PHOTOGRAPHY 101
HOW TO TAKE BETTER PHOTOS BY ERIC KIM
Dear Mark/Paulina,

I wanted to write you this book on how to take better photos. I know you started off with your iPhone, and started to show keen interest on making better images. I taught you the “rule of thirds” and other basics; but now it is time for you to take your photography to the next level.

So consider this a handbook or a manual of sorts; for you only. I am also writing this book in hope that other people (similar to you, still relatively new in photography and wanting to learn more) will find it helpful as well.

To start off, one of the first things on your mind is probably “what camera should I buy?”

Let me be honest with you— I regret spending so much time, effort, (and especially money) on all the gear and cameras and lenses I accumulated over the years. They call it “Gear Acquisition Syndrome” (G.A.S. is a fun acronym) in which we become dissatisfied with our photography, and hope that by upgrading our camera (or getting the newest and shiny camera) will help “inspire us.”

First of all, let me share my personal story with you:

I started off similar to you; I was 18 years old, had a keen interest in photography, and for my high school graduation present, got a Canon point-and-shoot camera for my college present from my mom. The first week was a love affair. I brought “her” with me everywhere I went; and I think on the first month I had the camera I averaged at least 1000 photos (mind you, my SD card was probably 512MB max). I loved how photography gave me the way to document my life experiences and helped me create “art” (as I’ve never been good at painting or drawing). Oh yeah, and I also have a terrible memory.

Anyways, although I was quite happy with the images I was making, I felt technically limited by the camera. I discovered things like “exposure compensation” (adjusting the brightness/darkness of the camera), the “macro” mode (being able to focus really close, like taking photos of flowers and insects), and also how to add the “rule of thirds” overlay to my LCD screen (to help me better compose).

I wanted to have more manual controls. I wanted to do things like control my shutter speed, and also aperture (which is how much light the lens allows in, which also controls “depth-of-field”— which is how blurry the background is when you shoot (also called “bokeh”).

At the time, Flickr was still relatively new, Instagram wasn’t around, Facebook was still in its infancy. The only way to share photos was either Flickr, photography forums (I was part of the “Black and White Vision” forum on FredMiranda.com), and creating your own “Photography Blog.” So the interesting thing was at the time, my photos had very limited reach. I would say I was a lot happier in this phase, when I just had my simple point-and-shoot camera, had it constantly with me in my front pocket, and just documented my everyday life.

Then of course, I discovered the “gear forums” where I wanted to learn what was the “best” bang-for-the-buck camera (that had a detachable lens), and could allow me to create the out-of-focus blurry background photos you saw everywhere on the internet (later discovered this to be called “bokeh”). Furthermore, I wanted a bigger camera (it looked more “professional”), and I also wanted to learn manual controls, so I felt that I was controlling my camera, rather than
my camera controlling me. I also wanted to have better “image” quality with my photos—I wanted images that were sharp and popped with high-resolution, color, and clarity.

I did some research and discovered this thing called a “DSLR” (Digital Single Lens Reflex—don’t worry too much about the technical concepts, but the basic idea is that the camera has a mirror, and also sees what your eye sees). The “DSLR” cameras also allowed you to put on different lenses.

MEGAPIXELS ARE OVERRATED; FOCUS ON IMAGE SENSORS

The common misconception with digital cameras is the more megapixels, the better the image quality. That is the biggest myth.

Without getting too technical, the megapixels a camera has dictates how big you can print the photo—yet it doesn’t necessarily mean it will have good image quality (a bit hard to explain, but just trust me on this one). You can make fabulous large prints (12x18”) with just a 8-megapixel camera. So for now, know that it doesn’t matter how many megapixels a camera has, but the quality of the image sensor.

What is an “image sensor”?

Well—it is like the eye of the camera, which takes in all of the light and information of your scene, and renders it into a bunch of 1’s and 0’s (binary data), and spits it out into what is a digital image. So basically an image sensor is the eye, brain, and computer behind your camera.

Generally the bigger the image sensor the better—because bigger image sensors have more detail, information, and quality. But not always. There are different types of image sensors (I’m listing them from small size going up to a bigger size).

- Cameraphone sensors: (really small); like in the iPhone
- Compact sensors: (usually found in most consumer point-and-shoots)
- Micro 4/3rds sensors: (a compromise between a DSLR-sensor and a compact sensor; most cameras with micro 4/3rds sensors have extremely fast autofocus, but don’t allow for as much “bokeh” (out-of-focus blurry photos) in your photography. Also the 4/3rds means that the aspect ratio of the images is 4x3 (length versus height). I have found that Micro 4/3rd camera sensors look as good as DSLR sensors (APS-C and Full-frame) on a computer screen. You only tell a difference when you zoom in 100% (but if you’re not going to print your photos super-big, you don’t really ‘need’ a APS-C or Full-frame “DSLR” sensor).
- APS-C sensors: (also known as “crop” sensors; most of these sensors are in lower-end DSLR cameras, and magnify your focal length (lens) by a factor of 1.5x or 1.6. This is a bit difficult to explain, so just ignore it for now. But the point to know is that for most photographers, a micro 4/3rd sensor and an APS-C sensor is most you will ever need).
- Full-frame sensor: (this is what everybody wants, and is available in “professional” cameras like the Canon 5D, 6D, 1D as well as the Nikon d600, D700, and D800 series. Also found in the Sony a7-series cameras). Now before you go off and buy a “full-frame sensor”—honestly know that I think full-frame is a bit overrated (will explain later).
I think for 99% of photographers (you and me included); you will never “need” a full-frame sensor. The only people who “need” a full-frame sensor are wedding and commercial photographers who want super-high low-light performance (without “noise”— those little speckles that show up in your photos if you shoot at night without a flash). Also having a full-frame sensor allows you to get more “bokeh” or out-of-focus in your photos (which brides and people getting headshots love).

BOKEH IS OVERRATED

A lesson I really want to drill into you: bokeh is overrated. Let me repeat that— having photos with a “shallow depth-of-field” (your subject is in-focus but the background) is overrated. If I could give myself one piece of advice when I started off was this: you don’t need a f/1.4, f/1.8 (or even a f/2) lens. This will save you so much time, frustration, and money.

Why is bokeh overrated? Don’t get me wrong; when I started photography, my first DSLR was a Rebel XT (EOS 350D) and I got a 50mm f/1.8 lens, and shot everything at f/1.8. What is this “f/1.8” I talk about? Pretty much the concept is that the smaller the “f-stop” number (also referred as “aperture”) the shallower your depth-of-field. Therefore if the aperture or f-stop of your lens is at f/1.8, your subject will be sharp and the background very blurry. If your aperture or f-stop is f/8, your subject will be sharp and the background will be sharp.

Why are we all obsessed with “bokeh”? Well; smartphones cannot create “bokeh” because the sensor is so small. Generally the smaller the sensor size, the less depth-of-field your camera can capture (this is also lens-dependent).

SMALL IS BEAUTIFUL

Another tip: the smaller your camera and lens, the more likely you are to bring it with you everywhere you go, and the more likely you are to make photos which will bring you happiness and joy.

So please please please— don’t go off wanting to buy a huge DSLR with these huge lenses. I did it, all my friends did it, and what happens is that you soon fall into a “treadmill”— and you just keep buying more cameras, lenses, and your camera bag just accumulates more and more shit— and then your camera bag is so heavy that you don’t even take it with you wherever you go. You end up letting all of your gear accumulate dust on the shelf, and you just end up taking photos on your iPhone (like you did when you started off).

Rather— pick a camera that is small and compact enough for you to always carry with you everywhere you go.

I also know that you are on a budget, and I don’t want to recommend any cameras that will break the bank. So here are my personal recommendations:

1. Ricoh GR II (~$550): The best bang-for-the-buck camera that has an APS-C (DSLR sensor). The camera is a compact camera, is black, and unassuming. But it has all the manual controls you want. The “disadvantage” is that you can’t change lenses— but it offers different “crop modes” which allow you to use a 28mm, 35mm, and even 45mm lens. Honestly this is my favorite camera that is easy to bring with me everywhere I go— it has a pop-up flash, superb im-
age quality, and the lens is sharp as hell. The new version also has Wi-Fi, which means you can transfer your photos from your camera to your phone, where you can post-process the photos (make black-and-white, add contrast, adjust brightness, etc), and then share to Instagram or Facebook). Read my review.

2. Olympus OM-D EM10 (~$495) + Lumix 40mm Lens (~$298): the best bang-for-the-buck micro 4/3rds setup. The benefit of this setup is that the camera is super small (not quite pocketable, but still much smaller than any "professional" camera), the autofocus is the fastest on the market out there, and the image-quality is quite top-notch. Also, it allows you to change lenses, in-case you want to upgrade your lenses in the future. There are different variations of the Olympus out there— but this is the best bang-for-the-buck. If you wanted a more “professional” version of this camera, you can get the Olympus OM-D EM5 Version II (which is around $800— $300 more expensive, and has slightly better build quality, a few more functions, but the same image quality). If money is no option, I’d also recommend the Olympus 17mm f/1.8 lens (~$450, I hear the autofocus is faster).

3. Fujifilm x100T ($1,299): This camera isn’t cheap (about the price of a new laptop)— but probably the best “value” camera out there in terms of the functions, body styling, and image quality. It looks like an old-school “rangefinder” camera and has that cool “retro” styling. I know you probably don’t have $1,300 lying around (so I’d pass on this camera)— but if you did have the money, I would recommend this camera.

LENS RECOMMENDATIONS

Another issue you might have; the overwhelming choice of lenses out there.

If I had one piece of advice regarding lenses and photography it would be this: don’t buy zoom or telephoto lenses.

One of the first lenses I bought was a Sigma 18-200mm lens for my Canon Rebel XT. In theory it sounded like a good idea; I would have all the focal lengths necessary for one lens, and never have to switch lenses. If I wanted to shoot a wide-angle shot, I could shoot wide. If I wanted to zoom, I could zoom close-in.

So first of all, what is a “zoom” lens? A zoom lens is a lens which you can zoom in and out. Why is this bad? It makes you a lazy photographer, the lenses are generally more expensive, less sharp, bigger, heavier, and prevent you from being as creative (I will explain later the benefit of a “prime” lens, or a non-zoom lens).

What is a “telephoto” lens? Generally a lens which has a longer focal length than 50mm. So any lens that is a 85mm, 100mm, 135mm, 200mm, 300mm (and so forth) is a telephoto lens. They usually call a 50mm a “standard” (default) focal length— because most people say that 50mm is roughly what the human eye sees. Based on my experience, the human eye’s perspective is actually a bit wider— around a 40mm lens (so generally I recommend most photographers get a 35mm lens, which gives you a bit more wiggle-room than a 50mm lens, which is often a bit too tight).

Now before you go out there and buy a Canon or Nikon 50mm lens— let me stop you. If you have a “crop-sensor” camera (entry-level DSLR) your image sensor multiplies the focal length of your lens by a factor of 1.6x or 1.5x. Therefore a 50mm lens on your “non-full-frame” DSLR is actually 50mmx1.6=80mm focal length. If your
crop sensor is 1.5 (most Nikon is 1.5x crop, while Canon is 1.6x crop) then it is 50mmx1.5=75mm). Therefore when people talk about “full-frame-equivalent” lenses, they are referring to what the focal length of a camera after you’ve multiplied the crop sensor.

Let me further explain:

If you have a “non-full-frame” sensor (crop sensor, aka 1.5x or 1.6 crop) this would happen to the following focal lengths. For simplicity sake I will just use the 1.6x factor (because I started off with a Canon crop-sensor DSLR):

- 18mmx1.6=28.8mm (full-frame equivalent)
- 24mmx1.6=38.4mm (full-frame equivalent)
- 35mmx1.6=56mm (full-frame equivalent)
- 50mmx1.6=80mm (full-frame equivalent)

If I tell you that it is preferable for you to use a “35mm full-frame equivalent” focal length, then it means that on your Nikon D60, you want to use a 24mm lens (which is actually around 38mm, which is the closest you can get to a 35mm).

However let’s say you upgraded and bought a Nikon D800 camera (full-frame), then you would just go out and buy a 35mm Nikon lens.

“IDEAL” LENSES

Okay let me bring up another topic we discussed; different lenses for different purposes.

So first of all, I’ve only used a 35mm (full-frame equivalent) on my camera for the last 10 years or so. On my Canon Rebel XT (EOS 350D, crop-sensor) I used a 24mm lens (which is roughly a 35mm full-frame equivalent) and once I upgraded to a Canon 5D, I got a 35mm f/2 Canon lens. When I got a digital Leica M9, I got a 35mm f/1.4 lens (later traded with a friend for a 35mm f/2 lens, because it is a lot lighter and more compact). I then later sold my Leica M9 and bought a film Leica MP (and kept the lens).

Moving on, I was gifted a Fujifilm x100s + x100T from Fujifilm, which are both 35mm “full-frame equivalent” lenses (the lens is actually a 23mm, but the Fuji crop-sensor is 1.5x, therefore 23mmx1.5=34.5mm). Furthermore I had a Fujifilm X T1 (also a crop-sensor, and on that I used a 27mm lens, which is actually a ~40mm lens “full-frame equivalent.” Why did I use a 27mm f/2.8 and not the 23mm f/1.4 lens (which I also had)? The 27mm was more compact, lighter, which is generally preferable.

Anyways, whenever you are shooting with a lens wider than 50mm (so a 24mm, 28mm, 35mm “full-frame equivalent” lens) you get “distortion” — meaning the edges become skewed and it no longer looks like what your human eye sees. Therefore if you shoot with a 35mm (full frame equivalent) lens and get really close to a subject’s face; their face will look like something a bit when you look at a funhouse clown mirror. It isn't flattering. Generally if you want more flattering portraits, you want to use a telephoto lens (50mm-200mm lens). Generally most portrait photographers recommend a 85mm lens (because the longer the lens, the more flattering to someone’s face). Not only that but the longer the lens, the more “bokeh” (blurry background) you can get in a photograph— which subjects generally like when they are getting a headshot.

Personally I hate any lens that is “longer” (more telephoto) than 35mm lens. Why? They just look boring.
I think one of the most interesting things about photography is that you can show “unreality” — or distort reality to make it more interesting. The human eye doesn’t see the world in 35mm (or 28mm or wider)— therefore when you shoot with a wider focal length, the photos just end up looking more interesting.

For me, I have been shooting a lot of portraits on the Ricoh GR (which is a 18mm lens, with a 1.6x crop, so 18mmx1.6= 29mm “full-frame equivalent” (which is roughly 28mm). I shoot all of these photos on “macro” mode (a function on your camera which allows you to focus on things which are really close to your lens). I don’t crop the photos, and the portraits look “distorted.” They don’t look how people are in real life. But I prefer them because they look more dynamic, edgy, and interesting. They aren’t the most flattering photos, but for my photography, I am not trying to make pretty Facebook profile glamor shots of people. I want to show some extra dimension of their character, personality, and face. And shooting wide allows me to do that.

Please please please don’t be like me and fall in this rabbit hole of wanting more lenses. I often preach this but I think the real secret to success and happiness (and less anxiety, and less debt) is to stick with one camera, one lens.

I currently have a Ricoh GR digital camera, and a film Leica MP camera and 35mm f/2 lens. I purchased the film Leica because I thought that all “serious” street photographers shot with one— as a lot of the master photographers (like Henri Cartier-Bresson) shot with one. I soon found out that while the Leica (a “rangefinder” camera— which I will describe more in-detail in a bit) is a fantastic tool; but honestly a bit overrated and has this strange mystique behind it (because some of the most famous photos in history were created with it, and the Leica was the first 35mm camera invented).

To detract for a second; what is a “rangefinder” camera? Simply put, a rangefinder camera is a metal box with an “optical viewfinder” (just a transparent piece of glass you look through) and a single “focusing patch” (the little tiny window that is on the left of the lens, if you are looking at the camera with the lens facing you).

People like rangefinder cameras for several reasons:

1. First of all, it looks “retro” and vintage. So they want to look like cool hipster douchebags (like myself).

2. Secondly, they like rangefinders because it is minimalist (kind of how people like fixed-gear bikes). Fewer controls is less distraction, and simplicity (kind of like how Apple embraces the “minimalist” philosophy). The only things you can really change is the aperture, shutter speed, and the ISO.

3. Thirdly, when you take a photo with a rangefinder, your vision is never obstructed while shooting. For example, if you shoot with a DSLR, your viewfinder goes black for half a second when you shoot (because the mirror flaps up and blocks your vision). With a rangefinder this doesn’t happen, as you are looking through an optical viewfinder that is just a piece of glass. The viewfinder of a DSLR looks through the lens, and the mirror mechanism is what allows you to see what your camera “sees.”

4. Fourthly, people are materialistic and want to show their status symbol. Essentially a Leica and a rangefinder are synonymous-- because the Leica was the first rangefinder invented (and as of this writing, the only digital rangefinder which is commercially available
on the market). However there are many other film rangefinders which are quite cheap and affordable-- I wouldn’t recommend you ever buy a digital rangefinder (a digital Leica starts at $7000, that is about 7 months of living in Southeast Asia like a king/queen). And oh yeah, Leica lenses start at around $2,000 (and these are the ‘budget’ lenses). If you were to ever buy a rangefinder, Leica, whatever-- I’d recommend the 35mm f/2.5 Voigtlander lens (only $400 dollars, which is small, compact, sharp).

Another random thing; lenses that allow you to create a lot of “bokeh” (f/1.4, f/1.8, f/2) are a bit overrated-- all of the photos I shoot are at f/8-f16. This gives me more depth-of-field (everything is in focus) and the advantage of this is that a good photo should have an interesting subject and background. A lot of lazy photographers (also rich) have these exotic lenses which shoot at even f/1.2, and they shoot everything at f/1.2 -- which allows them to simply blur out the background. But that is lazy-- once again, you don’t want to simply eliminate a messy background; you want to try to have a background which can add interest or context to an image.
EXPOSURE
Dear Paulina, in this chapter I will share some practical tips about exposure, lighting, and exposure-compensation:

**SHOOTING IN “P” MODE**

First of all, manually exposing is overrated. I personally just use “P” mode (stands for “program” -- which is a step more advanced than automatic mode). “P” mode automatically chooses your aperture (how much light your lens lets in) and your shutter speed, and you manually choose your ISO.

To control the darkness or brightness of your image, just use “exposure compensation” (adding a “+” or a “-” to the brightness of my images).

**ISO**

Let me also tell you about ISO; the darker it is the higher the ISO you want to use:

- If you are shooting at night or indoors, use **ISO 1600**.
- If you’re shooting during the day, I recommend using **ISO 400**.

What you need to know is that the higher the ISO, the faster your shutter speed. Furthermore, the higher the ISO, the more sensitive your camera sensor is to light, which means you are able to have a faster shutter speed when it is dark (therefore you prevent blurry photos at night).

As a rule, if your photos are blurry, increase your ISO. When it is super-dark, use ISO 3200. I generally don’t recommend shooting above ISO 6400, because at that point too much “noise” (that gritty ugly stuff that looks like little speckles in your photos when you shoot at night or with a high-ISO) appears.

The downside of using a high-ISO (800-3200) is that there is more “noise” in the photo. Generally, the lower the ISO (100-400) the cleaner the images.

As a default setting, I recommend always keeping your ISO at 800, which is a good default, and a good balance between image quality (low noise) and fast shutter speed.

Another thing: don’t be afraid to crank up or increase your ISO. If you need, use ISO 6400 to get a sharp photo. It is better to get a sharp (non-blurry) photo with a lot of grain, than a blurry photo. Why? In Lightroom, there are filters which reduce noise. Yet there is no software (as of yet) which does a good job “unblurring” a photo.
EDITING AND POST-PROCESSING
Post-processing takes me less than 2 minutes an image; I just use Lightroom presets. You can download my free film-simulation Lightroom presets.

Editing is choosing your best photos, “post-processing” is converting it into black and white, adding contrast, etc.

Unfortunately most photographers nowadays say “editing” to mean post-processing. So nobody cares about the art of editing-- the art of choosing your best images. They upload too many images online (instead of choosing their best).
SELECTING YOUR SUBJECTS
Ok— you now have your camera, and the question you might have is: “Now what do I shoot?”

Honestly; just shoot whatever you find interesting. Don’t feel like you need to make “professional” photos of anything. Avoid traveling just to take “interesting” photos. You can make interesting photos in your own city. Focus on photographing your everyday life experiences—shoot selfies of yourself in the mirror or a puddle, photograph your loved ones (your partner, friends, family), and interesting architecture or strangers you might meet in the streets.

Why do I recommend not traveling to take photos?

Well— I still recommend you to travel to explore the world, have new experiences, and to broaden your world-view. However; don’t travel in order to take photos. Why not? You just end up trying to mimic these “National Geographic” photos (“exotic” indigenous people in India, Africa, etc). You should travel with your camera and just use your photography to supplement your life experiences. You don’t want the photography to be the focus. First live an interesting life, and happen to take photos along the way.

I know it is tough; I have a hard time finding inspiration at home. This is why I have pursued “personal documentary” photography (rather than photographing poor people with AIDS in impoverished neighborhoods, I am photographing my own life). You know that I have been taking a lot of photos of Cindy (called the “Cindy Project”). All of these photos are shot over breakfast, while we are filling gas at a Chevron, when we are eating burgers and fries at In-and-Out, when we are on the bus or BART going into the city, when she is on campus, or when she is studying on her laptop at a cafe.
SOCIAL MEDIA
There is a plethora of social media sites out there for photography. You might feel overwhelmed and wonder which one you should use.

I would say the only ones you should focus on is Instagram, Flickr, and Facebook.

Instagram is by-far the most popular online social network. Flickr is good because they offer free online storage and backup, and they also have a fantastic photography community online there. Lastly, Facebook is good because all your friends are probably on Facebook.

I’m sure that in 10 years from now (I’m writing this in 2015) these will all be gone or different in some form of another. There will always be another new social media platform which will engulf everything else (remember when we thought MySpace was going to be around forever, and then Facebook took over?) Even Facebook is starting to get passé (only old folks use Facebook, all the young kids are using Snapchat and Instagram).

I have a love/hate relationship with social media. I love it because it gives me the opportunity to share my photos with the world. I hate it because I become addicted and a slave to the “likes/comments/favorites” people give me. Whenever I get fewer “likes” on a photograph it makes feel miserable and depressed. Whenever I get a lot it makes me feel euphoric. But this emotional rollercoaster over little red hearts on the internet? No matter how many “likes” you have— it won’t pay your rent, it won’t keep you warm at night, nor does having a lot of “likes” mean that your photo is good, nor does it mean that you are a good photographer.

Let me give you an example; as of now, I have 25,000+ followers on Instagram. One of my recent popular photos got 1,000 likes. Now that I have a new standard, whenever I get anything less than 1,000 likes, I feel shitty. You can never have enough likes.

So publish your photos to social media for the sake of it, but try to check your numbers as little as possible.

For me, I publish my photos, and I try not to look at how many likes/favorites/comments I have for at least a day or two. This makes me detach myself emotionally from the whole process.

Another social media tip— follow few people. Only follow a few people you truly care about (close friends and family) or a few photographers or creative people you gain inspiration from. Don’t do what I did— following a lot of people hoping that they will “follow back.” At this moment, I only follow fewer than 10 people, and I would rather keep a very close relationship with those few friends (than try to follow thousands of people).

Another interesting point— I would rather get one of my friends whose photography I love and respect (my friend Josh White) than 1,000’s of “likes” on social media from strangers. His opinion is worth more to me than the opinion of people I don’t know.
COMPOSITION
One of the things you are wondering is how to compose your photos better.

To start off, follow the “rule of thirds.”

Once you’re bored with that, try to incorporate more diagonals into your photos (check out the “golden triangle”).

Furthermore, download my free ebook: “The Street Photography Composition Manual” (it is focused for street photography but applies to any sort of photography).

My biggest tip: when you’re shooting, focus on the edges and the background of the photo. Try to get clean and uncluttered edges of your frame and backgrounds. The biggest mistake we make in photography is to just frame our subjects in our photos without considering the background of our photos. Avoid busy backgrounds; trees sticking out of your subjects’ heads, white bags, white cars, telephone wires, or anything else that might distract from the photo.

Furthermore, you might be wondering, “But what makes a great photo?”

For me— it is a combination of composition and emotion:

• **Composition**: not having distractions in the frame, and having geometric elements which lead the viewer’s eye to your subject.

• **Emotion**: not photographing something boring— but something that elicits an emotional response from you and your viewer.

How do you capture emotion in your photos?

Well— I try to capture body-language and hand-gestures. Photograph people with their hands on their forehead, looking off into the distance, hunched over, or standing up proudly.

Another tip; try to experiment with different perspectives in your photos. Shoot from really high-up (looking down), and shoot crouching down (really low, looking up). As viewers of images, we become jaded and bored by seeing the “same old things” shot at the same old perspectives. So switch it up— and add novelty to your images.