses, including many much older lenses. While this Vivitar zoom's longest 205mm setting had its worst flare result (at 5.7%+), the worst zoom tested reached 9.37% flare levels!

You simply can't build a zoom lens, with many more elements and air-to-glass interfaces, and get lower flare levels than an equal quality prime lens with fewer elements. Flare in the form of veiling glare also reduces contrast by scattering light on your image. Shadows aren't as black. So even if a zoom lens were as sharp as each of the similar quality prime lenses it replaced, it would be very unlikely to be as contrasty due to lens flare!

T-values - Bad News for Zoom Users

Ssssh! Can you keep an industry secret? Lenses are marked in f/stops, which are calculated purely from geometry. Most users think that a 180mm f/2.8 lens would be just as bright used wide open as a pro f/2.8 zoom lens set at 180mm and used wide open. After all, f/2.8 is f/2.8, isn't it?

Sorry, but f/stops are about geometry, while T or transmission values are about the actual amount of light transmitted. When you have a lens with only a few elements in it, there is relatively little flare and light loss from internal reflections and absorption in the glass of the lens itself. But what do you think happens when you have a complex zoom lens with 15 or even 18 or more elements in it? As we have noted, flare goes up dramatically with most zooms. With more elements, you should expect to get more light losses, and you do.

How bad is it? Would you believe that most zoom lenses have transmission value light losses of 1/2 to 2/3rds of a stop? Wow! That means the expensive f/2.8 zoom you are lugging around may actually be delivering the same amount of light as an honest f/3.4 (-1/2 stop) or even f/3.5 (-2/3rds stop) lens! If you have ever compared a 200mm f/2.8 against a 200mm f/3.5 lens, you see that the slower lens is only about a half or a third the weight and the cost to buy too. Ouch!!

So when you compare an expensive f/2.8 pro zoom lens against a prime or fixed lens, don't assume that the zoom is *really* f/2.8. Check the specifications for light loss and actual transmission value. If the lens loses half a stop (f/3.4) or even 2/3rds of a stop (f/3.5), don't compare it against a f/2.8 prime lens. Compare it against the slower equivalent f/3.4 or f/3.5 prime lens with similar transmission values. Suddenly, the fast pro f/2.8 zoom is seen for what it really is - a slower and very heavy f/3.3 or f/3.5 optic with higher distortion and more flare.

Naturally, the same is true of the lower cost consumer zoom lenses which claim to be f/3.5 or even variable aperture zoom lenses. These slow consumer lenses are even slower when you factor in the transmission value light losses. Likewise, those very wide angle 17-35mm zoom lenses with 13 or 15 elements in them experience similar high levels of flare, distortion, and transmission losses too. So here again, you can't compare your 20mm f/2.8 prime lens against a 17-35mm f/2.8 zoom lens. The prime lens will likely be a fractional stop brighter and faster, as well as lighter than the typical zoom for the transmission losses reasons described above.

Shooting Color Print Film for 8x10" or Smaller Prints? Forget Testing!
Photographers who use color negative films to make prints up to 8x10 inches can safely do without tests, since the differences in image quality will not be noticeable at these small enlargements. Those shooting color slide films or producing larger prints (black and white or color) should definitely evaluate their lenses' image quality. This is even more important for professional photographers whose pictures must meet the highest requirements.
Source: Lenses for 35mm, Kodak Workshop Series KW-18, 1998, p. 33, Artur Landt

My Views

I still have Nikon's first 8.5cm-25cm zoom lens, perhaps the second zoom lens for 35mm users after the original Voigtlander 36-82 f/2.8 Zoomar lens of 1958. I also have about as much invested in fewer 35mm zoom lenses as I do in 35mm prime lenses. But my lens testing efforts confirm that prime lenses are invariably better than zoom lenses, although sometimes the differences are only modest.

Zoom lenses have benefitted the most from modern glasses, multicoating, and more recent lens designs. Are you shopping for a bargain in an older zoom lens? You may find it relatively harder to find acceptable optical quality compared to prime lenses from the same period.

It has only been in the last decade or so that zoom lenses have been embraced by professional photographers. Even then, these pro zooms are the highest quality, fastest, and most expensive professional zooms rather than the consumer grade zooms most of us can afford to use!

Few people would consider any of the preset zooms made in the 1960s and 1970s. But many photographers, including professionals, use various preset prime lenses such as mirrors and long telephotos.

Except for the *cult classic* Vivitar Series I zooms from the 1970s, relatively few zooms from this period offer any features which would make them superior to today's newer zoom designs.

In the 1980s, we start to get some decent quality zooms in the shorter range zooms, from such third party lens makers as Tamron, Tokina, Sigma, Kiron, Vivitar and others. Low cost zooms in the wide and ultra-wide zoom ranges are still unlikely to equal today's improved wide and ultra-wide zooms.

In short, it is hard to get the best quality optical results from older consumer grade zooms. Even the better quality wide and ultra-wide zooms from more than a decade ago generally won't compete against today's zooms (at least, at the mid-consumer level on up).

By contrast, many prime lenses from the 1970s are very good, even by today's standards. You can find lots of normal and telephoto prime lenses that are very serviceable, but at surprisingly low costs.

On the other hand, lower cost prime ultrawide angle lenses from third party makers (such as Sigma) from the 1970s and early 1980s may be useful. But they are probably noticeably less capable than today's better prime ultrawide angle lenses. Within the wide angle lens range, you can often find some very capable performers from the 1970s, and increasingly so from the 1980s, but careful testing is warranted.

Obviously, you might find an exception to these general observations. But I believe that prime lenses offer better optical performance than zooms from the 1960s, 1970s, and mid-1980s period covered in our extensive List of 1600+ Third Party Lenses from the 1960s, 1970s, and 1980s. I have tried to highlight the possible exceptions in the cult classic lens pages.

Unfortunately, the vast majority of zooms offered for sale from the mid 1980s onward are consumer class zooms. Many of these zooms are reasonably capable lenses, but optical quality is often sacrified to low cost and light-weight design goals.

As noted in the collecting third party lenses and adapters page, fewer primes are now available, and most of the new ones are only coming out in autofocus mounts.

I believe that today's better professional and high end consumer zooms will eventually be more widely available as used items, and at better prices.

Until that happens, I am led to the conclusion that prime lenses offer a better buy for photographers seeking to get the best optical results for the least amount of money.

Notes:

From Lenses for 35mm, Kodak Workshop Series KW-18, 1998, p. 48-50, Artur Landt (ed. note: Mr. Landt authors the "Test and Techniques" column in the German photography magazine *Color Foto*):

A series of lens kit recommendations are made for different kinds of photography (e.g., architectural, landscape, travel..). Four levels of outfit, from basic and standard to expanded and professional outfits are described, with the professional outfits having the most range of optics. Zoom lenses are listed in none of the professional outfits! In only one of six expanded outfits is a zoom listed (35-135mm in portrait photography as an alternative to 35mm, 50mm and 100mm prime lenses).

Quoting from pp.44-45:

It is only fair to compare equivalent models, that is middle-range zooms with middle-range fixed focal lengths, or high-power zooms with high-power fixed focal length lenses. When these comparisons are made, you find that prime lenses still offer image quality superior to that of zooms. Generally, the difference is most noticeable at the zooms' maximum-focal-length settings. In the case of zoom lenses covering a large range of focal lengths, such as 28-200mm, the best image quality is often achieved at the widest setting.

At full aperture, zooms are generally inferior to fixed focal lengths due to spherical aberration and the diaphragm's changing position. For average subjects at moderate settings such as f/8 or f/11, prime and zoom image quality tend to be roughly comparable, although a deterioration toward the edges of zoom pictures is still visible. Very finely detailed subjects reveal a difference at the center of the image to the advantage of fixed focal lengths, even at optimum aperture settings.

Many zooms display a degree of spherical aberration, especially at close range and full aperture, giving a visible lack of definition toward the edges when flat objects are photographed. By stopping down to about f/11, you can virtually eliminate this loss of sharpness, but at the price of a longer exposure.

Zoom design, which requires a shifting position for the diaphragm, creates more pronounced distortion and vignetting than occurs in prime lenses...

From Modern Photography, February 1983, *SLR Notebook* by Herbert Keppler, p.102:

First, zooms which have macro focusing systems do not provide sharpness anywhere near that of a true single focal length macro lens...

In like manner, zooms used at moderate closeup distances as in portraiture seldom (if ever) provide the same sharpness as a good single focal length as I hope we proved in September SLR Notebook. The loss of sharpness compared to single focal lengths is far greater at such distances than at medium or far distances.

What's Wrong With This Lentar 80-210mm f/3.5 Zoom?

Lentar:	80mm		100mm		135mm		210mm	
f/stops	center	edge	center	edge	center	edge	center	edge
3.5	very good	excellent	excellent	excellent	very good	acceptable	acceptable	acceptable
5.6	excellent	excellent	very good	excellent	good	acceptable	acceptable	acceptable
8	excellent	excellent	excellent	excellent	very good	excellent	good	excellent
11	excellent	excellent	very good	excellent	excellent	excellent	good	excellent
16	excellent	excellent	very good	excellent	excellent	excellent	very good	excellent

Modern Photography, February 1972, p. 101

What's wrong with this Lentar auto 80-210mm f/3.5 zoom? Beats me, but you would be lucky to get $20 for one on EBAY. Most folks would sneer at the Lentar brand name, and ignore the intriguing fact that it is a solidly made auto-diaphragm lens with a fixed f/3.5 aperture. Such a fixed relatively fast (vs. f/4 or f/4.5) aperture is one of those indexes of a lens with potential to be more pro than con, i.e., "pro-sumer" than "con-sumer" ;-) Other tips are the close focusing to 6 feet, high cost ($200 in 1972 gold redeemable dollars). Today's consumer zooms are lighter, at least as good optically, but cost lots more and few focus as close as 6 feet, and none offer a fixed f/3.5 fast aperture throughout their range.

Soligor 70-150mm f/3.8 Zoom Data						
Soligor	70mm		100mm		150mm	
f/stops	center	edge	center	edge	center	edge
3.8	39	31	40	32	40	32
5.6	44	35	45	32	45	32
8	49	44	50	40	50	40
11	55	44	56	40	56	45
16	49	44	50	45	50	45
22	49	35	45	40	45	40
Modern Photography, March 1981						

I like this Soligor 70-150mm f/3.8 zoom because it is so small and light (at 1 lb and 1 1/2 ounces) that it is easy to take along. This one-touch zoom takes 49mm filters, another plus. While the original cost was $279, you can often pickup such a zoom today for $20-50. But except for two "good" ratings (at f/3.8 and f/5.6 at 70mm setting), the lens garnered all "very good" (n=18) or "excellent" ratings (n=16). Most of the "excellent" ratings (n=11) were in the edge or corner resolution. In other words, for such a small and light lens, this zoom performs surprisingly well.

This zoom lens loses 0.4 stops at 70mm, and only slightly more (0.65 stops) at 150mm. While barrel distortion is under 1% at 70mm, it rises to a rather high 2.11% pincushion distortion at 150mm.

Related Postings

rec.photo.equipment.35mm
From: danksta@ns.sympatico.ca (Terry Danks)
[1] Re: 400mm Lens!
Date: Tue Nov 03 1998

What will this lens be used for? The reason I ask is that I personally NEVER, NEVER use my 200-400mm Tamron at anything other than 400mm. If you plan on buying this lens for wildlife, including (especially) birds, I submit you too might find this to be so. Unless you feel you really need the zoom capability, don't buy it! Get a fixed FL 400mm such as the Tokina or Sigma instead. They have the reputation for being sharper than zooms at 400mm and are cheaper and a tad lighter too. For me they would do more for less. (So why do I have the zoom? Long story.)

From: "Anders Nilsson" anders.nilsson@goteborg.mail.telia.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Wider zoom area = lower quality?
Date: Wed, 28 Oct 1998

For any given level of cost/technology, there is a direct connection between a wider zoom range and lower quality. There exist on the market lenses with a wide zoom range and good quality, but they are expensive.

If You just want a lens for general photography, then I'd recommend You get something not exceeding the 28-105 You mention. It would be nice if You had specified Your camera system, if You're a Minolta user, then I can really recommend the 24-85/3.5-4.5 lens as an outstanding piece of good amateur equipment. It delivers in terms of picture quality, but it does not have the robust build of a pro lens, nor is it powerful enough for low light photography.

Nikon has a 24-120mm, but the Swedish magazine FOTO didn't rate if very high at the long end. Canon's 24-85 is reportedly inferior to the Minolta equivalent. One good option if You have the money is to buy a good 28-80 lens and a 20 mm prime for the wide angle shots. If You don't have the money, then buy a good 28-80 lens. Under no circumstances buy a 28-80 that costs USD200 or so, it's a complete waste of money and You'd be far better off with a 50 prime.

I'd forget about the 200mm lens for a while, this focal length is rarely needed for general photography, if You want a portrait lens, then drop the 20mm and buy a 100mm instead. Forget about cheap 200mm lenses, they will disappoint You. Buy a cheap 75-300 zoom if You must, otherwise save up for a pro spec 80-200/2.8 lens. Optical imperfections are more disturbing in tele lenses.

I'd drop any thoughts of Sigma lenses if I were You, I have never heard anyone being satisfied with them. Tokina ATX series lenses have a good reputation.

Hope this helps

Anders Nilsson
anders.nilsson@goteborg.mail.telia.com

From Nikon Digest:
Date: Fri, 30 Oct 1998
From: "Roland Vink" roland.vink@ait.ac.nz
Subject: DOF scales on their zoom lenses

What on earth keeps Nikon from putting DOF scales on their zoom lenses?

As far as I know, the only zooms with DOF scales are one-touch manual lenses, such as the AIS 35-105/3.5-4.5 and 80-200/4. The DOF marks on these lenses are beautifully curved colored lines on the barrel below the focusing/zoom ring.

Why do the lines curve? For a given focus distance, the DOF is wider at shorter focal lengths, and narrower at the long end. As you push or pull the zoom ring, you will see how the DOF changes as the focal length changes. The DOF markings are easy to read because they are directly under the focusing scale.

Now, if you take a look at the design of AF zooms, you see that this type of DOF marking is not practical. Only a few AF zooms are of the push-pull type, so it would be possible to put the curved DOF lines on the barrel. However, the distance scale is usually at the top of the lens, too far away to be able to read it against a DOF scale on the barrel.

Most AF lenses are two-touch style, so the curved DOF lines do not make sense. It would be possible to print DOF markings below the distance scale, but these markings would be true for only one focal length. I think such a scale would be more confusing than helpful. If you want DOF scales on your zooms, I guess you could tape a couple of scales to the lens for the focal lengths you use most often. Not a perfect solution, but it will at least give you some indication of the DOF. Personally, I usually stick to primes which have very good scales.

Roland.

From: fohl@nmgate.netminder.lucent.com (Mark E. Fohl)
Newsgroups: rec.photo.equipment.medium-format
Subject: Re: Tetering: the irresitable lure of MF, but AM I going to regret it?
Date: 30 Oct 1998

...

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>If there's a question in here, I'm not really sure what it is. Most of
>what I've said has been rhetorical. I guess I just need to know that I'm
>not acting in haste here, and that MF is worth the extra hassle.
>
>Sleighteem
>Please reply to hopi@pro-ns.net Thanks
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I've got two comments regarding your post. First, I have made some good 11 x 14 prints using 35 mm. Do you use zoom lenses? My results with Nikkor fixed focal length lenses were significantly better than those with my Nikkor zooms.

And that leads to my second and more important comment. I suggest that you not "switch to" MF, but rather add MF to your repertoire. Assuming that you can afford it, it is nice to have both capabilities. The 35 is lighter, smaller, has a greater variety of lenses and accessories. But MF gives better results and is fun to use in the right circumstances. My general modus operandi is to use 35 mm for color negative work and MF for B&W work. My MF, btw, is Mamiya TLR. I have a C220 (bought new about 15 years ago), a C330 (bought used a year or so ago) and four lenses: the 55, 80, 135, and 180. I consider it a good day if I go out and find an occasion to use every one of them.

Good luck with your decision,

-- Mark

[Ed. note: 2 zooms are better than 1...]
From: tut@ishi (Bill Tuthill)
Newsgroups: rec.photo.equipment.35mm
Subject: Re: 28-200mm (MF) lens,seeking opinions
Date: 2 Nov 1998

davsen@my-dejanews.com wrote:

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> Greetings, I'm looking at 28-200 (and 28-105) mm lens (maunual focus) from
> Sigma, Tokina and Vivitar. They all cost about the same price and have
> similar specs. can anyone make any suggests about which might be the
> better/worst lenses. ( i'll be using it with a canon AE-1 & T-70 FD bodys).
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For manual focus, you'll save money and get higher quality with a used lens.

But for the record, I wanted to remark that the Tamron 28-200 is considered the best superzoom, mostly because of its ability to focus as close as 80cm. However, buying the Tamron 28-80 and 70-300 ($368 paired) instead of just the 28-200 ($299) gives you more zoom range and this quality difference:

	open performance		closed		vignetting		distortion		flare	AF	build
	wide	long	wide	long	wide	long	wide	long		speed	quality
28-80	**	***	***	***	*****	****	*****	*****	***	*	**
70-300	**	**	***	***	****	****	*****	****	***	*	*
28-200	*	*	*	*	***	****	**	***	*	*	*

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rec.photo.equipment.35mm
From: kevinchen@my-dejanews.com
[1] Re: about Nikkor 85mm lens
Date: Thu Nov 05 1998

I have used the AF 85/1.8 for more than 4 years and find it's the best one among my currently owned 35-70/2.8, 35-135/3.5-4.5, 70-300/4-5.6 ED and 80- 200/2.8 ED. In fact, I really cannot understand why there is a need to pay 2.5 times to get a 1.4 though I don't have one. For 5% (maybe less) better performance possible you pay 150% more. Bad deal!

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rec.photo.equipment.35mm
From: David Johnson david@spamu.xlnt.com
[1] Re: about Nikkor 85mm lens
Date: Thu Nov 05 1998

...[above]
That is the way most things in life are. It costs more than 5% extra to manufacture/design something that is 5% better when it is near the limit of performance. It is more linear at the low end of performance.

Besides, the 1.4 is more than just 5% better, at least at f1.4. I have had many situations where another 2/3 stop would have been useful. It can mean the difference between getting a useful shot and not getting it. If you make your living at photography, it could pay itself off pretty quickly.

Bad deal!

It all depends on your needs.

--
David Johnson
XLNT
david@xlnt.com

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rec.photo.equipment.35mm
From: roy@veridata.com.tw (roy)
[1] Re: about Nikkor 35mm lenses
Date: Wed Nov 04 1998

hi Tony

I had ever consider this question, to buy one f1.4 lens I almost can buy f2 lenses for 2pcs, so I decide to buy the f2 lens, althought the f1.4 lens is better than f2...

roy

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rec.photo.equipment.35mm
From: kirbyko3@aol.com (Kirbyko3)
[1] Re: primer sharpness
Date: Mon Nov 30 1998

I use a Tokina 28-200 zoom when I travel, and the sharpness of the lens is noticeably less than the incredible sharpness of my AMAZING Pentax Takumar 135mm f/2.5, which is considered to be a pretty cheap and easy-to-come-by lens.

You can see the difference in sharpness even when you're focusing on your subject -- it's much sharper with a prime. But if you travel a lot, it gets to be a pain shuffling all those lenses on and off the camera to get all the shots you want, so a zoom is definitely a convenience. Then again, this zoom is a Tokina -- not hardly a Nikon!

Kerry

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rec.photo.equipment.35mm
From: rpn1@cornell.edu (Neuman-Ruether)
[1] Re: primer sharpness
Date: Mon Nov 30 1998

f98dawa@dd.chalmers.se (Dag) wrote:

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>I was talking to some guy the other day about primers vs. zooms.  He claimed
>that primers are only really useful when using a tri-pod, since the small
>quality you gain, in comparison to a good zoom, is lost by the shake  from hand
>held shooting.
>Does this correspond to other peoples experience, or are primers always
>noticeably better than good zooms (I'm primarily thinking of the Nikon  24-120).
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OK, I think one should split the zoom category into top-quality moderate-range tele-zooms, and the rest...;-) The first category *can* virtually match even rirst-rate non-zooms at almost all stops. The second category is quite different, even with top-quality zooms: the prime is generally faster, and is generally noticeably sharper at stops wider than about f8 (making the zoom the one I would recommend using with a tripod...). Add the lower-weight/smaller-size/lower-price/ easier-focusing of the non-zoom to their better wide-stop performance, and one wonders about the supposed "convenience" advantage of the zoom. I would rather have a sharp wider stop available for easy hand-holdability in lower light... A good 35mm f2 (sharp at f2...) will beat any 20/24/28/35--35/50/70/85/105/135/200mm made, unless the few very best of these are used at f11-16... Gosh, I wanna get a zoom...! ;-) (I do use tele zooms, though...;-)

David Ruether
ruether@fcinet.com
rpn1@cornell.edu
http://www.fcinet.com/ruether

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rec.photo.equipment.35mm
From: Yeti-Man@webtv.net (Yeti Man)
[1] Re: primer sharpness
Date: Mon Nov 30 1998

Also note that if you look at Canons published MTF curves, the ~$220 EF 28 f2.8 is sharper then their ~$1200 pro grade EF28-70 f2.8L at 28. This is an apples-apples comparison of zoom to prime IMO, as they are both equal max aperture and focal length when tested. It should also be noted that at f2.8 the ~$80 EF 50 f1.8 II also beats it, but some would tell me thats not a fair comparison as it's stopped down 1 1/3 stop at f2.8.

I am not saying primes are easier to live with, but the tests show them to be (on average) sharper.

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rec.photo.equipment.35mm
From: Rogerio Martins de Moraes bmf@mandic.com.br
[1] Re: primer sharpness
Date: Mon Nov 30 1998

....

I have to respond to that this way: primes are FAR better than zooms. primes can vary from a fisheye 8mm to a tele 1000mm. They're better than zooms because the don't "eat"much light (they can be faster than zoom, or the have a maximum apert ure like1.4 or 1.8, depending on the focal length). they are less expensive, they ha ve less elements to "distort" light. Sorry, but your friend was deadly wrong. You'l l only loose "from the hand held shaking" on long focal lengths (wich, by the way, almost always comes with a monopod). there's no match from a good 50mm to a zoom let's say 35~80mm. the zoom are good, depending on what are you going to use. the zooms are VERY simple to use, because you have lot's of focal lengths in one lens. I have a 28~200mm zoom, by Sigma, but for delicate shots i always use my 50mm/1.8f Nikon.

Date: Tue, 24 Nov 1998
From: Alex Cruickshank acruickshank@neca.com.au
Subject: Wide angle primes versus 20-35 zooms [v04.n135/5]

Mike,

I traded my 20 and 24 lenses for a 20-35. From a subjective viewpoint, I find the 20-35 as sharp as the 20 and sharper than the 24. In general I find the 20-35 a better lens since I have all of the range at the sharpness I only had the 20 before. However it is a bulky lens and a problem if you want to travel light, whereas the 20 fits in any pocket.

Alex

---

rec.photo.equipment.35mm
From: bob@bobshell.com
[1] Re: Zoom Lens - How is a constant aperture possible?
Date: Wed Dec 09 1998

"B.B. Bean" bbbean@beancotton.com wrote:

> A related question - is a constant aperture desireable?
>
> BBB
>
> On Tue, 08 Dec 1998 21:20:59 -0600, Edward Klein wrote:
>
> >Most zoom lenses that I have seen have two maximum aperture indications:
> >one for the short end, and one for the long end. This I understand.
> >However, I have also seen lenses (such as the Canon 100-300L F5.6) that
> >have a constant maximum aperture throughout the range.
> >
> >Can someone explain to me how this is possible? If I apply the F5.6 at
> >100 mm, I get an aperture diameter of 17.85mm. This gives me a minimum
> >F-no of F16.8 at 300 mm. Conversely, If I apply F5.6 at 300 mm, the
> >diameter becomes 53.5 mm. Going back to 100 mm, the smallest F-no
> >becomes an F1.9.
> >
> >So, which is the real maximum diameter? 17.85 or 53.5?
> >--
> >
> >Edward L. Klein
> >mailto:edklein@NOSPAMnol.net
> >http://www.nol.net/~edklein/

This whole question is not as complicated as it may seem.

The diameter of the aperture is not the physical measurement of the hole in the diaphragm. It is the measurement of the apparent size of the hole AS VIEWED THROUGH THE FRONT OF THE LENS. The aperture as it is presented to the incoming light, in other words.

Fixed aperture zooms are designed so that the magnification factor of the optical groups in front of the diaphragm changes as the focal length is changed. This accounts for the often complex designs of these lenses.

Fixed aperture zooms are more important in the studio than elsewhere, since the aperture you set does not change as you change focal length.

B

and a postscript:
Related to my earlier answer. No, the size of the opening does not change, but the amount of magnification introduced by the optics in front of it changes, so it appears to get larger as you zoom toward the telephoto end.

Bob

---

rec.photo.equipment.35mm
From: dwa652@aol.com (DWA652)
[1] Re: Prime vs Zoom lenses
Date: Tue Jan 12 1999

>Yes. Distortion is THE reason for not using zoom lenses, and it's an
>enigma to me that it doesn't catch more attention...

I agree that distortion is probably the best reason for not using zooms, but for many types of photography it does not impact the image much. For other types it does. I think most people are shooting snapshots, portraits, etc. where they just do not notice it.

God Bless,

Don Allen
http://members.xoom.com/donallenfoto
large set of photography links including my recommended photo book list! remove no spam from email address when responding!

From Nikon Digest:
Date: Tue, 12 Jan 1999
From: RIBNITZ Robert Robert.Ribnitz@unifr.ch
Subject: re:Lens selection for hiking [v04.n193/2]

hello,

I'd add to the comments made on the list, the following two cents of my own:

-Since you already have a 28-70/3.3-4.5 (not too fast), and a 70-210 (also not too fast), I'd suggest some lightweight primes. If you like landscape photography, you could get a 24mm/2.8 AFD, or a 20mm/2.8AFD; I'd tend towards the 20mm because 28->24 is almost on difference in angle.

Alternatively, If youl ike to close up on the subject, you could get an 180mm/2.8AF or AFD lens; this lens is superb, except for a little weight (700gr)

Most definitely, in your situation, I'd add a polarising filter (I know the beasts are expensive, but you only need one per diameter, and there are step-up and step-down rings. The polariser will intensify colours quite a lot, cut out haze, etc. Drawback, you lose 2 f-stops (therefore either you need fast lenses or fast film)

Yours

Robert

From Nikon Digest:
Date: Sun, 24 Jan 99
From: "Massimo Squillace" m.squillace@flashnet.it
Subject: Primes in the 28-85 range [v04.n211/26]

Hi all,

I've got an AF Nikkor 28-85mm f3.5-4.5 that I use a lot for my landscape photography, and I find its optical/mechanical performance satisfactory but not outstanding. That is why recently I've been thinking more and more of selecting two or three primes in this range in order to achieve:

1) maximum sharpness
2) easy hyperfocal distance setting
3) non-rotating front elements
4) good macro capabilities

I also own an AF-D Nikkor 20mm f2.8, an AF-D Nikkor 24mm f2.8 and an AF-D Nikkor 80-200mm f2.8 (without tripod collar), and the lens choice should complement this outfit, which I am extremely fond of, without adding too much weight to my overflowing backpack.

So far, since I frequently use the 28-85mm in the 50-70mm range, I believe I should get an AF-D Nikkor 60mm f2.8, to cover the normal range and my macro needs (never went beyond 1:1), but I cannot make up my mind for the other 1 or 2 lenses.

I am wondering how you people would fill this gap, preferably with Nikon lenses, keeping in mind the ordered list of priorities above.

Do know that I seldom use autofocus for my landscapes, but think it is a nice feature to have when shooting in dark places and to quickly get a starting point for approximate hyperfocal distance determination when using zooms, and that I couldn't care less for very bright glass since I never shoot above f8 - I require maximum sharpness from f8 to at least f16 instead!

I would also take this opportunity to thank you for the replies to my previous post about European mail orders; living in Italy, I will probably go for www.nicam.it, which sports competitive prices and good national S&H policies.

Massimo Squillace

---

rec.photo.equipment.35mm
From: marcio@nospam.com
[1] Re: Should I Give up Zooms?
Date: Sat Jan 30 1999

fstop27184@aol.com (Fstop27184) wrote:

```
>If I had to use only primes, I would have 50 pounds and 20 lenses to  carry
>when
>I am in the feild. While with a 28-105 2.8 Tamron and a Nikon 80-200 2.8  I can
>cover 90% of what I need to get!
```

Oh puuleease, I really have to wonder if people who make this kind of statements *ever* seriouly used and carried a set of prime lenses before. To cover the 28-200 range, nobody would carry anything near 20 lenses. Most people would carry 4 (say 28,50,100,200), some would carry 5 (say 28,35,85,135,200), and a few would carry 6. That's 2 to 4 lenses more than carrying zooms. On the Canon EF line, the 28-70/2.8 and 70-200/2.8 are listed as weighing 30.8oz and 44.8oz respectively for a total of 75.6oz.

The 28/2.8, 50/1.8, 100/2, and 200/2.8 weigh 6.5oz, 4.6oz, 16.1oz, and 27.7oz for a total of 54.9oz. I can add a 35/2 for an additional 7.4oz and a 135/2.8 for 13.7oz, and the total weight is still 76oz (under 5 lbs). Total additional weight of the 6 primes compared to the 2 zooms: 0.4oz!

Flexibility is enough of a justification for using fast zoom lenses. There's no need to make stuff up.

Marcio

---

rec.photo.equipment.35mm
From: Hans_Georg_MichnaNoEmailPlease@csi.com
+ (Hans-Georg Michna)
[1] Re: Should I Give up Zooms?
Date: Sun Jan 31 1999

tut@ishi (Bill Tuthill) wrote:

```
>Slide films are not better than print films.  In low-contrast areas
>Velvia resolves 80 lines/mm, same as Royal Gold 25.  The next best
>slide film, Provia, resolves 60 lines/mm versus 63 lines/mm for many
>print films including Konica Impresa and Fuji Reala.  For data see:
>
>  http://creekin.net/films.htm
>
```

>The best lenses resolve 80 to 100 lines/mm, and you are right that
>it is in the center of the lens only, with a tripod, etc. But that
>still exceeds film resolution, nicht wahr?

Bill,

ja, it does, but only for the very best fixed lenses like a good 50 mm lens. Most zooms have difficulties to resolve 40 lines/mm. The measurements I saw didn't even try to test beyond 40 lpm because the contrast is already very low at that level.

If you look at the www.photodo.com graphs, you can see that many zoom lenses have contrast problems even at 10 lines/mm, especially nearer to the edges, but even in the center the contrast is often not near the 90% one would wish.

This holds for the "business end", i.e. maximal focal length and aperture wide open. That's where I use them most.

My impression is still that the lens is the main sharpness problem, not the film.

Hans-Georg

>> Film has become quite a bit better recently.
>
>At the higher speeds, but not really at lower speeds. Ektar 25 is
>an old film, now discontinued, and its high-contrast resolution has
>never been surpassed.

[No mail please]

From: "bbb" bbb@bbb.ca
Newsgroups: rec.photo.equipment.35mm
Subject: Re: what determines prime lense lengths
Date: Fri, 16 Apr 1999

Richard,

Prime focal lengths are mostly a matter of tradition. In earlier days when rangefinder cameras were dominant, it made sense to standardize on a few focal lengths, because each focal length could require a different viewfinder (no sense offering both a 45mm and a 50mm viewfinder). This is why 28, 35 and 50 are standards (as opposed to 30, 40 and 60 say). Other focal lengths are not quite so standardized from brand to brand. For instance, Zeiss prefers to make 25mm lenses, while everybody else makes 24's. Similarly, you will find both 20's and 21's for sale, and I think that every mm increment between 14 and 20 is available from some manufacturer. On the longer end, I know that 75, 80, 85, 90, 100 and 105 are well represented focal lengths. 135mm is the traditional "telephoto" focal length for rangefinders (the longest lens that you can reasonably use with a rangefinder). 180 is a pre-W.W.II Zeiss focal length, and beyond that most brands go with multiples of 100mm (except Leica).

That's the short explanation. Hopefully, someone will post the long explanation.

Bernard

Richard Mansell wrote

>Hi
>
>Why do prime lenses tend to come in certain focal lengths eg 20, 24, 28,
>35, 50, 85, 105? Why, for instance, are there no 26mm lenses (at least
>none that I am aware of)? Is this fairly arbitrary based around 50mm
>being "normal" or is there some method to it? Please don't flame if
>this comes across as a stupid question....
>

>Richard
>(a Nikon man who realises that other brands have their merits too)
>
>--
>Richard Mansell   M.Phil Management Studies

From: rmonagha@news.smu.edu (Robert Monaghan)
Newsgroups: rec.photo.equipment.misc
Subject: viewfinder coverage etc Re: Zoom vs Fixed debate - just wondering...
Date: 2 Aug 1999

RE: what do prime lens users do since they can't precisely zoom/crop/shoot?

since most medium format users don't have zoom lenses (weight, cost, quality issues), we cheat. We use enlargers to pull out stuff we want to crop/print, so it is a sort of after-the-fact zoom, if you will, based on the larger film format. 35mm can do so too, but somewhat restricted as to how much cropping for a full sized (say, 8x10) image. On slides, I use a duplicating setup (or zoom slide duplivar on 35mm), so while quality may be lost relative to the 6x6 original, the copy can be precisely framed and enlarged and projected as needed, and sometimes the contrast buildup helps (or I can process to reduce it etc.).

While you can argue that a 80-210mm zoom is really an 80, 81, 82... 209, 210mm lens replacing all those focal lengths, in practice most of us would not miss the difference if we had an 85mm, 105mm, 135mm, and 200mm prime series. I'm pretty happy with the 105 and 200mm; I've also noticed zooms tend to be used more at either end than at any setting in the middle, haven't you? ;-) I need more telephoto and more wide options, regardless of the zoom, so if I am using a zoom I often bring an ultrawide lens (20mm nikkor or..) and a longer tele (300mm nikkor or??); I also carry around a fast lens (50mm f/1.4) as the zooms are sometimes too slow. for more on pros and cons of zooms, see my pages on zoom/primes at

http://www.smu.edu/~rmonagha/third/primes.html

Finally, most 35mm viewfinders don't show an accurate view of the image that most zoom lens users are going to get on film, unless you are using a really pro camera/viewfinder combo (Nikon F3..). You may be seeing 92% to 95% of the on-film image, or as little as 80% (Prakticas..) or less.

So the idea that you are precisely framing a scene is a bit optimistic; in most cases, you will get extra stuff you can't/won't see in the viewfinder in your images, and you either don't notice or it is cropped for you by the minilab or slide mount. In fact, most minilabs will do a really poor job of printing film to the edges, so your carefully composed to the edges pro camera 100% viewfinder shots are going to get another 10-20% or more cropped out of them when printed. This is done, obviously, just to offset the huge variations in viewfinder coverage of cameras and it is easier faster to print. Slides lose 5% or so in the mounts (varys).

In other words, the idea that you can precisely frame an image and get exactly what you see in the viewfinder on film and your prints is only really true for a minority of photographers using pro cameras and processing. Not to say you can't frame faster with a zoom than swapping lenses and somewhat more closely using intermediate steps between primes, but that convenience is often at a high price in weight, quality, lens speed(s), linear distortion, light falloff, and close focusing ability etc. etc etc.

Still, I'm delighted so many folks are selling off their old primes for such low prices to buy zooms, so I can get such great bargains! ;-)

grins bobm

From: "Fred Whitlock" afc@cl-sys.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Professional zoom vs consumer prime
Date: Tue, 3 Aug 1999

I'm not fond of attaching the moniker "professional" to any piece of equipment. Nevertheless you should understand that there are some optical compromises involved in designing and manufacturing zooms. Zooms are generally slower, softer, lower in contrast and unable to focus as closely as primes. Sometimes this is a subtle difference and sometimes it is even unimportant but no zoom, no matter how good, can perform up to the level of a prime lens in its range. The tradeoff is convenience and savings against ultimate performance. It's a tradeoff that has convenience winning the vast majority of the time. Good shooting.

Fred
Maplewood Photography
http://www.maplewoodphoto.com

From Nikon Mailing List:
Date: Thu, 14 Oct 1999
From: "ToomTarm" t_toomtarm@hotmail.com
Subject: [NIKON] Follow up: 20-35/2.8 vs. 4 primes -Second summary

Thank you thank you very much... I really appreciate your effort and yout time of thought to help me. This is one of many reasons that I like this NikonList (compared to another lists that I subscribe... HINT: One of the heritage camera).

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Now, the summary of today is:
- - From 9 emails of 8 people (Stefan did twice. thanks!)
- - Prime 6 votes
- - Zoom  0 vote
- - Either one 3 votes (depends on application)

1) 20/2.8 7 votes
2) 24/2.8 3 votes
3) 28/2.8 2 votes (not including one reject)
4) 35/2   5 votes
5) Zoom   3 emails from 2 people not votes but refer to
6) Others 50/1.8, 105/2.8Micro, 24-50/3.3-4.5

Thank you thank you very much.....  I think I will wait until 24 hours after
I post muy mesage and I will give a call to B&H on Friday afternoon then...

REFERENCE
From: John Donovan jdonovan@magenta.com are :
1) Get the primes
2) Pick 20, 28 and 35.
Reason:
- - Great for long run
- - Cost advantages

From: John Albino jalbino@jwalbino.com
1) Get the primes
2) Pick 20 and 24 personally
Reason:
- - Better quality of primes
- - Cost advantage for lens accessories (hood, filter)
- - Zoom might be better "if" for PJ or fast changing (but not me)

From: Bernhard Hoeflechner dobob@xover.mud.at
1) Get the primes
2) Pick 24 and 35
Reason:
- - Cost advantages
- - Filter size
```

From: Jim MacKenzie photojim@yahoo.com
1) Get the primes
2) Pick 20+28 or 24 and 35

From: Stefan Miltchev miltchev@gradient.cis.upenn.edu
1) Discuss advantage/disadvantages of prime and zoom.
2) Don't pick

From: lance@olg.com
1) Get the primes
2) Pick 20/2.8, 24-50/3.3-4.5, 105/2.8 Micro(?)

From: Fernando Martins fer@caleida.pt
1) Get the primes
2) Only 20/2.8. If have backup money, get 35/2 as standard lens.

From: Scott Laughlin laughlin@wctc.net
1) Discuss advantage/disadvantages of prime and zoom. Assume prefer prime
2) 20/2.8, reject 28/2.8

From: Stefan Miltchev miltchev@gradient.cis.upenn.edu Second thought
1) Get the prime or zoom depend on task
2) 20/2.8 and 35/2

[Ed. note: another side...]

From: "Jack A. Zucker" jaz@gwis.com
Newsgroups: rec.photo.equipment.medium-format
Subject: Re: death spiral of camera stores? Re: Local Camera Store story...
Date: Wed, 18 Aug 1999

....

> > Even zoom lenses which were available only in 35mm to 70mm, as a rule, because
> > distortion reached unacceptable levels in any other configuration (according to
> > Japanese optical engineers) were replaced with 28mm to 200mm zooms when
> > standards were relaxed and the engineers realized Americans just couldn't see
> > the difference anyway.
>
> I thought it was the sophistication of the computer assisted
> design and computer assisted manufacturing allowing more
> precise grinding and assembly.

That's what I believe too. As evidence, check out Gary Bernstein's work (page was at http://www.garybernstein.com/ before 2/2003) where he explains that for years, he wouldn't come near a zoom lens and now with today's technology/quality, he can't imagine NOT using one !

Jaz

[Ed. note: the following stats are followups to postings re: study of photodo MTF scores to lenses for major brands, split by prime lenses and zooms, and shows a significant gap between quality of primes and zooms, but similar scores and std. deviations between brands]

Date: Mon, 23 Aug 1999
To: rmonagha@post.smu.edu
Newsgroups: rec.photo.equipment.35mm
Subject: brilliant analysis! Re: Canon vs Minolta vs Nikon lenses

Neat! Brilliant analysis and idea! Assuming a normal distribution, we get:

	mean	stdev	-2	-1	mean	+1	+2 stdev
prime			2.3%	15.8%	50.0%	84.0%	97.7%
canon	4.1	0.4	3.3	3.7	4.1	4.5	4.9
nikon	3.9	0.3	3.3	3.6	3.9	4.2	4.5
Minolta	3.9	0.4	3.1	3.5	3.9	4.3	4.7
avg=	4.0	0.4	3.2	3.6	4.0	4.3	4.7
zoom							
canon	3.2	0.5	2.2	2.7	3.2	3.7	4.2
nikon	3.1	0.5	2.1	2.6	3.1	3.6	4.1
Minolta	3.1	0.5	2.1	2.6	3.1	3.6	4.1
avg=	3.1	0.5	2.1	2.6	3.1	3.6	4.1

In other words, 97.7% of the zoom lenses (at 4.1) are below just over half (4.0) of the prime lenses. So you have a 50:50 chance that a prime will beat 4.0, but only one chance in 50 that a zoom will do so! ;-)

Or, 97.7% of the prime lenses (at 3.2) are above the average of the zoom lenses (3.1), so only one prime lens in fifty is as bad as the average zoom lens. Hmmm?

Some 5 out of 6 zoom lenses (3.6 at 84%) will be worse than the worse 1 out of six prime lenses (also 3.6 at 15.8%). Or only one zoom lens in six will be as good as the worst one sixth of the prime lenses.

So much for the myth that today's zooms are "just as good" as primes

for more, see my pages on prime vs. zooms at

http://www.smu.edu/~rmonagha/third/primes.html ;-)

And while I personally don't put a huge amount of stock in single point MTF scores by photodo or anybody else in my lens selecting, I have to wonder why nobody else noticed such graphic similarities (between manufacturers) and differences (between AF zooms and primes) before! ;-)

Nice Job, Øivind Midttun!

regards to all - bobm

[Ed. note: Mr. Burian is a noted author and nature photo magazine editor..]
rec.photo.technique.nature
From: pburian@aol.com (PBurian)
[1] Re: Nikon has announced Image Stabilizer lens
Date: Fri Jan 28 2000

```
>But why on earth start with a
>80-400mm zoom?  Why not give people a decent prime and put it up against
>Canons 300mm f4 IS lens.
```

Probably because zooms outsell prime lenses 6 to 1. The Canon 300mm f/4 has never been a hot seller.

Peter Burian

From Nikon Mailing List:
Date: Thu, 2 Mar 2000
From: Rolland Elliott rolland_elliott@yahoo.com
Subject: The end is near!

Every year it seems like Nikon wacks off a few more Manual Focus Nikkors from their product line.

This year I've heard both the 800mm f/5.6 lens is dead and the 105mm f/4.5 UV Nikkor. This is sad because these were truely unique lenses and are hard to find.

I bet it's only a few more years before all the MF nikkors are no longer made. But I guess there will always be used equipment shops!

What do the rest of you think about Nikon's lack of commitment in the MF Nikkor line. Their two newest cameras the N60 and N80 won't even meter with MF lenses. Pathetic.

Peace Rolland

From Nikon Mailing List:
Date: Thu, 02 Mar 2000
From: John Albino jalbino@jwalbino.com
Subject: Re: The end is near!

Rolland Elliott wrote:

```
>What do the rest of you think about Nikon's lack of
>commitment in the MF Nikkor line. Their two newest
>cameras the N60 and N80 won't even meter with MF
>lenses.  Pathetic.
```

Well, the last point doesn't bother me that much, since I do understand at some point (for marketing reasons) a company needs to stop support of its oldest products on its newest (and cheapest) products.

However, I do fear the phase-out of all MF lenses (and cameras), so much so that I'm in the process of duplicating all my favorite MF stuff so I'll two of each.

--
John Albino
mailto:jalbino@jwalbino.com

From Nikon MF Mailing List:
Date: Sat, 11 Mar 2000
From: John Albino jalbino@jwalbino.com
Subject: Re: [NIKON] Expensive cameras with cheap lenses

Several of us say pretty much the same thing on the list from time to time.

First, a lot of people who have F5s with "cheap" lenses are really wearing their F5 as a piece of jewelry -- sort of like someone who lives in a center city and has a Porsche really has the Porsche as a status symbol, since it is a wildly underutilized and over-powered vehicle for a city-dweller.

IMO, with the exception of the high-end, fast-focusing, fast-aperture zooms, zooms are bought by people seeking a panacea or "magic bullet." They incorrectly assume the zoom range will solve many or all of their problems, whether it be by reducing the number of lenses they carry, or give them a wider selection of "precise" focal lengths.

Rarely have they learned to "see" with a fixed-focus, prime lens, understanding its characteristics, and strengths and weaknesses. Instead of learning how to find the best angle for composing a shot to fill the frame with the best perspective for the scene, they rely on a zoom to frame the photo rather than exploring various possibilities with a prime.

They will argue, "my zoom fits my needs perfectly," or "I only have to carry one lens instead of three or four," or "my zoom lets me get closer [by zooming in] for times I cannot move myself," or "my zoom is a lot cheaper than an equivalent bevy of primes," or "my zoom gives me an infinite number of focal lengths within its range, while primes are fixed," or any of lots of other platitudes and wishes.

IMO zooms should be a supplement --not a substitute-- for a good basic set of primes. Are there times when a 24-120 or a 28-105 is appropriate mounted on an F5 or F100? Of course -- I often use my 24-120 on my F100. But I'll also have a bagful of prime lenses with me, so when I see something where I know the zoom will be a compromise, I can snap on the appropriate prime.

IIMO, spending about $2,000 for an F5, and then scrimping by getting "only" a 28-105 is to seek a status symbol, not a reasonable compromise.

The money would be much better spent getting an F/N60, or an F/N90, and getting the same 28-105 zoom. Use it --A LOT!-- and learn which focal lengths are most useful. Save the more than $1,000 price difference, and decide which prime or two is most useful, get them, and then decide to move up to an F100 or F5. But LEARN HOW TO SEE first.

People may think I hate zooms, but that's not true. I'm disappointed with people who think zooms will solve all their problems -- they won't. In fact, they may limit a photographer's skill acquisition because they reduce the possibility of curiosity in exploring photo settings. Do I think zooms are useful? Yes. Do I think they are useful on "expensive" cameras? Yes. Do I think that ONLY "pro" zooms are useful on expensive cameras? No. Do I think "cheap" or "consumer grade" zooms are useful? Yes. On expensive cameras? No, except for carefully defined uses where the photographer has a specific effect in mind, and knows from experience that the cheap consumer zoom is just right.

A lot of people will rationalize getting an expensive camera this way (or similar): "I just got my bonus. I don't know when I'll come into such money again. I'll buy an F5 (or F100) with my windfall -- the camera will last me forever, and it's a REALLY GOOD camera, that I've always wanted. I'll get an inexpensive zoom to go with it that fills my immediate needs, and if I ever get another bonus I'll get more lenses." Is such a person primarily motivated by wanting to take better pictures, or by acquisition of a jewel? (I don't know.)

And if such a person never does more than get mini-lab 4x6 prints from Kodak Max film, that's a perfectly satisfactory setup -- except for wasting a lot of money on a camera that is vastly over-powerful for the intended use.

Sort of like the ongoing debate on the ultimate desirability of auto focus. Again, far too many people treat AF as a panacea, rather than learning how to do it themselves. But that's another flame-war-starting thread. (grin)

- --
John Albino
mailto:jalbino@jwalbino.com

From Nikon Mailing List:
Date: Tue, 14 Sep 1999
From: Jonathan Castner jonathan@jonathancastner.com
Subject: [NIKON] Re: The sharpness of zooms v.s. primes

Jeff Rankin-Lowe wrote:

There's a long standing belief that primes are always sharper than zooms. In the past that was generally true.

Guess what? Its still true and always will be true. The fact of the matter is that zoom lenses are optically more complex than fixed focal length lenses. Because of that, they can never have the same or greater sharpness, contrast or distortion free charactistics of a fixed. Simple physics at work. Modern design and materials has brought us some amazing zooms though. All the Nikon pro zooms, the 17/20-35 f/2.8, 28-70 f/2.8, 35-70 f/2.8, 80-200 f/2.8 are all so darned good that the difference is pretty small. Except for the 80-200 f/2.8, I prefer fixed lenses because they are less flair prone, focus closer, smaller, lighter and often brighter for my low light work. BTW, here have been FIVE versions of the Nikon 80-200mm f/2.8, Jeff forgot the original AI-S model.

Cheers!

Jonathan Castner - Photojournalist
e-mail: Jonathan@jonathancastner.com
Online folio: http://www.jonathancastner.com

Date: Fri, 6 Aug 1999
From: Yeti-Man@webtv.net (Yeti Man)
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Zoom or primes for travel shots?

You would _very much_ notice the difference. Especcially if you are shooting a lot of buildings (straight lines... the zooms will show more distortion - curvature of lines - than the primes), and the primes will be noticeably sharper. The added speed surely doesnt hurt either.

The zoom would be more convenient... only one lens, the focal lengths inbetween and beyond 24-50....

IMO, I would take the primes. If you were comparing to "L" zooms, I may say otherwise, but for the lenses you are considering the primes will give far and away better quality.

Date: Thu, 12 Aug 1999
From: LL lewislang@my-deja.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Why do "slow" lenses suck?

mceowen@aol.com (McEowen) wrote:

```
> Faster lenses give you more options . . .
>
> * You can shoot in lower light levels without resorting to using a tripod or
> flash (if color balance considerations permit this)
>
> * You can shoot at faster shutter speeds -- to capture action or to prevent
> camera shake
>
> * You can use a slower (lower ISO) film which appears less grainy and makes
> better enlargements
>
> * You can use your flash at greater range or in the bounce flash position.
>
> plus, they're easier to focus.
> Maximum lens speed is really critical but unfortunately modern marketing of
> photographic equipment has almost eliminated lens speed from most  buyer's
> considerations . . . .
```

Sadly, the above is quite true, fixed aperture zooms seem to be going the way of the dinosaur. Its a shame because they are not that expensive to make/sell, to me its just a matter of manufacturers dictating public taste. Perhaps the reasoning is that most people shoot color negative and most of the color negative shooters probably shoot 400 I.S.O. film (and now 800 I.S.O. film is being touted as a "normal" film for everyday use/all conditions) so I guess with the bulk of amatures shooting point and shoot rangefinders with built in 38mm-1XX f/3.5-f/16 (a slight exageration to make a point) the small maximum aperture zooms are "acceptable" to the masses who either don't know better or don't care. Unfortunately most consumer (and/or budget) lenses from both the major original manufacturer brands of SLRs as well as the major indies (Sigma, Tokina, Tamron, etc.) also follow this trait (ie. 35-70mm f/4-5.6 lenses, etc.).

Now if you want a fixed aperture zoom then mostly you've got to settle for pro glass which has a fast constant aperture (usually around f/2.8) and makes a big dent in the wallet. When I got serious about photography (early 80's) there were plenty of fixed aperture zooms of reasonable, though not fast, fixed aperture - usually either f/4 or f/3.5). They were well

constructed (mostly metal barrels) and usually had exceptional quality and sometimes exceptional range (I owned a very sharp 25-50mm Nikkor f/4 zoom and a Pentax 28-135mm f/4 lens - both constant aperture).

Although lightweight is nice and plastic has its place in lens design when used judiciously,I'm afraid most of the consumer and especially budget consumer) lenses make me wish I was still in the Reagan era when there seemed to be more high image/build quality consumer lenses of reasonable fixed aperture. I don't own Pentax anymore but if I did I'd probably get their 20-35mm f/4 zoom. I currently own both a 24-50mm Minolta Maxxum f/4 (constant aperture of course) lens and a 70-200mm f/4 Minolta Maxxum lens (also constant aperture). They are both of superb image quality (sharpness/color rendition/bokeh), very good build quality (especially for AF lenses w/c seem to get more and more flimsy/"plasticky"). The best part about it is that I got them used for a decent price, my viewfinder remains the same brightness through the zoom ranges, and f/4 is decent enough an aperture so that I'm not always wishing I had a faster lens (as I did when I used my Canon EOS 630 with Tamron 24-70mm f/3.3-5.6 w/c at the long end of the zoom the viewfinder reminds me of looking through a long dark cave - OK so I'm exagerating just a little but that's how it "feels" to me.

Part of the pleasure in photography (for me) is being able to look at a nice bright viewfinder image and the faster the zoom and to have a constant aperture is a blessing - with an f/4 zoom I can have my cake and eat it too - reasonable aperture, bright enough viewfinder, ultimate flexibility, also my 24-50mm Minolta lens focuses down to about 1.1 feet which is virtually as close as a faster fixed prime lens would at 24mm and quite a bit closer than most normal 50's would (except the macros/micros). Well that's my constant "four" cents worth... -- Photography without a mind is like Kodachrome without sunshine

-
LL Visit my web site "LEWISVISION" - http://members.com/Lewisvisn/home.htm
Fine art photography from the real to the surreal and beyond!

Date: 12 Aug 1999
From: spoorl@aol.com (SpooRL)
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Why do "slow" lenses suck?

Also, any modification that causes light loss (filters, extension tubes, teleconverters, etc) is obviously easier to handle if you start from a larger maximum aperture. If you take a slow zoom that is f5.6 at 200mm and add a polarizing filter, you are starting from the equivalent of a pretty high f-stop with no depth of field to show for it. Then, if you choose to use faster films to compensate for this added light loss, you are sort of digging yourself into a hole of mediocrity, and working against your effort to produce a better image, which is the whole idea of using the filter in the first place. The faster lenses (primes as well as zooms) add flexibility, as well as easier viewing and focusing and improved optical performance. They allow you to move into more sophisticated or specialized applications with fewer roadblocks. You won't find yourself saying, "geez! I wish I had a faster lens for that!"

Spoo

Date: 13 Aug 1999
From: magambo@aol.com (Magambo)
Newsgroups: rec.photo.equipment.35mm
Subject: Re: newbie: fast lenses

In general, if possible, you don't want to shoot with any lens wide open for a number of reasons.

1) Depth of feild problems - especially when using wide range modern zooms, there is a tendency to zoom in close (especially with close focus zooms) and if the lens is wide open, the depth of field can be so small that a person's eyes might be in focus (whatever you focused the camera on) and their ears blurry because the DOF is so narrow it won't even cover the whole subject. With a faster lens you can stop the camera down a bit more, open up the depth of field, and still keep the shutter speed relatively high.

2) Lenses are usually sharpest two or more stops above maximum aperture. With a slower lens you'll tend to be always shooting around max. ap., and losing detail and sharpness because of it. A 1.4 lens isn't good because you use it at 1.4, it's good because you use it at 2.8 or 3.5 or 4 and it is nice and sharp. A f4 lens - you'd be at 6.7 or 8 before it gets sharp.

Of course, someone will refute all this. it works for me.

Luke

Date: Fri, 13 Aug 1999
From: Russell Williams williams@adobe.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Why do "slow" lenses suck?

> Because slow lenses force you to either
> use a wider aperture, which narrows
> depth of field or to use a slower shutter
> speed which increases sharpness due to
> movement.

This is wrong (because of typos?). Slower lenses certainly don't force you to use a wider aperture -- they *prevent* you from using the widest apertures (the ones they don't have available!) In dim light, they can force you to use a slower shutter speed than you would have if you had a faster lens, which can *decrease* sharpness due to camera or subject movement.

These differences only apply when you would have used the faster lens at an aperture larger than that of the slower lens, and unless you're comparing a 28-200 zoom (f/5.6 at 200mm) vs. a 200/2.8 prime, that's not necessarily that often (the difference between "slow" and "fast" lenses at a particular focal length is often a single f/stop. If you're shooting at f/8, whether the lens maxes out at f/4 or f/2.8 doesn't matter -- the relative quality at f/8 and the lens' size, weight, and cost matter.

This very question is addressed in this month's Popular Photography. Additional reasons: pros will pay for the flexibility even though they may not use the maximum aperture that often. Also, the faster lens gives you a brighter finder and faster, more reliable autofocus in dim light even when you don't shoot at the widest apertures.

Russell Williams
not speaking for Adobe Systems

From: "Fred Whitlock" afc@cl-sys.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: L lenses or several Primes
Date: Sat, 29 May 1999

Well designed prime lenses are always sharper in the corners at wider apertures, faster, lighter, closer focusing, and contrastier than well designed zooms. The laws of optics require it. Zooms provide more flexibility and convenience than primes. A focal length range of zooms is likely less expensive than a similar range of primes. Those are the tradeoffs. What is more important to you is something only you can determine. Good shooting.

Fred
Maplewood Photography

From: "don ferrario" don@ferrario.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: L lenses or several Primes
Date: Mon, 31 May 1999

The usual discussion of prime vs zoom concerns sharpness. I recently switched back to primes (Nikon) because of two things:

1. physical size: The "large" aperture zooms (f2.8, non-variable aperture) are BIG lenses. The Nikon 80-200f2.8 is HUGE in comparison to the Nikon 180/2.8 prime. I found I could carry the 28/1.4, 85/1.8 and 180/2.8, and have a smaller *and* lighter package, vs carrying the 28-70/2.8 and 80-200/2.8.

In particular, the Nikon 80-200/2.8 is so big (especially with the mandator hood attached) it won't fit into any reasonable size camera bag that I'm going to walk around with. I have a backpack, but I don't want to use it every day!

2. lens speed: Its a big deal when a zoom lens is f2.8. In a prime, that's the cheaper version... I can pick up one or even two f-stops using the prime lenses. Maybe I'm silly, but I still like slow films. Yes, I use Fuji-800 when needed, but I still have about 50 rolls of Ektar 25 in the fridge. Great stuff, but don't bother with f4-5.6 zoom lenses...

Your mileage may vary...

--

don ferrario
http://www.ferrario.com/don

tom brown harvest1@bellsouth.net wrote

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> I hate these sorts of questions because our needs differ,but I am attempting
> to make a decision to buy a
> 28-70L or a combo of 24 2.8, 35 2, and an85 1.8.  I know the range is wider
> with the primes I listed and the
> price more, my question is will they as sharp as the L zoom.
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From Nikon MF Mailing List;
Date: Fri, 30 Jun 2000
From: "Rolland Elliott" rolland_elliott@yahoo.com
Subject: Nikon offcially dumps almost 50% of the Manual Focus lenses

Pay your respects to the following victims:

```
8mm f/2.8
15mm f/3.5
50mm f/1.2
200mm f/2
400mm f/2.8
400mm f/3.5
400mm f/5.6
600mm f/5.6
800mm f/5.6
2000mm f/11
1200-1700mm f/5.6-8 (like anyone would really buy this lens anyways)
UV 105mm f/4.5
```

The above lenses are sadly MIS (missing in action) from Nikon's latest volume 6 of the full line product guide.

Would someone on this list please do me a favor and go after the idiot in Nikon's marketing dept. that decided to dump almost 50% of Nikon's MF line and introduce cameras like the N80 which don't even meter with MF lenses and uses IR film advance mechanisms? Argh!

Peace, Rolland

From: "Natasha" NoSpam@NoEmail.com
Newsgroups: rec.photo.equipment.35mm

Date: Sun, 30 Jul 2000
Subject: Re: Whats a prime lens

The Focal Encyclopedia of Photography (third edition, 1993, ISBN 0-240-80059-1) includes several instances of Sidney F. Ray (Polytechnic of Central London) using "prime lens":

Quotation from page 652:

"Prime lens - Term used to describe a camera lens that is attached to an accessory device such as an afocal converter, teleconverter, or anamorphic system."

I detect no intention in that definition of reference to either a fixed focal length lens or a zoom lens, and it would have been very easy for the author to have extended that definition to include such usage. The author apparently intended to refer to the primary lens of a camera (regardless of its being fixed focal length or zoom) when an accessory device (lens) was attached.

In another section titled "Lens Types," Sidney Ray provides the following:

Quotation #2 (page 430):

"Afocal lens - An afocal lens is one whose two elements are separated by the sum of their focal lengths, giving the principal (nodal) plane at infinity... Astronomical and Galilean telescopes are examples of afocal systems. Such devices can be used in conjunction with a conventional prime lens or projector lens to change focal length and are usually called afocal converters..."

[SNIPOLA]

Alas, Quotation #7 (page 435) breaks with that usage: "Zoom lens - Lens with a focal length that can be varied continuously between fixed limits while the image stays in acceptably sharp focus... Early zoom lenses tended to suffer from variable distortion as zooming progressed, but modern designs give much improved image quality, approaching that of a fixed focal length lens. Unfortunately, the maximum apertures available are still modest in comparison to a prime lens."

I notice that Quotation #7 uses both "fixed focal length lens" and "prime lens" in contrast to "zoom lens," but that usage is contrary to his definition in Quotation #1 and his usage in Quotations #2-#6.

I conclude that "prime lens" can be used in more than one intention. Supplemental lenses and teleconverter lenses are used with zoom lenses by many photographers, thus "prime lens" properly can refer to a zoom lens in certain contexts. "Prime lens" also properly can distinguish a "fixed focal length lens" from a "zoom lens" in certain contexts.

In conclusion, it is necessary for the author to make obvious which intention is desired, for both intentions can be correct usage in the proper context.

Case closed.

From Nikon MF Mailing List:
Date: Thu, 10 Aug 2000
From: "Roland Vink" roland.vink@aut.ac.nz
Subject: Re: 75-240/4.5 AIS MF vs. 75-300/4.0 AIS AF lens for my FE?

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> I'm going to see if I can get my hands on a 80-200/4.5 to check it
> out.  May try the prime lenses as well, but I suspect that they may
> be out of my price range.
```

Hi Pomin,

The AI 80-200/4.5 and series-E 75-150/3.5 both have something of a cult status and nice samples can be expensive. Mint 75-150 often sell for $200 on ebay, but if you are less fussy about cosmetics you can get the lens for a lot less. The 80-

200/4.5 is probably similar. If you want a zoom and don't mind a larger filter size, you could also consider the series-E 70-210/4 or AIS 80-200/4.

Primes such as 105/2.5, 135/2.8 and 200/4 may be more affordable than you think. WIth the popularity of telephoto zooms, prime teles are common and cheap on the used market. Few realise than the primes are much better than the zooms - they are smaller, easier to handle, better optically and 1-2 stops faster - a Big advantage for telephotos. Don't discount them until you check them out.

Roland

Date: Wed, 20 Sep 2000
From: "Mac Breck" macbreck@access995.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: No real optical improvement since the 70's?

"Glenn Woodell" g.a.woodell@larc.nasa.gov wrote

mdelachapelle@uswest.net

```
> says...
> >
> >Nonsense!  Amongst the many technology improvements:

Pre-1980 technology examples listed below:

> >(1) Aspheric lenses
58 f/1.2 AI,  1978

> >(2) Low dispersion glass
180-600 f/8 ED, 1974
360-1200 f/11 ED, 1974
300 f/2.8 ED, 1975
300 f/4.5 ED, 1975
400 f/5.6 ED, 1975
600 f/5.6 ED, 1975
800 f/8 ED, 1975
1200 f/11 ED, 1975
400 f/5.6 ED AI, 1977
180-600 f/8 ED AI, 1977
360-1200 f/11 ED AI, 1977
400 f/3.5 ED-IF AI, 1977
200-600 f/9.5 ED 1977
300 f/2.8 ED-IF AI, 1978
400 f/5.6 ED-IF AI, 1978
600 f/5.6 ED-IF AI, 1978
50-300 f/4.5 ED, 1978
300 f.4.5 ED-IF AI, 1979
600 f/4 ED-IF AI, 1979
800 f/8 ED-IF AI, 1979


> >(3) Better coatings
Nikon Integrated Coating (multicoating) introduced in 1973.

> >(4) Better lens design tools and manufacturing processes (CAD/CAM)
Yes this should have been, and sometimes was the case (e.g. the recent
constant f/stop zooms). Instead, 1984 brought us the first Nikon
variable-f/stop zoom.
```

> Here's some more...
>
> (5) Internal focusing
400 f/3.5 ED-IF AI, 1977
300 f/2.8 ED-IF AI, 1978
400 f/5.6 ED-IF AI, 1978
600 f/5.6 ED-IF AI, 1978
300 f.4.5 ED-IF AI, 1979
600 f/4 ED-IF AI, 1979
800 f/8 ED-IF AI, 1979

> (6) More lenses with tripod collars
debatable, except for getting an 80-200 with a tripod collar.

> (7) More 200mm lenses with low dispersion glass than ever before
In Nikon, the closest is the 180. It got ED "officially" in 1982, but is suspected of being ED since 1970.

> (8) Wide selection of rectilinear lenses

Wides in Nikon?
28 f/3.5, 1959
35 f/2.8, 1959
35 f/3.5 PC, 1963
35 f/2, 1965
24 f/2.8 (with CRC), 1967
35 f/1.4, 1970
28 f/2, 1971
28 f/2.8, 1974
28 f/4 PC, 1974
35 f/2.8 PC 1974
24 f/2.8 AI (with CRC), 1977
28 f/2 AI, 1977
28 f/2.8 AI, 1977
28 f/3.5 AI, 1977
35 f/1.4 AI, 1977
35 f/2 AI, 1977
35 f/2.8 AI, 1977
24 f/2 AI, 1978
35 f/2.5 Series E, 1979

Superwides in Nikon?
21 f/4, 1959
20 f/3.5, 1969
15 f/5.6, 1973
18 f/4, 1974
20 f/4, 1974
13 f/5.6, 1976
13 f/5.6 AI, 1977
15 f/5.6 AI, 1977
18 f/4 AI, 1977
20 f/4 AI, 1977
20 f/3.5 AI, 1979

> (9) Wide selction of superwides and fisheyes

Superwides listed above.

Fisheyes in Nikon?
8 f/8 Fisheye Nikkor, 1963
7.5 f/5.6 Fisheye Nikkor, 1967
6 f/2.8 Fisheye Nikkor, 1969
10 f/5.6 OP Fisheye Nikkor, 1969
8 f/2.8 Fisheye Nikkor, 1970
6 f/5.6 Fisheye Nikkor, 1972
16 f/3.5 Full Frame Fisheye, 1973
6 f/2.8 AI Fisheye Nikkor, 1977
8 f/2.8 AI Fisheye Nikkor, 1977
16 f/2.8 Full Frame Fisheye, 1979

Mac

Date: Thu, 21 Sep 2000
From: "Fred Whitlock" afc@skyenet.net
Newsgroups: rec.photo.equipment.35mm
Subject: Re: No real optical improvement since the 70's?

Carsten, I think's probably fair to say that most fixed focal length lenses aren't much better today than they were in the 70's optically. But we do have faster lenses that weren't designed for whatever reason before the advent of CAD. Macro lenses almost all go to 1:1 today but didn't in those days also because of CAD. (Note: I think the 2:1 macros of those days may outperform the 1:1 macros of today at infinity focus.) Wide angle lenses had more barrel distortion in those days than they do today. I could list a number of similar things.

The biggest difference of all, I think, is in zoom lens design. Zoom lenses are noticeably better today than they were in the 70's. I'll never forget the disappointment I experienced when I saw my first chromes made with my fancy Sun Zoom of 1971. They were horrible. I never used the lens again. I finally sold my 1978 vintage Nikkor 43~86 zoom. I didn't use it anymore because it wasn't a very good performer. I still don't use zooms very often but I can assure you that modern day zooms are a whole lot better than those of the 1970's. than their 70's ancestors. No they still aren't as good as primes but they are very good indeed.

If you were to compare a 50mm f2 normal lens from today with one from the 70's (or even 60's or 50's or 40's) you probably wouldn't notice any difference and, if you did, the difference would be subtle. I still make wonderful chromes with a 50's vintage Leica that are indistinguishable from chromes made with modern equipment, at least at modest apertures. But compare zooms or extreme wide angles or very fast telephotos and the differences will become obvious. Computer technology has definitely improved the science of optical design. Good shooting.

Fred
Maplewood Photography

From Leica Mailing List:
Date: Sat, 17 Feb 2001
From: Jim Brick jim@brick.org
Subject: [Leica] Re: Leica R Vario Elmarit 35-70/2.8 ASPH.

I played with the prototype in 1998. As with all Leica special R lenses, it was very large. It dawned on me that I could carry a 35/1.4, 50/1.4, 60/2.8 and 80/1.4 in the same space and have f/1.4 available and macro capability. So for me, even if it were available and cheap, it was not something that I was interested in.

I bought the 70-180 APO zoom and it indeed was a stellar performer. But way way too big and heavy for what it was.

These things have a market. Albeit very specialized. I suspect that the money that they would have to charge for the 35-70/2.8 in order to just break over the life of the lens, would be astronomical, hence, no lens.

Jim

From: Jerry Coffin jcoffin@taeus.com
Newsgroups: rec.photo.equipment.35mm
Date: Tue, 5 Dec 2000
Subject: Re: Variable focusing

cmr@iisc.com says...

[...]

```
> A given set of lenses can focus perfectly at no more than 2 focal
> lengths. It is many decades since my father encouraged me to do the
> mathematics, so I don't think I can replicate it, but there is a
> mathematical proof.
```

I'm not sure what math you did, but this is basically nonsensical.

A zoom lens consists of a positive element (or set of elements) up front, and a negative element (or set of elements) behind it. By moving the entire assembly together, you change the focus. By moving the distance between the two, you change the focal length, but also change the focus. By changing both at once, you get a zoom lens that stays in focus as you change the focal length. Due to mechanical tolerances in the lens, there will always be SOME change in focus as you change focal length, and vice versa, but with close manufacturing tolerances, this can be minimized to the point that it's negligible.

OTOH, to achieve extremely wide ranges, modern zooms often use two or three sets of elements like this, one behind the other. By varying the focal lengths of all of them, you can get a MUCH wider range of focal lengths than with only one pair.

Now the bad news: a positive lens followed by a negative lens is fundamentally a lens followed by a teleconverter. IOW, a zoom lens is basically similar to a variable teleconverter, closely matched to a lens with which it happens to be permanently mounted. We all (hopefully) know that teleconverters tend to deteriorate images to some degree or other. When you use a zoom, you're taking all the pictures through a teleconverter. If you use a wide-range zoom, you're likely to be using a couple or three teleconverters in succession on the same image. As you'd expect, this tends to deteriorate the image more than a single teleconverter.

To compound this problem, a wide-range zoom lens will typically have a LOT of elements. Each time you add an element (even with good multicoating) you reduce light transmission and add a bit of flare. In addition, the light is traveling through a LOT of glass before it gets to the film. This means whatever dispersion the glass has (and it always has SOME) will add up. Likewise, each element adds its own aberrations.

To minimize the dispersion, you use as good of glass and careful quality control as possible. Most lenses are designed with a number of different types of glass with different characteristics to help minimize the effects of chromatic aberration. Quite a few now use an aspherical element or two to minimize spherical aberration. Likewise, in most cases groups of elements are designed to counteract distortions introduced in other groups.

In the end, it comes down to this: a fast, wide-range zoom could be designed that was theoretically just about as good as a prime lens anywhere in its range of focal lengths. Mathematically it works perfectly well, but it probably wouldn't work in practice and would be huge, heavy and expensive to even come close.

--
Later,
Jerry.

From: pburian@aol.com (PBurian)
Newsgroups: rec.photo.equipment.35mm

Date: 06 Dec 2000
Subject: Re: Variable focusing

Many of the affordable zooms are still varifocal. Focus does not shift very much as you zoom, but it does, with such models.

With autofocus cameras, the AF system adjusts focus so it's not a big deal.

Unless you use Focus Lock first, and then zoom.

Peter Burian

Date: Wed, 06 Dec 2000
From: Thomas Bantel tab@IPA.FhG.de
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Variable focusing

PBurian wrote:

> Many of the affordable zooms are still varifocal. Focus does not shift very
> much as you zoom, but it does, with such models.

Also many of the not-so-affordable zooms are varifocal, e.g. Canon 28-70 f/2.8L. Indeed, all of the Canon EF zooms I own are varifocal. The amount of focus shift varies, but is quite noticeable.

Thomas Bantel

From: "Fred Whitlock" afc@skyenet.net
Newsgroups: rec.photo.equipment.35mm
Date: Fri, 16 Feb 2001
Subject: Re: Zoom vs fixed lens resolution

33% sounds like an overstatement. Here's a brief book on the subject.

Lenses deal basically with a curved field of view. If the subjects and field of view were flat, then sharpness would be the same from the center of the frame to the edges. But this is not the case. Lenses deal with a curved world. So, when you focus on a subject, the sharpest part of the image will be at the center of the frame and sharpness will decline as you move toward the edges. This is true of any lens. At wide aperture this phenomenon is pretty easy to see but as you close down the aperture, depth of focus tends to make the problem diminish.

Zoom lenses have larger front elements (more curvature) and more elements (to correct optical aberrations at varying focal lengths) than fixed lenses of similar maximum aperture. So zoom lenses display more of this "corner softness" phenomenon simply because of the way they are designed. In short, if you made a photograph with a fixed lens and a zoom lens set at the same focal length, the fixed lens would show better resolution in the corners and at the edges of the frame than the zoom at any aperture. In order to get the corners sharp you would need to stop down the zoom lens to a smaller aperture than the fixed lens. In the center, of course, a good zoom and a good fixed lens should be sharp. The issue relates to what happens away from the center.

Most beginners consider resolution as a fixed parameter. What really matters is how resolution varies from the center to the edges of the frame at given apertures. Fixed lenses perform better than zoom lenses in this regard. Even more confused now?

Fred
Maplewood Photography

WTE wte@ncia.net wrote

> Can anyone clarify the recent point made that top quality fixed focal length

> lenses, such as Leitz,
> have significantly more resolution to given than zoom lenses? I believe the
> figure stated was that zoom lenses could only deliver about 33% of the a
> good fixed focal length lens.
>
> Thanks
>
> Walter Eitel

---

rec.photo.equipment.35mm
From: "Jriegle" jriegle@worldnet.att.net
[1] Re: Cheap Sigma vs. cheap Nikkor
Date: Sun Feb 25 2001

If you are concerned about sharpness, you should simply not use zooms (the consumer cheap ones) and just buy fix focal length lenses. Fixed lenses are faster and sharper and have less distortion than zooms. If you need great sharpness in a zoom, you'll have to take the plunge for the fast f2.8 ones and stay in a zoom range of around 2x.

John

...

From Nikon Mailing List:
Date: Sun, 1 Jul 2001
From: Felix Lopez_de_Maturana fmaturana@inicia.es
Subject: RE: [NIKON] primes vs. AFS Zooms

Aside from weight/size, can anyone tell me what advantage(s) Nikon's prime AF lenses have over the 17-35, 28-70, and 80-200 AFS lenses?

regards,
Michael Wilke

Mike

I use the three AFS zooms and although I have not eny of the AF primes I use too 15,20,24,28,35,50,55, 85,105, 180,200 and 400 mm MF primes so that perhaps I am qualified for giving a opinion. I believe that main difference between primes and zooms is "not" sharpness nor contrast, beeing better in primes, but in distortion which is always much more difficult to avoid in zoom than in primes. So if you make a lot of architecture pics a zoom must be discarded. Otherwise AFS zooms have almost so good sharpness and contrast figures that good primes. And much more convenience. If you need perfection perhaps it is the time of using a Sinar 4x5 and a pile of Rodenstock, Schneider Kreuznach, Carl Zeisss or similar lenses. Last week I saw a man in a street in my town, Bilbao, Spain making a picture with such a equipment. He transported the whole thing in a a trunk on wheels...This is not my idea of making pictures. I know that this matter zooms/primes has been widely discussed in this and in other lists but finally is a personal decision.

Kind regards

Félix

From Nikon Mailing List:
Date: Sun, 01 Jul 2001
From: Jonathan Castner jonathan@jonathancastner.com
Subject: [NIKON] Re: primes vs. AFS Zooms

The simple fact is that prime lenses are simper designs. Due to the laws of physics that means that if they are made to the same standards, primes are smaller, lighter, sharper, higher in contrast, lower in flair, better color, lower in distortions, able to have larger apertures and have greater close focusing ability than similar zoom lenses.

To many shooters these differences are either not that critical so the zooms are fine, or are the differences are so important that only primes will do. Personally, I prefer primes. I do use the excellent Nikon AF 80-200 f/2.8 D zoom but it is by no means as good as the AF 180mm f/2.8D on the long end or the AF 85mm f/1.4D on the short end.

In fact those prime lenses show that the zoom is an amazing lens for a zoom but as a prime it is just pretty good. I have some prime lenses, like my AF 28mm f/1.4D, AF 24mm f/2.8D, 85mm f/1.4D and AF 105mm f/2.8D Micro that you can't get with the zooms. Period. Bigger apertures and closer focusing alone make a huge difference to me.

Jonathan Castner - Photojournalist
Online folio at: http://www.jonathancastner.com

From Nikon Mailing List:
Date: Sun, 01 Jul 2001
From: Steve Bartlett sbartlett19@home.com
Subject: [NIKON] primes vs. AFS Zooms

Although I find that all my primes are sharper than my (mostly consumer) zooms, I usually have to look close to see the difference. I notice the greater distortion and flare of my zooms more often. Although distortion and flare are not noticable in every photo, when they do occur it's obvious.

Regards,
Steve

From Nikon Mailing List;
Date: Fri, 29 Jun 2001
From: "Jim MacKenzie, CIP" jim@dusykbarlow.sk.ca
Subject: Re: [NIKON] primes vs. AFS Zooms

- ----- Original Message -----
From: Theowilk@aol.com
Sent: Friday, June 29, 2001
Subject: [NIKON] primes vs. AFS Zooms

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> Aside from weight/size, can anyone tell me what advantage(s) Nikon's  prime AF
> lenses have over the 17-35, 28-70, and 80-200 AFS lenses?
```

- slightly better sharpness
- generally nearer focusing
- faster maximum apertures
- less flare
- cheaper (usually)

Don't overlook the non-AF-S 80-200. It focuses very quickly and is much less costly.

Jim

From Nikon Mailing List;
Date: Wed, 04 Jul 2001
From: "Simon Pearson" pearson_sl@hotmail.com
Subject: [NIKON] Re: primes vs. AFS Zooms

I think another thing to factor in when comparing primes to zooms, is the fact that zooms by their very nature are more prone to being knocked out of line optically if bashed. Primes are far more robust in this respect. The 17-35/2.8 may be more likely to superficially withstand being dropped than say the AF 24/2.8, but I would wager that if both 'superficially' survived the fall the zoom would be optically 'out' but the prime would be fine. I do not own the 17-35/2.8 BTW, just making a wild generalisation.....

Also to be considered, is that while the 17-35/2.8 zoom 'takes the place' of the 18, 20, 24, 28 & 35 primes, if your zooms does break down you're scuppered. Whereas if one of your primes breaks, you could certainly cope with your other primes in the 'range'. This is something that John Shaw harps on about when people take 'only' a couple of 'catch all' lenses. Going from memory, he gives an example of someone on one of his photo tours to Africa who only took a Canon 100-400 zoom and a 24 for scenics.... her 100-400 broke within the first couple of days and she was stuck with the 24mm for everything!! Bit of a nightmare really!!

Just my tuppence, YMMV.....

Cheers,
Simon

From Nikon MF Mailing List;
Date: Tue, 17 Apr 2001
From: "L Shepherd" Shepherdlen@btinternet.com
Subject: Re: re: variations in glass /Focus shift

From: "Steve Bartlett" sbartlett19@home.com:

I am less sure of what Bjorn means by focus shifts On a zoom lens like the AFS 17-35mm , if you focus at 5 meters with the zoom set to 17mm, you should be able to zoom to 35mm and everything at 5 meters should remain in focus. If it isn't in focus, then the focus has shifted.

Hi Steve,

Yes and no!

Yes as in vari-focal zooms in compact cameras where the focus is only set by the camera after zooming. This enables much better quality for much less money (as in the Olympus IS3000 which has an outstanding zoom), but is not much good if you focus before you zoom.

Few zooms are described as holding accurate focus throughout the zoom range, i.e. they have a trace of vari-focal so it is best to focus after zooming. No in the sense Pop Photo showed few AF systems could detect when a camera was carefully moved in relation to a static subject and no focus error was detected within f4 depthof field. Sharp focus at 17mm might not be as sharp at 35mm due to the influence of the larger image size on depth of field. Unsharp focus after zooming out can be caused by AF system limitations rather than lens design. Also no if you do not hold the camera steady when autofocusing at 17mm and AF locks on a subject which is sharp enough at 17mm it may not be quite sharp at 35mm. That's down to the photographer.

The only zoom I have come across where the manufacturer says it holds it's focus precisely through the entire zoom range is the Olympus 85-250 f5 but I am sure there must be others. All that matters is that if you focus carefully after zooming you will be OK and if you zoom IN after focusing you will be usualy be OK.

Len Shepherd..

[Ed. note: Thanks to Chris Bush for sharing these observations on lenses!]
Date: Wed, 30 Aug 2000
From: Chris Bush chrisbush@telus.net
To: rmonagha@mail.smu.edu
Subject: Old primes rule!

Just read your article on the cheap prime lens paradox and I couldn't agree more.

I shoot for a newspaper and use some of the latest wizbang Nikon stuff. For sports and fast on the fly work it's great, but it's also heavy and big. The 80-200 F/2.8 is a monster, especially coupled to an F90x. Add that to a backup body, lenses and flashes and you're packing lots of weight.

I fell into the trap of newer more expensive is better, while finding I was increasingly longing for my old mechanical cameras with primes that were small, light, reliable, manual (so you stayed mentally connected to what you're dong) and made great pictures.

I wanted to get a back up, weekend vacation system with primes that was small and cheap, something I could toss in a fanny pouch and not worry about at the beach or take on the bike.

Then I did some pics for a story about a famous Canadian writer who had recently suffered a stroke, lost his memory and gone blind. We had a great time while I shot and his wife ended up giving me a box of his old cameras. In it was a Konica TC (like a K1000 or Ricoh KR5). It was build in 1976, but is like brand new. I picked up a 135 3.2 Hexanon and a third part 28 2.8 for peanuts and now I have a compact system I can even stuff in my pockets that takes great pictures. And shooting on vacations and weekends is fun again because I'm not burdened with the weight and I've sort of gotten back to my roots in photography. The big bag of heavy Nikons stays home.

BTW: I started out with old OEMs and thrid party lenses and I've never had a bad one. I got a lot of great quality pictures with an ugly old beat up Vivitar 28 2.8 I picked up cheap and I wish I still had it.

Funny how our egos get the better of us when it comes to name brands and bucks.

Date: 25 Jun 2001
From: mceowen@aol.com (McEowen)
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Prime lenses: What do you do when...

What do you do when you cannot move around to achieve the desired cropping for a picture? Do you routinely crop the image after you've shot it? Pass up on the shot? Pull out a zoom to achieve the desired effect?

You learn to "see" like your lenses. When photographing a scene your mind processes the information something like: "I want to show context or environment so I'll use the 24mm" or "I want to focus in on the details so I'll use a longer lens". Then you position yourself to make the photo. Rarely are you limited by not being able to zoom -- in fact, it NEVER occurs to me. Between my slrs and my rangefinders I carry a 24, 35, 50, 105 (sometimes an 85 instead) and 180. I almost NEVER wish I had something to fill the gaps.

Date: Mon, 25 Jun 2001
From: "Malcolm Stewart" malcolm_stewart@megalith.freeserve.co.uk
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Prime lenses: What do you do when...

Interesting one this...

I take slides and seem to operate in two different modes:

A) serious stuff using prime lenses EF35f2, EF85f1.8 USM and an EF200 f2.8L say, with a 50 f1.8 for good measure.

B) holiday snaps; 17-35 EX HSM Sigma zoom, EF 28-135 IS USM and the EF35 f2 for when the light drops.

Then there's the nature stuff using the 300, 500 and a 1.4x when necessary

A) If I can't frame it, I'd use the wider lens and trust that my use of fine grain Provia 100F and good lenses at their optimum apertures would give me an acceptable image.

I never go out without a prime lens, but I frequently go out without a zoom.

M Stewart Milton Keynes, UK

...

From Minolta Mailing List:
Date: Sat, 25 Aug 2001
From: xkaes@aol.com
Subject: T-stops, etc.

I use a hand-held meter a lot. I know some of you do as well. For some of us this is because the camera we use does not have a built-in meter. For some of us it is because we prefer the difference metering modes of the hand-held meter. And there are times when we are using electronic flash manually. But for a variety of reasons we might be setting the f-stop and the shutter speed manually without the use of a TTL meter

But when I do this I usually forget to use the t-stop instead of the f-stop. For years, I just used the f-stop and still do most of the time. But the other day I re-discovered the need for t-stops.

For those of you unfamiliar with t-stops, here is what I know -- in a nutshell. All lenses have the same f-stop scale on them, but they do not all transmit the same amount of light at the same f-stop. For example, my 80-200 f4.5 Rokkor-X transmits 2/3 of an f-stop less light (at f-4.5) than my 50mm f1.4 Rokkor-X (at f4.5). The same is true at any other f-stop pair. What I need to do when setting the f-stop on the zoom is to open the f-stop 2/3 of a f-stop to compensate. Otherwise my exposures will be useable, but way off. The light loss occurs because of all the reflective lens surfaces in the zoom lens. It has 14 elements (or 28 glass surfaces) and a litle bit of light is lost when crossing each of these. Other lenses suffer similar loss. With a TTL meter, this is compensated for automatically, but in non-TTL situations, you can run into trouble.

What I need to do is run through all of my lenses and test each to see what the light loss is. How do others cope? Should we put together a light-loss list for the Rokkors?

From Minolta Mailing List:
Date: Sat, 25 Aug 2001
From: "Bill Kean" <wjkean@hotmail.com>
Subject: Re: T-stops, etc.

I think that is all we can do, choose settings from experience. There has been a series of articles in Amateur Photographer magazine recently pointing out that the lenses don't transmit the same amount of light, the shutter speeds are not as marked, the film ratings are not exactly as stated, we each use meters slightly differently etc.

Those with the equipment to do so could measure the light transmission and that would be a useful indication.
Bill

From Minolta Mailing List:

Date: Sun, 26 Aug 2001
From: Samuel Tang <samueltang@eisa.net.au>
Subject: Re: Re: T-stops, etc.

Hi All,

T-stop marking is used extensively in lenses for professional movie cameras as exposure across different takes needs to be absolutely consistent. The basis for a T-stop is to think of it as the f/stop of a lens with 100% transmission, the angle of coverage has no bearing on this.

I will see if I can look up the standard method for measuring the T-stop, although I cannot really think of an easy way off hand to set the benchmark for a lens with complete transmission though.

But then there is a degree of tolerance set by the standards authorities on the on-film exposure accuracy. The Japanese standard tolerance for on-film exposure accuracy is one stop each way, while the American standard is somewhat tighter.

Even when we consider a camera with leaf shutter, the effective shutter speed changes with aperture; the smaller the aperture the longer the effective speed. I guess this issue is something we have learned to put up with.

Best,

Sam.

From Nikon MF Mailing List:
Date: Tue, 21 Aug 2001
From: Henry Posner/B&H Photo-Video <henryp@bhphotovideo.com>
Subject: Re: 50mm

you wrote:
>Which Japanese camera making company made 50/55mm lenses to fit Nikon SLRs
>other than Nikon?

Sigma, Tamron, Tokina & Vivitar once upon a time. Nowadays, except for long tele lenses and macro lenses, there are very few aftermarket companies making non-zooms of any sort.

Sigma has a 50/2.8 D-AF macro. That's the only one in our current database.
--
regards,
Henry Posner
Director of Sales and Training
B&H Photo-Video, and Pro-Audio Inc.
http://www.bhphotovideo.com

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from minolta mailing list:
Date: Tue, 18 Sep 2001
From: "Ze'ev Kantor" <zeevk@netvision.net.il>
Subject: RE: Normal vs. Zoom

I would like to support Emanuel's post. When I am comparing performance (judged from my slides and prints) of my primes and zoom lenses, the sharpness (resolution) is the less noticeable difference. This is

especially true in regard to Minolta AF lenses that benefit from more advanced / modern design, materials and construction. For example, the 24-85mm F/3.5-4.5 is an exceptionally sharp and contrast lens but this is achieved by sacrificing distortion.

I am involved now in a self-assigned project shooting reflections in windows of buildings. Since most images include window frames - the slightest trace of distortion is evident in the prints. After several shooting sessions, I decided to leave all zooms, except the 70-210 f/4, at home and pack my bag with 17mm, 24mm, 28mm, 50mm, 85mm, 100mm, and 135mm primes.

On the other hand, for portrait photography, although I still have the exceptionally sharp and excellent trio: MD 85mm F/2, MD 100mm F/2.5 and MD 135mm F/2.8 - my first choice of lens is the MD 50-135 f/3.5 zoom. I still prefer the flexibility and convenience of this zoom over tedious lens switching - except when close-focusing limitation or light conditions force me to use my primes.

Ze'ev Kantor
zeevk@netvision.net.il

From: Charles Richmond cmr@iisc.com>
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Advice needed prime v zoom lenses
Date: Sun, 20 Jan 2002

Mxsmanic wrote:
>
> "DM" ihate_ms@hotmail.com> wrote
>
> > ... but if you compare shots side by side,
> > there is a definite difference ...
>
> That will never happen in practice, because nobody shoots identical
> photos with two different lenses just to see which looks better.
>
> > If I compare the slides I've shot with my
> > 28-105 USM and ones shot with the primes
> > (24/2.8, 50/1.8 and 1.4, 85/1.8, 100/2.8 etc)
> > in every case the primes win.
>
> Try spending real money on the zoom, and the results may be different.
> Keep in mind that you can replace several primes with one zoom.
>
> > In addition, primes are smaller, lighter,
> > use smaller filters (52 or 58mm), have less
> > flare and have been very well corrected for
> > distortion (except maybe the 50/1.4 USM).
>
> There's only one huge problem: If you don't like the focal length of a
> prime, you have dismount the lens and mount a different one.
>
> Consider this: If you must get a shot, and you only have one 35mm
> prime, the advantage of the prime (if any) with respect to image quality
> is likely to be erased by the disadvantage of having to crop and
> enlarge, or of losing part of the image, because of the fixed focal

> length. If you have to crop to half the image because you had only one
> focal length, you've just cut image quality by one half--far more than
> you would have lost with any decent zoom at all.
>
> The days when primes were unconditionally preferable to zooms are long
> gone. Unless you have some very, very unusual requirements, you don't
> need primes for anything.

The funny thing is, that now that I have "L" zooms (17-35, 28-70, and
100-400) I am thinking seriously of switching to primes on both the
wide and the long ends. There is a difference and it is visible. It
may not be much, but it is real; in distortion, chromatic aberration,
and sharpness.

--
* Charles Richmond   Integrated International Systems Corporation   *
* cmr@iisc.com   cmr@acm.org   cmr@shore.net   http://www.iisc.com   *

From: Lisa Horton Lisa@lisahorton.net>
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Advice needed prime v zoom lenses
Date: Mon, 21 Jan 2002

Mxsmanic wrote:
>
> "Charles Richmond" cmr@iisc.com>
>
> > Learn to read.
>
> I did. That's why I suggested better zooms.

I have better zooms. But I still find the primes to be faster (no
debate there), sharper, less prone to flare, and of course smaller &
lighter. Different tools for different needs, I always say. Zooms
give you flexibility at the expense of ultimate quality, primes give
you better quality at the expense of flexibility.

Lisa

From: ihate_ms@hotmail.com (DM)
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Advice needed prime v zoom lenses
Date: 20 Jan 2002

"Mxsmanic" mxsmanic@hotmail.com> wrote...
> "DM" ihate_ms@hotmail.com> wrote...
>
> > ... but if you compare shots side by side,
> > there is a definite difference ...
>
> That will never happen in practice, because nobody shoots identical

> photos with two different lenses just to see which looks better.

It does make a heck of a difference if you're submitting your pics
for publication. If someone else comes up with better pics, chances
are that yours will be tossed out. This is what the poster is trying
to do. Please read the original post.

> > If I compare the slides I've shot with my
> > 28-105 USM and ones shot with the primes
> > (24/2.8, 50/1.8 and 1.4, 85/1.8, 100/2.8 etc)
> > in every case the primes win.
>
> Try spending real money on the zoom, and the results may be different.
> Keep in mind that you can replace several primes with one zoom.

To each his own. Maybe you are very rich and can afford to spend
$5,000 on 3-4 L series zooms. I am not, and for what I do, I am
more than satisfied with the results of the primes. I owned a
100-400L, and at 100mm, the 100/2.8 USM beat the zoom. At 200mm,
my 200/2.8L beat the zoom. That's enough for me.

The original poster specifically stated that he doesn't want to
spend big bucks on expensive L series zooms.

> There's only one huge problem: If you don't like the focal length of a
> prime, you have dismount the lens and mount a different one.

Big deal. When he's shooting landscapes, he has more than enough
time to change lenses, walk around and look for a nice spot, etc.

> The days when primes were unconditionally preferable to zooms are long
> gone. Unless you have some very, very unusual requirements, you don't
> need primes for anything.

Wow, now that's a huge sweeping statement. If you are happy with your
zooms, fantastic. Now let's get on with life.

From: brianc1959@aol.com (brian)
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Advice needed prime v zoom lenses
Date: 24 Jan 2002

"Ahriman" ahriman@nospam.com> wrote
> >There are a few zooms
> > that will beat good primes, too, but they are a rarity, and expensive.
>
> Name one.
>
> Ahriman

One that I have tested and used extensively: Nikon 17-35mm f/2.8. At
the appropriate focal length settings it is sharper and has less

distortion than the Nikon 20mm f/2.8, 24mm f/2, 28mm f/2, and 35mm
f/1.4. It may be better than some of the others as well, but those
are the lenses I happen to have. The primary reason for the improved
performance is that the zoom has less color fringing due to more
creative use of abnormal glass types. The only significant advantage
that primes have over this lens is lighter weight.

The wide-angle primes could obviously be re-designed to have improved
performance, but this might not happen for a long time, if ever.

Brian

From: "Ahriman" ahriman@nospam.com>
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Advice needed prime v zoom lenses
Date: Thu, 24 Jan 2002

"brian" brianc1959@aol.com> wrote...
* "Ahriman" ahriman@nospam.com> wrote
> > >There are a few zooms
> > > that will beat good primes, too, but they are a rarity, and expensive.
> >
> > Name one.
> >
> > Ahriman
>
> One that I have tested and used extensively: Nikon 17-35mm f/2.8. At
> the appropriate focal length settings it is sharper and has less
> distortion than the Nikon 20mm f/2.8, 24mm f/2, 28mm f/2, and 35mm
> f/1.4. It may be better than some of the others as well, but those
> are the lenses I happen to have. The primary reason for the improved
> performance is that the zoom has less color fringing due to more
> creative use of abnormal glass types. The only significant advantage
> that primes have over this lens is lighter weight.
>
> The wide-angle primes could obviously be re-designed to have improved
> performance, but this might not happen for a long time, if ever.
>
> Brian

Thanks Brian, I had heard that the 17-35mm f2.8 is one of the finest zooms
around - my point really was that Manic was making sweeping statements
having never even used a quarter of the gear he was talking about. HOWEVER,
you are making unrealistic comparisons - the lenses you are comparing the
zoom with are optimised for their speed rather than for their sharpness. If
you shoot a 24mm f2 *at* f2, it will naturally be unsharp compared to the
zoom. I've noticed that some (not all) Nikkor primes do tend to lose it a
bit at their widest apertures, more so than my Pentax gear, anyway. You
should be comparing with the slower aperture models at those focal lengths
(which are mostly f2.8 anyway, and so equal speed to the zoom) which are
(apart from the AF 28mm, reputedly) much better than the high speed
counterparts. I have shot with a 35-70 f2.8, and an 80-200 AF-S f2.8, and
was not enormously impressed with the sharpness of the results against my
old Takumar lenses! This wasn't a big biased test, just trying them out in
awe and wonder...which evaporated when I developed the film.

Manic is something of a sporadic troll who managed to escape my filter when I reinstalled my OS a few months back, but thankfully he is back in there after giving much amusement again!

Ahriman

From: brianc1959@aol.com (brian)
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Advice needed prime v zoom lenses
Date: 24 Jan 2002

"Ahriman" ahriman@nospam.com> wrote
> No it doesn't! How little do you actually know about the performances of
> lenses?!? A zoom *must* have more elements than a prime (apart from the odd
> ultrawide) and where there is a glass-to-air surface, there is flare. The
> more glass-to-air surfaces, the lower the overall image contrast. The simple
> fact of designing a lens that can alter its focal length and stay corrected
> for linear distortion *has* to be a compromise with sharpness, because every
> ray of light has to pass through more elements to be corrected before it
> hits the film. DO learn some basics about lens design. Your every post is
> making you look more and more foolish.
>
> Ahriman

In principle you might be correct, but in practice not completely. Many wide-angle primes were designed years or even decades ago, and they really aren't nearly as good as they could be. As I've pointed out above, the Nikon 17-35 f/2.8 zoom is actually sharper and has less distortion than many if not all of the fixed focal length lenses currently offered by Nikon in this range.

The one area where zooms might have an inherent disadvantage is with flare, but this is often a non-issue as long as ghost images are avoided in the design. Having a large number of elements does not in any way limit sharpness, but there will be some internal flare. However, no 35mm zoom lens has anything like the complexity of zoom lenses designed for broadcast television and cinematography, and flare is certainly well-controlled in these applications.

I am a lens designer, and I can tell you that it is possible to achieve amazingly good correction in a zoom lens. Better than you can imagine. In cinematography, for instance, zooms are now completely dominant. And this is not because film makers are willing to make sacrifices in image quality.

Brian

From: "Mxsmanic" mxsmanic@hotmail.com>
Newsgroups: rec.photo.equipment.35mm
Subject: Re: The cheap philosophy
Date: Tue, 01 Jan 2002

"Robert Monaghan" rmonagha@smu.edu> wrote

> actually, I am pretty surprised that the Nikon
> zooms, even pro zooms, are doing so well for you
> against the Leica prime lenses ;-)

The latest Nikon pro zooms should not be underestimated. They surpass most primes. The 17-35/28-70/80-200 AF-S trio is superlative.

The Leica primes will do better on a test bench, I'm sure. Certainly I've seen direct evidence that the Summicron 50 is sharper than the 28-70 at the same focal length, and that the Apo-Summicron 90 is sharper than anything else. But when you are shooting handheld and/or ordinary subjects (not extreme cases), these differences are not always obvious or even detectable.

I think the 28-70 is the least sharp of the three (although it is still better than just about anything else), but it is an early 28-70 and I wonder about it sometimes. Eventually I might buy another one just to see.

> I suspect the Leica ones are better as you noted
> at the margins, esp. wide open where they seem to
> be optimized.

I tend to agree. The 90mm Summicron is sharper than any other lens I have, even wide open at f/2, and it is like that all the way out to the corners. It is so good, in fact, that I look for excuses to go out and shoot with a 90mm lens. But in most shots you just can't see this.

> But the differences aren't night in day in general
> shooting, I'd be willing to bet, and subtle in a
> blind lens test too ;-)

Agreed.

From: brianc1959@aol.com (brian)
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Advice needed prime v zoom lenses
Date: 23 Jan 2002

rmonagha@smu.edu (Robert Monaghan) wrote
> But it is a paradox that you can often buy a full
> series of smaller prime lenses for what a pro zoom in the same range
> costs....
>
> bobm

Hi Bob:

The wide-angle range is the one area where a zoom can actually provide better image quality and lower distortion than the corresponding primes. I know this is the case for Nikon, and it may also be true for Canon now that they have replaced the 17-35/2.8 with a sharper

16-35/2.8.

Getting better quality along with the convenience of a zoom is worth the price IMHO. My wide angle primes are now gathering dust. True, the primes are smaller, and the zoom won't balance properly unless you are using either a large camera or a motor drive.

Brian

From: contaxman@aol.comnospam (Lewis Lang)
Newsgroups: rec.photo.equipment.35mm
Date: 23 Jan 2002
Subject: Re: Advice needed prime v zoom lenses

Side?point:

I don't see why (other than the poster's title of this thread/needs) anybody has to use or pit one verses the other. Both zooms and ffls both have their place, when you you need flexibility of focal lengths use zooms (and try to optomise quality if possible w/ tripods, flash, fast shutter speeds, gobos to block light from hitting the lens and causing flare, etc.) and when you have more control over your subject and/or when your subject is appropriate for an fll go that route. I've made good quality 16x20" prints off of the Minolta 70-210 f/4 Maxxum zoom and Superia (or Super G?, I forget which) 400 I've gone as far as 20x30" w/ my old Nikkor 25-50mm from Ektar 125 (no longer available). Ive gone as far as 30x40" approx. off of Leica M (35 f/2 Summicron) and K25 as well as 16mm f/2.8 Nikkor and Ektar 25 w/ excellent results handheld at about 1/30 sec. (most probably braced on a camera bag in the prone position). The point is that all these lenses are is tools and that any good tool can deliver good results if used w/ care. Past a certain point you are only talking about degrees of excellence in contrast, anti-flare coating, etc. as most high quality lenses, regardless of whether they are ffl or zoom can meet the needs of decent quality when used (lit, exposed, gobo'd for flare, shot w/ tripod/monopod/braced or high shutter speed and/or flash, using low or highspeed film to ensure maximum sharpness in the former case on a tripod or the latter if handheld, especially under less than favorable lighting conditions) w/ care. If you need even more quality than good zooms or ffls can deliver you really should be either excercising better technique or going up to a bigger format.

Yes, ffls can deliver less flare, greater contrast and less vignetting and often faster speed than most zooms but so what? Sometimes the shot counts more than a 5 or 15% difference in resolution/contrast. If you want ultimate quality (including both resolution and tonal separation (micro contrast instead of global contrast)) use ffls (or zooms) in the next format up (from 35mm). Past a certain point all anybody is arguing is minutiae...

That's my 35 plus cents on the topic...

Lewis

http://members.aol.com/Lewisvisn/home.htm

From: "Ahriman" ahriman@nospam.com>
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Advice needed prime v zoom lenses
Date: Tue, 22 Jan 2002

"Mxsmanic" mxsmanic@hotmail.com> wrote...
> "DM" ihate_ms@hotmail.com> wrote...
>
> > ... but if you compare shots side by side,
> > there is a definite difference ...
>
> That will never happen in practice, because nobody shoots identical
> photos with two different lenses just to see which looks better.

Any shot taken on a cheap zoom will look unsharp and tonally flatter when compared to any shot taken with a halfway decent prime. I can tell the difference straight away from looking at a print whether someone has used a cheaper zoom or a good zoom or prime. Doesn't matter what the picture is *of*. I have 30 year old Pentax screw mount lenses that are *far* sharper than a cheap Canon or Nikkor zoom.

>
> > If I compare the slides I've shot with my
> > 28-105 USM and ones shot with the primes
> > (24/2.8, 50/1.8 and 1.4, 85/1.8, 100/2.8 etc)
> > in every case the primes win.
>
> Try spending real money on the zoom, and the results may be different.
> Keep in mind that you can replace several primes with one zoom.

Not in terms of overall image quality you can't. What you gain in terms of focal length flexibility you lose in sharpness, lens speed, contrast, and flare issues.

>
> > In addition, primes are smaller, lighter,
> > use smaller filters (52 or 58mm), have less
> > flare and have been very well corrected for
> > distortion (except maybe the 50/1.4 USM).
>
> There's only one huge problem: If you don't like the focal length of a
> prime, you have dismount the lens and mount a different one.

Only if you're not very imaginitive. I practiced going out with, for example, a 28mm wideangle mounted on my camera and no other lenses on me at all. It improved my eye as I had to change my way of thinking. Zooms make you lazy. Unless you're a professional who desperately needs to change focal length that quickly, why bother? Given that to even start to approach the image quality of a reasonable prime in a zoom will cost the best part of a thousand pounds - for *one* 35-70mm f2.8 lens, to say nothing of the extra expense of a similar tele zoom, it seems that primes offer a distinct bang for your buck advantage.

>
> Consider this: If you must get a shot, and you only have one 35mm
> prime, the advantage of the prime (if any) with respect to image quality
> is likely to be erased by the disadvantage of having to crop and

> enlarge, or of losing part of the image, because of the fixed focal
> length. If you have to crop to half the image because you had only one
> focal length, you've just cut image quality by one half--far more than
> you would have lost with any decent zoom at all.

If that is how you think, then perhaps you should think more about your shots when framing them. I rarely crop, regardless of what lens I am using. I make the image fit the frame, or I don't bother taking it.

>
> The days when primes were unconditionally preferable to zooms are long
> gone. Unless you have some very, very unusual requirements, you don't
> need primes for anything.

Apart from enlargability of your image, quality, edge definition, better vignetting and flare control, faster apertures, smaller physical size, better contrast...shall I go on?

Do you want convenience and shots that look like they were taken with a compact? Or do you want to take high quality shots and still have change left over from £500?

Ahriman

From: brianc1959@aol.com (brian)
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Advice needed prime v zoom lenses
Date: 24 Jan 2002

"Ahriman" ahriman@nospam.com> wrote...

> Even the AF-S Nikkor 17-35mm f2.8,
> regarded arguably as the finest zoom in the focal length, can't hold a
> candle to a Prime Nikkor 20mm.
>
> Ahriman

IMO, precisely the opposite is true, at least over a 24x16mm image area. The 20mm prime has a slight contrast advantage at f/2.8, but by f/4 the zoom is sharper and has more contrast, and it keeps this advantage when stopping down further because it has far less color fringing. The zoom at 20mm also has far less geometrical distortion than the prime lens, which of course holds true at any aperture setting. You might argue that the 20mm prime is slightly better for indoor wide-open work, but for everything else the zoom will definitely provide superior image quality.

Brian

From: brianc1959@aol.com (brian)
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Advice needed prime v zoom lenses
Date: 24 Jan 2002

"Ahriman" ahriman@nospam.com> wrote in message
>
> Thanks Brian, I had heard that the 17-35mm f2.8 is one of the finest zooms
> around - my point really was that Manic was making sweeping statements
> having never even used a quarter of the gear he was talking about. HOWEVER,
> you are making unrealistic comparisons - the lenses you are comparing the
> zoom with are optimised for their speed rather than for their sharpness. If
> you shoot a 24mm f2 *at* f2, it will naturally be unsharp compared to the
> zoom. I've noticed that some (not all) Nikkor primes do tend to lose it a
> bit at their widest apertures, more so than my Pentax gear, anyway. You
> should be comparing with the slower aperture models at those focal lengths
> (which are mostly f2.8 anyway, and so equal speed to the zoom) which are
> (apart from the AF 28mm, reputedly) much better than the high speed
> counterparts. I have shot with a 35-70 f2.8, and an 80-200 AF-S f2.8, and
> was not enormously impressed with the sharpness of the results against my
> old Takumar lenses! This wasn't a big biased test, just trying them out in
> awe and wonder...which evaporated when I developed the film.
>
> Manic is something of a sporadic troll who managed to escape my filter when
> I reinstalled my OS a few months back, but thankfully he is back in there
> after giving much amusement again!
>
> Ahriman

Hi:

For years I tended to be mainly interested in faster lenses, so those happen to be the ones that I own. I was somewhat shocked this past fall when I got the 17-35/2.8 and tested it along with all my wide angle primes at all apertures. Obviously, you can't compare an f/2 lens wide-open fairly with an f/2.8 lens wide open. However, I think it is useful to compare them at equal apertures. The 17-35 zoom has good resolution but fairly low contrast at f/2.8 regardless of focal length, but as soon as you stop it down to f/4 or slower the contrast goes way up. It is a pretty big lens, but it balances well on one of the larger camera bodies.

Brian

From: "David Kieltyka" daverk@msn.com>
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Re: Advice needed prime v zoom lenses
Date: Fri, 25 Jan 2002

Jim Davis ydavis@hkg.odn.ne.jp> wrote:

> A zoom on the other hand, allows you to frame exactly, and get that
> great image before it changes. To me, this is the factor that make a
> zoom better. Not the small quality difference a prime gives you. Not
> to mention not having to change lenses, somethin which is sure to
> lose you that great photo.

I use my 50mm lenses at f/1.4 (or f/1.2 or f/1.5 depending on the lens) 90% of the time. Case closed.

Actually I think zooms are great. For the 8x10" max. prints most people will make, or have made for them, the qualitative differences between a good zoom and a good prime don't matter. If you're shooting action stuff, or if your movement is restricted, a zoom gives you lots of flexibility. But I also think zooms encourage compositional laziness. When shooting a landscape scene I get better & more interesting results if I pick a single focal length and then move around to find a good composition. With a prime I can't be tempted to just diddle around with the zoom ring rather than move around to find a better location. When you put a 24mm lens on your camera and leave it there you must learn how to make the 24mm angle-of-view work or your photos will suck. With a zoom you can say "Ah, screw it," and twist the ring to the settings you're comfortable with. Which IMO isn't good for your picture-taking skills.

-Dave-

From: "A Dettling" aarondettling@hotmail.com>
Newsgroups: rec.photo.equipment.35mm
Subject: Re: "cheap consumer zooms"
Date: Sat, 18 Aug 2001

An exhaustive list is impossible.

If a lens has two or more of the following characteristics, it may be a cheap consumer zoom:

name like Cosina, Phoenix, Vivitar, or Sears as someone else said
cheap
variable focal length
variable maximum aperture, with max higher than 3.5
plastic construction

Seriously, there are a few good zooms out there with consumer pricing. (e.g., Nikkor 28-105) But you need people with lots of experience to tell you which ones they are. If you have a specific lens in mind, ask and I'm sure someone will know something about it.

From: "Dallas" dallas@nospam.ananzi.co.za
Newsgroups: rec.photo.equipment.35mm
Subject: Re: prime vs. zoom???
Date: Fri, 1 Feb 2002

Let me put it this way:

I read about the incredible quality of the Nikkor 80-200mm f/2.8 ED zoom from many sources, so naturally I thought that it would be worth getting. I got it and yes, the pics I took were sharper and better colour saturated.

However, I then read about the legendary 180mm f/2.8 ED Nikkor and how many

said it was probably the sharpest Nikkor ever made, so I got it.

Man, they were right. That 180mm lens is an eye-popper! The best I have ever used. It makes the 80-200mm look like a consumer lens.

From: NNZsACYw.5.stripes@spamcannon.net (Josh Osborne)
Newsgroups: rec.photo.equipment.35mm
Subject: Re: prime vs. zoom???
Date: 1 Feb 2002

>hello group
>i often hear advanced photographers say prime lenses are the only way to go,
>and zoom lense are no good in image quality
>is this true? can you really tell by looking at 4x6 prints or only like an
>8x10?

Some zoom lenses are quite good, a lot are quite bad. Most prime lenses are quite good, a few are bad.

A lot of the badness in zoom lenses will tend to go away if you stop them down a bit (for example avoiding f/5.6 at 300mm on the 75-300 going to at *least* f/8). Sometimes stopping down too much gives you more DOF then you want though, or not enough speed.

Zoom lenses tend to flare worse then primes, and a lens hood helps less (but it still helps, so use it!). The good zooms tend to be quite heavy (then again so is a 300mm f/2.8...).

Can you tell on a 4x6? Sometimes yes. Sometimes no. For sure a zoom will sometimes let you capture an image that a fixed lens wouldn't merely because you can go wide or long enough before the moment passes, but a fixed lens can also let you capture a moment the zoom would miss because they tend to be far far far faster then consumer level zooms (and somewhat faster then pro zooms).

Are you shooting action or landscapes? Inside or outside?

I wouldn't get all wraped up in it, go try a prime lens. The 50mm f/1.8 is a great one to start with, it is the cheapest Canon EF lens I know of, and it is sharp focuses fast, and works well in low light. Get it, and see if the extra speed is worth the hassle of doing lens changes to you. If not you have to decide if the pro zooms are worth the extra cost and weight, or if the consumer zooms are good enough.

>i am mainly interested in the canon eos line (that's what i am thinking of
>getting) but i am guessing the same theory applies to all brands
>thanks in advance!

Avoid the kit lens, I think 28-80 f/3.5-5.6, it is really amazingly bad. The other consumer zooms are better. I hear the 28-135IS is quite nice, but I don't own that one. It would probbably be a good pick to see how much you like consumer zooms, it is a bit pricy

though, so see if you can test it in the camera store before you
buy it.
--

From: Hypofumes@dark.room
Newsgroups: rec.photo.equipment.35mm
Subject: Re: prime vs. zoom???
Date: 1 Feb 2002

I thought/believed that zoom lenses would never match a prime lens, and they did not for most of the 50 years I have been doing photography... But, when the high end Nikkor AFD zooms came out and I saw the test results in the photomags I decided to do some testing of my own... I got an F5 body with the 30-70mm f2.8 AFD and the 80-200 f2.8 AFD zooms... With both the zoom and the prime lens used on a tripod, two stops down from wide open, and at the same focal length, you absolutely cannot see any difference in the photographs... I'm now a believer in zooms (the high end pro lenses, not the consumer versions)... I would expect the Canon series of pro zooms to give equal results...
...

From: fuzzfactor@aol.com (Fuzzfactor)
Newsgroups: rec.photo.equipment.35mm
Date: 01 Feb 2002
Subject: Re: prime vs. zoom???

Put it this way, There are some bad primes and great zooms, so there is certainly overlap. Still, the best primes are better than the best zooms in image quality. I don't have too much of a problem with the sharpness issue, I find some zooms have lots of distortion and light fall-off that is annoying in some types of subjects. Some of those wide range do-it-all zooms can be a poor. Some conclude it is worth the compromise. -F

From: "B. Chan" See.Below@Email.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: prime vs. zoom???
Date: Sun, 03 Feb 2002

Yes, today's primes are still smaller, cheaper, faster, and better optically.

For zooms, you trade the above for convenience and saved the time for changing lens. This is very important at times as to have the picture taken or not. For most consumer or prosumer zooms below about $500, you can tell the difference even on 4x6. It is not just sharpness, but overall contrast, uniformity, distortion as well. If you do a side by side comparison, you will notice although they both take good pictures. Some of the top grade

zooms does approach the quality of primes but you are paying a lot more.

To get primes or zooms? It all just depends on how you shoot. If you need to be able to shoot anytime any situation quickly and not carrying a lot, you definitely need a zoom. If you are taking landscape or studio work, it is much more cost effective to use primes.

For myself, I use both zooms and primes

Biu.

From: "David Kieltyka" daverk@msn.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Re: Advice needed prime v zoom lenses
Date: Fri, 25 Jan 2002

Jim Davis ydavis@hkg.odn.ne.jp wrote:

> A zoom on the other hand, allows you to frame exactly, and get that
> great image before it changes. To me, this is the factor that make a
> zoom better. Not the small quality difference a prime gives you. Not
> to mention not having to change lenses, somethin which is sure to
> lose you that great photo.

I use my 50mm lenses at f/1.4 (or f/1.2 or f/1.5 depending on the lens) 90% of the time. Case closed.

Actually I think zooms are great. For the 8x10" max. prints most people will make, or have made for them, the qualitative differences between a good zoom and a good prime don't matter. If you're shooting action stuff, or if your movement is restricted, a zoom gives you lots of flexibility. But I also think zooms encourage compositional laziness. When shooting a landscape scene I get better & more interesting results if I pick a single focal length and then move around to find a good composition. With a prime I can't be tempted to just diddle around with the zoom ring rather than move around to find a better location. When you put a 24mm lens on your camera and leave it there you must learn how to make the 24mm angle-of-view work or your photos will suck. With a zoom you can say "Ah, screw it," and twist the ring to the settings you're comfortable with. Which IMO isn't good for your picture-taking skills.

-Dave-

From: "David Kieltyka" daverk@msn.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Advantages to prime lenses?
Date: Fri, 31 May 2002

George Gill gillcan@shaw.ca wrote:
> I'm looking at wide angle lenses. When there isn't too much
> price difference, are there any significant advantages to using

> Nikon AF prime lenses vs. their AF zooms?

The main advantages to me are size and weight. A single-focal-length lens is likely to be smaller and lighter than a zoom of comparable speed. If you need a few different lenses to cover the range of one zoom the combined bulk and weight will of course be greater. But in most cases I don't mind adding some overall weight in exchange for a lighter lens on the camera.

And then there's the speed factor. My favorite SLR lens at the moment is an 85mm f/1.4, which I use wide open much of the time. There is no zoom that can do f/1.4 at any focal length so in this case the single-focal-length option is the only one.

Performance-wise the best zoom lenses these days are at least as good as average single-focal-length lenses. Zooms are where all the R&D money goes so I guess this makes sense. I've recently bought two zooms, a 35-70mm and a 75-200mm, and have been pleasantly surprised by both of 'em. Neither is fast enough to replace other lenses but they're handy to have around.

-Dave-

Date: Fri, 31 May 2002
From: blades@starband.net
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Advantages to prime lenses?

Glad to see there are others out there testing lenses rather than just guessing. I've tested about 200 Nikkors over the years and the result for me has been an almost 100% commitment to fixed focal length lenses. The primes, as UrbanVoyeur says, are quite visibly superior in any performance category you wish to name. I don't mean new primes or these or those primes. I mean all primes. The differences in performance are so striking that I now feel guilty when I use a zoom even when the zoom is the best option for the job.

I don't criticize zooms either. I understand the convenience and flexibility they offer. I agree that modern zooms are quite good for what they have to do. Some of them are truly outstanding. I even own and use some. But to say that they are on a par optically with prime lenses is simply an indication of lack of experience. It would be nice if zooms were as good optically but, alas, they aren't and, thanks to the laws of physics, never will be. Good shooting.

Fred
Photo Forums
http://www.photoforums.net

"UrbanVoyeur" nospam@nospam.urbanvoyeur.com wrote
> So what is your point? That I should discard more than decade of experience
> and side testing of this very issue?
>
> That I should ignore hour and hours of carefully set up & studied real world
> tests? I and just about every photographer I have ever worked as an

> assistant for has run these tests with me at one time or another, in real
> shooting conditions, using combinations of rented lenses and our own stuff.
>
> Should I forget hundreds of hours as a B& W printer, both of my work and
> that of other which supports my position?
>
> Or perhaps I should ignore my own recent evaluations of 35 mm transparencies
> shot Canon primes vs canon zooms?
>
> I don't claim any optical bench superiority - I merely speak to what I've
> seen with my own eyes. If you don't believe me, rent a Canon EOS 3 or 1 V,
> and one or more following prime & zoom lens combos:
> 24 f /1.4
> 35 f/1.4
> 50 f1.4
> 85 f/ 1.2
> 135 f/2
> 200 f/2.8
>
> vs
> 17-35 f/2.8
> 28-70 f/2.8
> 70-200 f/2.8
>
> Now, using a tripod, a model, a strobe or two, and Provia 100 F @ISO 100,
> run some rolls. Using a 4x and 15x loupe, compare the transparencies at the
> same F-stop and zoom focal length, and come back here and tell us what
> you've found.
>
> You can do the same with just about any manufacturer (Hass, Mamiya, Pentax).
> The result will be the same:
> The prime lenses will be sharper, with more uniform sharpness, show less
> distortion at the corners (esp wide angle), will have higher contrast, and
> lower chromatic aberration. As a result of the latter two, good primes will
> produce more vivid colors.
>
> Please by all means try it. Prove me wrong.
>
> Does this mean that zooms are no good? Of course not. Many are very good,
> but the question was are primes better, and if so how.
>
> Does this mean that you can't get good shots with a zoom? Of course not. We
> all have. But lenses are tools and we must be aware of their strengths and
> weaknesses.
>
> --
> J
> www.urbanvoyeur.com

From: T.P. t.p@No-mail.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Advantages to prime lnses?
Date: Thu, 30 May 2002

"UrbanVoyeur" nospam@nospam.urbanvoyeur.com wrote:
>True that there are many crappy prime lenses out there.
>
>But if you put OEM prime lenses (Nikon, Canon, Pentax) against their OEM
>zooms (pro or not) the primes will out perform the zooms everytime.
>Moreover, OEM primes will outperform 3rd party zooms as well (Sigma,
>Tokina, etc)

Alas, you are wrong.

When set at the same focal length, many of the best pro zooms are optically *better* than the same manufacturer's fixed focal length lenses. The reason is simple; most manufacturers' fixed focal length lenses were designed a long time ago, and do not take advantage of the most modern techniques in design and manufacture.

Contrast this with pro zooms, which cost vast amounts of money to develop and make full use of the latest technological advances.

This is emphatically *NOT* true of most consumer-grade zooms, which are designed to a price, not a standard, and are exactly as you described above.

From: rcochran@lanset.com (Richard Cochran)
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Advantages to prime lnses?
Date: 30 May 2002

"George Gill" gillcan@shaw.ca wrote
> I'm looking at wide angle lenses. When there isn't too much price
> difference, are there any significant advantages to using Nikon AF prime
> lenses vs. their AF zooms?

Sure. The zooms have more elements, so they're more likely to flare or suffer internal reflections. This is an especially significant issue with wideangles, because a wideangle photo often has the sun in it. Furthermore, a single focal length lens can have a lens hood that's precisely suited to it, while a zoom must have a lens hood that's only suited to the widest setting -- the hood is wider than needed at the long end of the zoom, offering less than optimal protection from flare.

Zooms almost always show barrel distortion at the wide end, often with pincushion or "mustache" distortion at other focal lengths. These are much less of a problem with primes.

Zooms usually have a slower max aperture. They're almost never as sharp wide open, though by f8 or f11 it's hard to see the difference.

Of course, zooms DO give you a more versatile choice of focal

lengths. This can be a very nice advantage, but it does come at
a cost in other areas.

--Rich

From: "jriegle" jriegle@att.net
Newsgroups: rec.photo.equipment.35mm
Subject: Goodbye to Zooms
Date: Mon, 12 Aug 2002

I have a 50mm f/1.7 lens that's always in my bag, but rarely sees much use beyond copy work and available light use. After using it on a second body for some landscape work and looking at the results, I'm considering getting a 35mm and 80mm prime and selling the zoom lens. I always knew the best primes have an advantage over the best zooms in optical quality. Although I have tried some impressive zoom lenses in the 28-70 range, they all seem to have the same limitations of varying degrees. Geometric distortions, less contrast than the better primes, stronger light falloff and less speed. I'm forced to use the zoom at or close to its widest aperture where performance drops off because of it's relative slower speed.

I agree that sharpness is not everything. I love the convenience of the 35mm format. Given its small negative size, I want to maximize the detail I get from the slides and enlargements. The fast primes allow me to use slower films even with the lens stopped down for better sharpness.

If I were pro, I'd have the f/2.8 28-70mm zoom because I need the ability to go from wide angle to mild tele quickly to bring home the shots. I'm not pro and I like to take my time when shooting.

Well, when and if things improve with my employer, I'm going to pursue getting me the primes. OTOH, I may have to sell off my cameras and lenses just to eat.

Good shooting, John

From nikon manual mailing list:
Date: Mon, 28 Oct 2002
From: "Michael E. Berube" photog@pivot.net
Subject: Re:Zooms vs. Primes

How much better your images will be will be up to you and your craft of course, but used Nikon primes are often an incredible value. Most everyone wants the convenience of the do it all zooms so many older primes especially get put up in sacrifice to NAS attack. Primes are usually less costly, more compact, lighter and have far fewer air/glass surfaces that don't have to be reconfigured to attain differing focal lengths so they most always are faster and still better optically than most affordable zooms.

In short they can be very good performers for not much money IF you have time to change lenses when you want a different perspective/angle of view or IF have enough bodies around your neck to put a different lens on each.

My favourite Nikkor prime spread is: 24/2.8, 50/1.8, 85/1.8 (or even better 85/1.4) and 180/2.8. I often couple the wider two of these lenses with a vivitar X2 macro zoom and feel 'covered' for a whole day of fun shooting. (24, 50 and 100 with 1:1 macro.) I also find it a challenge to take something like only a 24 and a 180 to the street and field and see how that makes me look at things differently. If I can only take ONE lens, I take the 50 because it is small, light, fast and easily replaceable at $129 brand new. I no longer have an 85, but will pick an AF 1.4 someday soon because even the Leica shooters find it as nice a portrait lens as the famed 75 Summilux and a 127.5mm/1.4 lens on my D100 sounds cool! My cheap home AI'd 85/1.8 of yor was really nice, but not AF so it was limited on my F100 and offers no metering at all on a D100, so it had to go. (As will my home AId 180/2.8 Nikkor-H when I've got an AF70-200/2.8 in the stable.)

You are right, it is highly doubtful that you will see any difference in a 4X6 minilab RA4 print between any of your zooms and even Zeiss or Leica glass, much less Nikkor glass, but if you want to print big, you will probably notice a difference that makes having the flexibility of primes available that much more reasonable.

Carpe Luminem,
Michael E. Berube
...

---

from minolta mailing list:
Date: Sun, 3 Nov 2002
From: xkaes@aol.com
Subject: F-stops and T-stops

petersven@yahoo.com writes:

A word of mild caution on the Sigma 24mm - I had one of a probably somewhat later model in a Nikon mount, and was very pleased with it, till I discovered that it was actually about 2/3 of stop slower than its rated maximum aperture.

Anyone ever compare their Minolta lenses actual transmission. You might be surprised especially with the zoom lenses. My 80-200mm f4.5 Rokkor is a super-sharp zoom, but it loses 2/3 of an f-stop compared to a 100mm lens. (that is if I set the 100mm at say f8 and the zoom at f8 I need to reset the zoom almost to f5.6 to get the same shutter speed reading). If I don't compensate, I'll end up with underexposed pictures. If I use the built in meter, it compensates automatically, but otherwise, I have a problem. I have a similar problem using flash in manual mode.
This is not just a problem with Minolta lenses, but want to know other people's experiences.

---

from minolta mailing list:
Date: Mon, 04 Nov 2002
From: Samuel Tang samueltang@eisa.net.au
Subject: Re: F-stops and T-stops

Hi Joe,

...(quotes above post)

In the movie industry where accurate exposure is imperative, lenses are engraved with f/stop and T-stop scales; the first for depth-of-field calculation, and the second for exposure setting. With its background in movie equipment, when Bell & Howell produced its Foton 35mm still camera, its Taylor-Hobson (another name famous in the movie equipment industry) lenses were all marked in T-stop. While it is convenient to calculate exact exposure, it never became popular in stills cameras. There are several factors:

1, As mentioned before, even if we discount bokeh characteristics, two lenses with different transmission levels but of similar specifications will deliver different amounts of depth-of-field when set to the same T-stop, making the usual calculation involving a standard circle of confusion diameter impossible.

2. The popularisation of TTL metering takes care of the transmission variation, which happened later on.

3. The exposure lattitude of modern films, and the greater tolerance in exposure variations in stills work.

4. The industry lattitude standard: the Japanese standard is that the actual on-film exposure can be a whole stop on each side.

But when it comes down to brass tacks, inacuracies in actual exposure the machine delivers to the film is something we don't think about too much. Consider the inherent characteristics of a leaf shutter, we do not really think too much about the effective shutter speed slowing down when we set the iris to a smaller aperture setting, and yet few, if any large format photographers and users of Rollei, Hasselblad, Bronica, etc. bother to do any compensation and still get away with it.

Best,

Sam.

---

from minolta mailing list:
Date: Sun, 3 Nov 2002
From: xkaes@aol.com
Subject: Re: F-stops and T-stops

samueltang@eisa.net.au writes:

2. The popularisation of TTL metering takes care of the transmission variation, which happened later on.

3. The exposure lattitude of modern films, and the greater tolerance in exposure variations in stills work.

My problem is that I use a hand-held meter a lot. And when I use flash, it

is typically in manual mode. And while film has some latitude in it, the detail that will be missed with a 2/3 f-stop transmission error are the shadows -- which I think are very important in pictures. And lots of time it's not just 2/3 f-stop. If I make an additional exposure error in the same direction, the cumulative effects can be disasterous. I've told myself to make a t-stop sheet for all of my lenses but have not gottten around to it yet.

---

from minolta mailing list:
Date: Wed, 06 Nov 2002
From: Samuel Tang samueltang@eisa.net.au
Subject: Re: F-stops and T-stops

Hi Peter,

petersven wrote:

> So what causes differences in light transmission? Does a greater number of
> lenses and poorer coating cause light loss?
>
> I suspect that the difference between the Sigma and Nikon lenses I used was simply due to Sigma skimping - if I remember correctly, its front lens was a little smaller than the Nikon's.

As Joe pointed out, the number of elements, especially the number of groups, has an effect on the amount of light loss, but there is also the effect of the glass absorbing some of the light as well.

The size of the front element has no direct effect on the actual transmission. For instance, if you compare a first generation inverted-telephoto wide angle lens to that of a second generation design of the same specification, you will see the former has a much larger fromt element.

Earlier designs tend to use a single inverter placed at some distance before the actual "working part" of the lens, which requires it to be much larger, while later designs compound inverters split into multiple groups which make the front element much smaller without compromising the specifications.

Best,

Sam.

From manual minolta mailing list:
Date: Wed, 06 Nov 2002
From: "eamon_jeffers" eamon_jeffers@hotmail.com
Subject: Re: F-stops and T-stops

By chance, I happen to be reading Ansel Adams' "The Camera" on the train to and from work, and in Chapter 5 on Lenses he makes a short aside:

"A scale of t-stops has sometimes been substituted for f-stops to indicate light transmission. These values are seldom seen today [~1980], except in some lenses for cinematography, primarily because the efficiency of lenses has been greatly increased by lens coating techniques. The t-stop values, while fine for determining exposure, also distort other mathematical values that relate directly to the true t-stop, such as depth of field and hyperfocal distance".

Having said that, there's a lot to be said for making your own measurements (as you've done). For years I put off the mundane task of testing my own film speed but, when I finally got round to doing it, I learned lots.

I imagine that, if you're using a TTL meter (I mainly use an X700), the difference between t-stop and f-stop becomes academic.

Regards,

Éamon

From minolta mailing list:
Date: Wed, 6 Nov 2002 21:56:23 EST
From: xkaes@aol.com
Subject: Re: Re: F-stops and T-stops

I would guess that Adams was talking mostly about large-format lenses. Here there would be little difference between F and T, as most LF lenses have 4-6 elements. But with 35mm zoom lenses of 14-18 elements????????????

From minolta mailing list:
Date: Wed, 6 Nov 2002
From: JFranz2777@aol.com
Subject: Re: Re: F-stops and T-stops

At the film studios where I slave daily, the common folk, (lighting, grips, and camera support) all talk f-stops and meter f-stops - the DP (Director of Photography), if he wants to upset and confuse everyone, pontificates about t-stops -- this pisses everyone else off and a nasty exchange usually follows... a very good DP (one of the founders of A.S.C. as a matter of fact and author of several books) told me years ago, that with good gear and a meter designed to complement it (I.E. - built in) the difference is negligible, more of a discussion item rather than a crisis, the film is also very forgiving (now) -- however, SOME DP's (or as we call them, "displeased persons") still make a big deal about it - MOST do not and we can work with them, - as a sidebar, you'll note that some of the "big" names don't work too much anymore since no one else wants to work with them because they are such a pain.....

That's my 2 cents -

Jim (JFranz2777@aol.com)

From nikon MF mailing list:
Date: Thu, 21 Nov 2002
From: "Roland Vink" roland.vink@aut.ac.nz
Subject: Re: Zooms vs Prime

> I have observed that several of the nature/landscape
> pros seem to use zooms (especially the AF-S zooms
> Mitch mentioned) almost exclusively for 200mm and below.

Landscape and nature (closeup/macro) work typically requires medium - small apertures between f5.6 - f22, to give enough depth of field. Most primes and decent zooms are sharpest in the f5.6-f11 range and at smaller apertures sharpness is limited by diffraction so there is little difference between lenses of any type.

Zooms usually have higher distortion than primes but there are very few straight lines in nature (unless the sea is on the horizon) so again, zooms are not at a disadvantage.

---

from nikon mf mailing list:
Date: Wed, 20 Nov 2002
From: Jim MacKenzie photojim@yahoo.com
Subject: Re: Re: Zooms vs Prime

--- Bob Fowler crazybob2525@yahoo.com wrote:
> I have to agree with Jim. I have 10 primes and 6
> zooms, it just seems that the primes spend more time
> on the cameras than the zooms. Old habits die
> hard...

I use them both about equally. But I use primes with manual-focus bodies more than I do with autofocus cameras. Manual focus seems to invite the thoughtfulness and slower pace that fixed lenses require.

Jim

---

from nikon MF mailing list:
Date: Wed, 20 Nov 2002
From: Jim MacKenzie photojim@yahoo.com
Subject: Re: Re: Zooms vs Prime

--- Mitch Winkle mitchwinkle@yahoo.com wrote:
> Well, because not everyone can afford a stable of a
> dozen lenses.   I
> think the original question had something to do with
> having to make a
> decision one way or the other, so this may be a bit

> out of context.

Perhaps that's true - but prime lenses are cheap. Any
photographer could easily afford to own one or two of
them. A new 50/1.8D is $90 US. A used 35/2 is $150.
I paid $35 for my 135/2.8. I've spent more on single
filters for fast zoom lenses than a whole prime lens
would cost.

Jim

=====
Photography on the North American prairies & plains:
http://groups.yahoo.com/group/PrairiePhoto/

From Minolta Mailing List:
Date: Mon, 03 Feb 2003
From: Ze'ev Kantor zeevk@netvision.net.il
Subject: Re: Lies, Damn Lies and Marketing Lies- 5400HS v. 5600HS

I would like to rise another point, you will decide whether it called lie or ... Many manufacturers get use of the very wide "allowable" tolerances to specify nominal rating while the actual are within the lower allowable boundaries. You will be amazed, but I went through several reviews of zoom lenses (fro a pile of old journals I have), looking for the actual (measured) focal length and in this search (34 lenses) not even one zoom lens had an actual focal length higher than maximum or shorter than minimum - most of the 80-200 where 90-190 !!!. One NIKON 75-300, was actually measured 283mm at the long - still within the tolerance.

Given the high reproducibility achieved with modern computer-aided manufacturing technology, the actual deviations in production are much smaller than "industry standards" which allows manufacturers to design to a smaller than stated nominal values and still falling within the allowable wide tolerances.

Ze'ev Kantor
http://www.angelfire.com/art2/kantor_z

> ----- Original Message -----
> From: Kent Gittings
> To: Minolta@yahoogroups.com
> Sent: Monday, February 03, 2003
> Subject: RE: [Minolta] Lies, Damn Lies and Marketing Lies- 5400HS v. 5600HS
>
> What most makers do is not lie but publish the GN for a particular point in the flash that may not be the standard GN point. Now it seems most are listing the guide number at the max zoom setting as the model identifier instead of a more standard value at 28-50mm or so.
> Kent Gittings

From minolta mailing list:

Date: Fri, 7 Feb 2003
From: xkaes@aol.com
Subject: Re: Vivitar 400mm/f5.6

kenny_xray@yahoo.com writes:

> *this is interesting, because I don't quite understand it! Does it mean that some lens' max aperture is not what it says it is? Presumably this does not affect TTL. Is it just at max aperture (i.e. a marketing lie!) or does it run through the range?*

No, it has nothing to do with the maximum aperture of the lens. It happens at any aperture. Try this experiment. Let's say you have a 50mm f1.7 lens and a 80-200mm f4.5. Put the 50mm lens on the camera and focus on a white wall. Set the f-stop at f8 and see what the recommended shutter speed is. Now replace the 50mm lens with the zoom lens. Do the same thing with the zoom lens, and you'll see that the camera recommends a SLOWER shutter speed -- at the SAME f-stop. (This is easiest to see with a camera having a needle readout, but it works OK with an LED readout too.) Why the change in shutter speed? Because the zoom lens has more glass elements than the 50mm lens, and all that glass in the zoom lens causes less light to reach the film and the meter. So the meter compensates by recommending a slower speed. It's not a problem with a TTL meter, since it automatically compensates, but if you use a hand-held meter, the f-16 rule, or a flash (in manual OR automatic mode) your film will be under-exposed. With many lenses, the drop in exposure will not be too severe, especially when you take into consideration the exposure latitude of film. But if you are using slide film, shooting a higher contrast scene, or if you or you meter happens to under-expose the subject for other reasons, your results will be affected. It's best to test all of your lenses and note how much to compensate when they are used.

From: "Jim MacKenzie" jim@dusykbarlow.sk.ca
Newsgroups: rec.photo.equipment.35mm
Subject: Re: Which Nikon lenses are parfocal?
Date: Tue, 28 Jan 2003

"Michael" puffmoike@yahoo.com.au wrote

> As a rule what types of lenses are likely to be parfocal (expensive,
> small zoom range, recent designs, etc)?

I can't tell you specifically what lenses are parfocal. I don't know if anyone has composed such a list.

As a rule, lenses that seem surprisingly small, lightweight or inexpensive for what they are will be disporoportionately parfocal. The parfocal (or varifocal) design permits smaller lenses for less money with good optical quality. Having constant focus at all focal lengths involves design compromise.

As another rule, autofocus lenses will be more likely to be parfocal than manual focus lenses, because autofocus cameras don't care and refocusing is easy and fast.

Of my lenses:

20-35/2.8D - not parfocal
35-80/4-5.6D - slightly parfocal (there is some focus change but it is slight)
28-105/2.8D (Tamron) - I'll have to test it, but I think parfocal
75-300/4.5-5.6 - definitely parfocal
80-200/2.8 ED - not parfocal

Jim

From: "Tang Wong" tangwong@adelphia.net
Newsgroups: rec.photo.equipment.35mm
Subject: Womderful fixed focal length lenses
Date: Sat, 23 Nov 2002

I have a set of 4 zooms that covers the range from 20mm to 400mm and they are not cheap consumer grade. I recently bought several older (about 20 years old) fixed focal length lenses - 28mm, 50mm and 135mm - from eBay for just over $150! I am amazed by the quality of these older lenses. The zooms came very close but never better. These fixed focal length lenses have better build quality and handling is just wonderful. I really don't miss the auto focus feature as I only it occasionally. Even though I am still carrying zooms but found myself using them less often. I really don't understand why anyone would want to give up these wonderful lenses.

From: "UrbanVoyeur" nospam@nospam.urbanvoyeur.com
Newsgroups: rec.photo.equipment.35mm
Subject: Re: "Primes"?
Date: Wed, 27 Nov 2002

"prime" to mean non-zoom lenses is not an optical definition but a colloquialism popularized but the motion picture industry.

Cinematographers have long referred to fixed focal length lens as "prime" lenses.
--
J
www.urbanvoyeur.com

"Q.G. de Bakker" qnu@worldonline.nl wrote
> Amazing how in replies to a posting about fixed focal lenght lenses the term
> "primes" pops up again. So it must be time again (after a long period during
> which all went well) to point out that the term "prime", when applied to a
> lens, only makes sense when describing some sort of secondary optical
> attachment (like a close up lens, or a fish-eye converter) that is mounted
> on a "primary", or camera lens.
> Usage of the term "prime" as meaning a "non-zoom" lens (a.k.a. a fixed focus
> lens) is as correct as thinking the moon is made of Stilton cheese. As

> correct as thinking a zoom lens (a "non-prime") is a secondary lens.

From: "Ahriman" ahriman@nospam.com
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Independent Pro Lenses
Date: Wed, 27 Nov 2002

"T. P." t.p.@noemailthanks.com wrote
> "Kevin Woodcock" kevin.woodcock@bigfoot.com wrote:
> >
> >I would agree it's the ideal situation but even then they can still be more
> >expensive than the independent new. What about independent second-hand for
> >a real bargain??
> It's only a bargain if you are the person buying used.
>
> The residual values of used Stigma lenses are extremely low. That
> says more about the optical and build "quality" of these lenses than
> any salesman or magazine advert can tell you.

Not really - some real junk from the stables of Nikon or Canon has better residuals than a quality Sigma EX lens - a lot of it is about brand prestige. There are some superb third party lenses available for an absolute burgle on the used market.

>
> Basically, they are junk products that are dressed up to appear better
> than they really are. Hugely expensive advertising and a policy of
> offering carefully selected hand-made examples of lenses for magazines
> to "review" play a huge part in the success of manufacturers of junk.

Agreed - at the consumer level of the market. The magazines appear to have some serious blind spots when reviewing lenses (you know it's bad when they award 28-300mm lenses with 'best buy' badges...) but at the 'Pro' end of the market, Sigma and Tokina's lenses are optically very, very good. Apertures wide open the own brand pro lenses have the edge, but stopped down to f5.6 you'd be hard pressed to tell them apart. I've regularly used a Sigma 28-70mm f2.8, and I have used a Canon L 28-70mm f2.8, so I have seen the results first hand, and image quality is not in question unless you're doing a lot of low light work. Build quality is not as good as own brand lenses (though Tokina's are not far behind, even if their irritating focus clutch mechanism does seem like a real oversight on part of the designers), with the Sigma EX range feeling a fair bit more fragile than the tank-like Nikon AF-S zooms and the Canon L zooms.

>
> If you buy a top quality Nikon, Canon or Minolta "pro" zoom lens you
> can be sure that it will have a very healthy residual value when you
> come to sell it. That tells you *everything* about their products'
> high optical and build quality, and should give you a strong
> indication as to which choice is the best overall value.

If resale value is more important, then that is certainly true, but it is not the whole story.

> If you cannot afford a camera brand pro lens, even from the used
> market, you might instead consider buying a couple of camera brand
> fixed focal length lenses, which are likely to offer better quality
> than almost any zoom lens.

True, but if a job requires flexibility, such as weddings and lifestyle portraits, a zoom is the only way to go. A pro photographers kit is not often dictated by what the finest gear on the market is, but what the best gear for the job is.

Ahriman

From: "Simon Stanmore" s.stanmore@freeuk.com
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Independent Pro Lenses
Date: Wed, 27 Nov 2002

With the independents it's a case of really knowing what to choose from their line-up. Tamrons 90mm macro's are great. Sigma's old 300mm f/4 was just as good optically as the marques own (double-the-price) offerings. Sigma's 70-200 f/2.8 is also highly regarded (I've never used one of these though). For a 28-70mm f/2.8 a SH Tokina ATX-Pro (now discontinued) is a seriously good lens which is very well built. No USM and a slightly awkward lens-cap/hood arrangement compared to the Canon but running it very close optically. The new version - a 28-80 f/2.8 is supposed to be very good as well (again one I can't speak from personal experience on this one).
If you really want the Canon (28-70 L) then snap one up quickly from http://www.cameraworld.co.uk/ - £799 new right now - a real bargain. They're a reliable supplier - I've bought from them several times and had no problems at all

Simon

From: "stevie" Sunbeams_are_yellow@yahoo.com
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Independent Pro Lenses
Date: Wed, 27 Nov 2002

You clearly have no realistic ideas about Sigma lenses TP, the EX range has some very good glass, the 15-30 EX for example has far less distortion @ 15mm than my (very expensive) Minolta Prime 28mm !!!. Some of the Nikon stuff I have seen come out of China looks like it came in a 'lucky bag'. I for one wouldn't contemplate such branded rubbish. The Sigma 50-500 is a real stunner, solidly built -excellent optics. The only lens I didn't rate was the 28-70 EX MK1 - too much barrelling. The Sigma 105mm macro is well regarded as one of the best performers in its class, grow up , get away from your PC, try some real photography for a change & then comment on something you have really used & experienced.

From: "Ahriman" ahriman@nospam.com
Newsgroups: rec.photo.equipment.35mm,uk.rec.photo.misc
Subject: Re: Independent Pro Lenses
Date: Wed, 27 Nov 2002

"Kevin Woodcock" kevin.woodcock@bigfoot.com wrote
> Do you think it's worth buying a "Pro" f2.8 zoom lens 24/28 - 70mm and70 -
> 200mm from either of Sigma and Tokina or should I keep saving up for aCanon
> L series?
> The price is swaying me towards an independent, what's your thoughts?

They are very, very good. I've used a the Sigma EX lenses quite a bit; namely the 17-35mm, 28-70mm f2.8 and, very occasionally, the 70-200mm f2.8, and all of them delivery very sharp, quite contrasty images compared to even a mid-range own brand zoom. The brand names tend to deliver better sharpness when wide open (the Nikkor AF-S17-35mm f2.8 is sparkling throughout its range, and the Canon L 28-70mm f2.8 is the same) than the Sigmas, but they are certainly very respectable, and still sharper at f2.8 than a manufacturer's own lens costing the same price. I've a couple of friends who get excellent results from their Tokina AT-X 28-80mm and 20-35mm f2.8 lenses as well. I would say that the off-brand pro lenses are a good alternative from a performance point of view, and certainly Tokina's build quality on their AT-X Pro range is almost on a par with Nikon and Canon's finest. If you can afford an L zoom, get one. If you can't, don't be ashamed to go for the Sigma EX or Tokina AT-X Pro lenses, but do your homework first and read some user reviews - as with any range, there are duff designs (the new Sigma 24-70mm f2.8 EX is reputedly less sharp and punchy than the 28-70mm f2.8, for example).

Hope this helps

Ahriman

Postscript:
> are certainly very respectable, and still sharper at f2.8 than a
> manufacturer's own lens costing the same price.

This should of course read 'still sharper at their widest aperture than a manufacturer's own lens costing the same price.' Sorry!

Ahriman

End of Page

Broken Links:

Primes vs. Zooms Page by Chris Bitmead, which was at (before 2/2003):

http://www.ans.com.au/~chrisb/photo/technical/zoom-prime.html

Prime vs. Zooms by Nelson Tan, which was at (before 2/2003):

http://scicblc.nus.sg/~photosoc/myviews.html