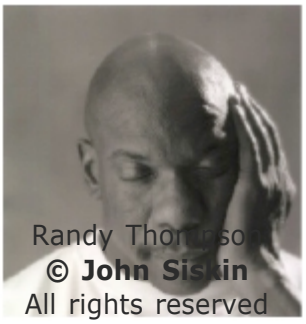
4-Week Short Course: Portrait Photography
Lighting on Location and in the Studio with John H. Siskin

All photos and text © John Siskin, all rights reserved worldwide. No form of reproduction or usage - including copying, altering, or saving of digital image and text files - is permitted without the express written permission of John Siskin

Lesson #4: Controlling Light

Welcome to Lesson 4. I've started off a lot of these lessons by talking about other photographers. I would be remiss if I didn't mention the photographer whose vision started me on this road: Edward Weston.



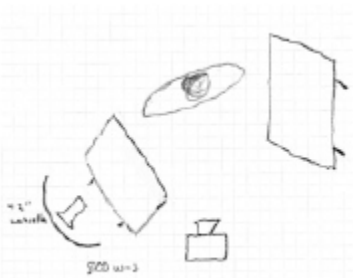
I really hope that you will take time to review the work of other photographers; it is good for your own vision!

Into The Studio!

I often find people think that they can't have a studio - cost is too high and they probably need a good deal of space. Clearly they have a definition of studio that reduces their ability to make photo images.

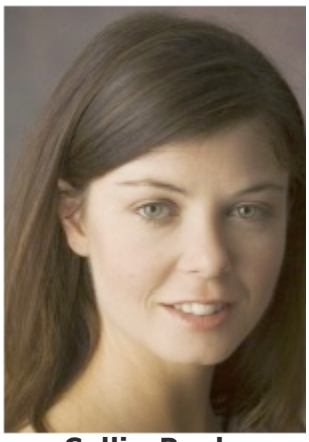
A studio is a place where the photographer controls the light - all the light! This definition can help you design a place where you make the images because you control the light.

If you use strobes, you can control all the light almost anywhere since the strobes can over power almost any other light source. Really big strobes can overpower sunlight! I've included a section at the end of this lesson about making a home studio. I hope you will find it useful.



Collin Diagram #1
© John Siskin

All rights reserved



Collin Poole
This is a good face, good cheek bones and good chin. The face shows good structure.
© John Siskin
All rights reserved

I started out this class with images of Collin outdoors. Now we'll see what we can do in the studio. One thing I need to mention before we get too far into this: there are reflectors and there are reflectors. I am using a large piece of metallic fabric on a light panel frame, which I will refer to as a light panel reflector. I am also changing the bowl-shaped reflectors on the strobes, so I'll call that a bowl reflector. This first shot utilized very soft light. The light is created by a big light source and one large reflector. The large light source is created with an umbrella and a light panel with a cotton cover. The light bounces off the umbrella then goes through the cotton cover on the light panel. I really like the umbrella/light panel combination.

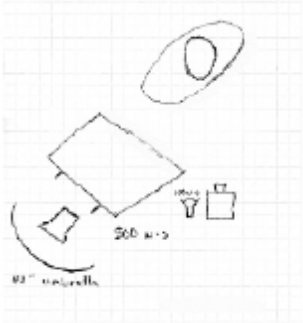
Since the light source and the bounce off the light panel reflector are so large, the transition from light to shadow is very soft. This tends to make a subject appear younger, as it does in this shot. Because there is a shadow side, the face appears thinner. If you light both sides of the face evenly you create less shadows and the face will appear broader.

Another point about a large light source, it creates a broader, less intense catchlight in the eye. This can be very pleasing, as in this shot. If you have too much broad lighting, you can make the eye too reflective, losing the punch it brings to a photo.

Making choices about the size and position of your lights and reflectors is the key to being able to make good portrait lighting. You want to learn to see this light in your head first. In this way you can apply it to a person's face, in your mind's eye - so to speak, before you try to set up the light in the studio.

One of the advantages to being able to control light is that you can re-create a person's face by using your lighting tools.

Collin
Using the broad light source and the Norman 200B to create more shape in the face.
© John Siskin
All rights reserved



Collin Diagram #2
© John Siskin
All rights reserved

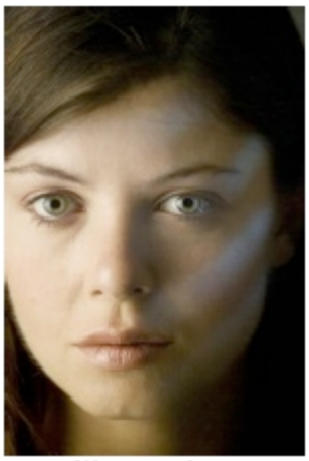
In this next shot, I wanted to create a light that would make Collin look more mature and more elegant. In order to do this, I used a harsher light. I put a Norman 200B onto the camera and used a bowl reflector with a glass diffusion dome over it. This light was mounted on a camera bracket, so it stayed in line with the camera.

In addition to this configuration, I used the umbrella/light panel from the last shot, and removed the light panel reflector. Light comes from the large reflector, but you can see the effect of the 200B when you look at the catchlight in the eye and the shadow under the chin, and the left side of Collin’s face.

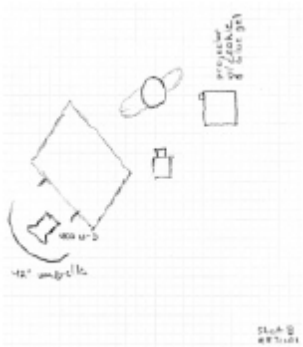
These are the easiest to see differences, but you can also see differences in the area around the eye and the eyebrow. If you changed the power levels of these two light sources, you could make additional changes in the face.

I will be talking about changing the power levels between lights a little later in this lesson.

This small change in light, coupled with a change in the model's expression crates a significant difference between these two images.



Collin Poole #1
Used a Kodak slide projector to create the blue light on her left side. Shot by a Kodak camera, light by a Kodak projector.
© John Siskin
All rights reserved



Collin Diagram #3
© John Siskin
All rights reserved

I wanted to do a shot that could only be done when the photographer has control of the lights - that is, in the studio. This shot uses a Kodak slide projector as the second light source.

I am using a piece of cinefoil in place of a slide with a pattern of crescents cut out of it and a blue gel. (Cinefoil is black aluminum foil. It is handy for lighting because it will not burn.)

The patterns for a projection light are called cucoloris or cookies. I used to do this sort of lighting a lot with film. I do it less now because my digital camera works poorly with low light.

If you would like more information on using the slide projector, check out the article I wrote about it at my website: www.siskinphoto.com. Look for the magazine link.

Most of the light for this shot comes from the same large light source. The projector creates the pale blue light on Collin's face as well as some very unusual catch lights in the eye.

The trick in doing this kind of thing is that you have to focus when the room lights are on, then lock the focus on the camera by putting it to manual focus. You have to turn all the room lights and the modeling lights off when you shoot, otherwise they will affect the light on the face the same way the projector does.

The exposure on this shot was 1/8th of a second at f4. The strobe was at just 400 watt-seconds. This is the sort of thing where you want to shoot a lot of images because most of them will be lousy. This is because you have so much trouble seeing by just the light of the slide projector. You can also see that it leaves Collin with very large pupils - since she is posing in a dark room.

One thing I want to point out about all of these images: the lights are close to the subject. This enables me to control what they do and assures me that my big light sources will act like big light sources.

The background on all of these shots is grey muslin. Rather than light it from the front, I put light through it. You can only see it in some shots where I have turned on the background light. Note that I am using a red gel over this light.

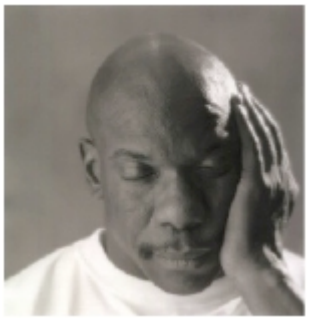
Charlie C
Made with a Mamiya C-330 and the wonderful 180 super lens. Used Norman lights and a large diffuser.
© John Siskin
All rights reserved

Charlie has a great face for photography. He looks like he just walked out of the Dust Bowl of the 1930's Great Depression. When somebody has a great face, they are generally easy to light. You want to put contrast and detail into the face. Consequently, you are going to use a smaller light source.

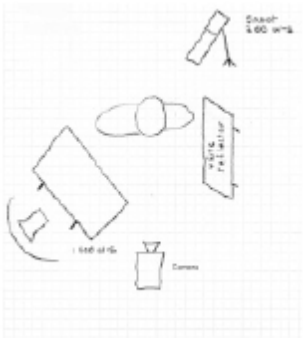
In this case, I used one 42" ribless umbrella. This gave me everything I could want from the face. The umbrella is about 60º from the subject camera line.

The fill comes from the light scattered by the umbrella. The background is black seamless. I wanted his eyes to be looking away from the camera, giving the sense of a far away stare.

It is a pleasure to shoot someone who has a face with such character.



Randy Thompson
Shot with a home Randy Diagram



made lens to create a special glow in the portrait.

© **John Siskin**
All rights reserved

© **John Siskin**
All rights reserved

Randy also has a great face, but this shot has a lot more going on in it. First, the light is softer, because I am using a large light source again. It is also softer because I am using a soft focus lens. These are classic lenses first made about a hundred years ago. They generally do a good job of creating sharp mid tones as in this shot while giving a glow to the highlights.

You can build these lenses, though they are tough to adapt to a digital camera. Check out my article about building these lenses on the same part of my website I mentioned earlier.

A simpler way to do this is to use a Hoya Softener filter (A or B) or a Zeiss softer filter. These are the best soft focus filters that I know. They are so good because their effect is primarily seen on the highlights, not all over the shot.

The real reason I brought this up was to discuss mixing soft light and hard light on a person.

There are several traditional places to put hard light in a portrait: on the hair and in a rim around the subject. I find that , snoot is a great tool for this.

(As a reminder from Lesson 3, a snoot is a long tube that you attach to your strobe in order to keep light focused on just one specific part of the subject.)

For hair, hard light is used just on the hair. Generally, this is done with a dark haired person to give the hair highlights. Be sure to use the preview on your digital camera when you try this, it is important to get the levels of the light sources right.

A rim light is made by focusing light around the edge of the subject from behind the subject. The light on Randy is a rim light that came around to the front a little bit. Of course it has a glow in this shot because of the optics. But even if it didn't, it serves to define his hand and the side of his head. The brightness also keeps the eye away from the shirt, which would otherwise be the brightest focal point in the shot.

When you bring hard light onto the face you create a point of interest and visual tension. You want to make sure that you are placing this light very carefully.

In addition, you want to use the histogram and maybe, if available, preview the

image on a large monitor to make sure the balance between the lights is right. A little hard light needs a lot of soft light to balance it.

In the shot of Randy, the main light is at 1200 watt-seconds while the snoot is at only 200 watt-seconds.

Christine
Using light from the grid spot to highlight the face.
© John Siskin
All rights reserved

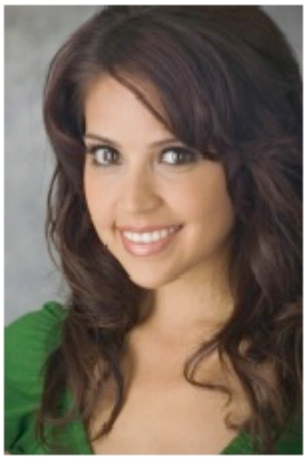
Soft Light, Hard Light & Ratios

Portrait photographers have talked about lighting ratios for a long time. In order for us to understand ratios, we need to put them into the context of the equipment being used. At one time, film was mostly black and white and had an ISO of about 80. Strobes are, and were not an option.

Lights are hot, big and not all that powerful. So the first thing that we don't do is use a lot of diffusers, because they eat up light. This is the key point: ratios are designed for small light sources.

These are hard lights; they reveal defects in a person's face. The first two shots here have the same ratio. In the first photo, I used small light sources; the second is taken with big light sources (umbrellas and diffusers). Both shots are at a ratio of 3:1. The first shot is hard light and the second is soft light.

3:1 Hard Light



3:1 Soft Light

© John Siskin
All rights reserved

© John Siskin
All rights reserved

The first shot has a real strong change in the amount of light on the two sides of the face. This is characteristic of the original ratio lighting.

As you now know, I generally like large light sources. I think that they are more flattering to the face. As a direct consequence of this, I do not use ratio lighting much.

I have to admit that in making this section of the class, I was quite pleased with some of the ratio images and I was also pleased by the ease of using ratio lighting.

I do not suppose I will suddenly start using it a lot, but it is good to have more tools in the lighting kit. Also, I am noticing that much of today's fashion advertising is done with small light sources.

It would be important when using this kind of light to have a good make-up artist, since the light is harsh.

Small Light Source Set-up
Norman 200B
© John Siskin
All rights reserved

Large Light Source Set-Up
Norman 2000 watt-second pack and LH2400 heads.
© John Siskin
All rights reserved

And now for the math. (You knew it had to happen.) So just what are we counting? The ratio defines the difference in light between the two sides of the face. *Ratio lighting*, traditional ratio lighting anyway, uses two light sources. One light is on the side of the face at 45º or more from the line between the subject and the camera. This is called the *main light*. The other light is near the line between the subject and the camera. This is called the *fill light*.

These designations have always seemed backward to me, but this is how it was set up. The fill light puts light on both sides of the face.

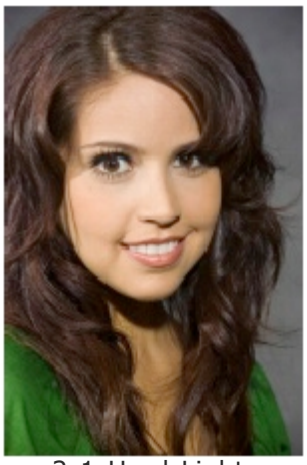
The next two shots show the set-up with both hard light and soft light.

In this case, both lights are the same

distance from the subject. In order to change the light levels and change the ratios. I changed the power of the lights.

You could also change the distance between the light and the subject to change the ratio. The ratio is between the amounts of light placed on both sides of the subject.

Of course, you could set up a ratio between any light sources in a shot but that wouldn't be what photographers were originally talking about. In this set-up, the fill light places light on both sides of the face. The main light puts light on just one side of the face.



2:1 Hard Light
© John Siskin
All rights reserved

If you use the same amount of light from both lights the ratio will be 2:1. This is because you have light from the fill light illuminating both sides of the face, so both sides have the same amount of light which we will call 1.

If we add the same amount of light to one side of the face from the main light, that side will have twice as much light as the other side. Therefore, the ratio will be 2:1. It looks like this next image.

3:1 Hard Light
© John Siskin
All rights reserved

If the light from the main light is twice as powerful, we have a 3:1 ratio. It works like this: 1 unit of light on both sides of the face from the fill light. Now add in 2 units to one side of the face, so that side will have 3 units of light. This 3:1 ratio is a very good balance for portraiture.

5:1, Hard Light Color
© John Siskin
All rights reserved

5:1 Hard Light, B&W
The higher ratios look better in Black & White than color.
© John Siskin
All rights reserved

Of course, you can have even more contrast. If the main light is 4 times as powerful as the fill light the ratio will be 5:1. A light that has 4 times as much power is 2 stops more powerful than the lower power light. Most strobes have at least this much power output range.

So the fill light still adds 1 unit of light to each side of the face. The main light has 4 units of light, since it is 4 times as powerful, making the total on that side of the face 5 units of light.

One great thing about working with ratios, it gives you more dazzling and incomprehensible factoids to say in front of clients!

What Is A Studio?

Basically, a studio is a place where the photographer has control of what happens with the light. I need to be sure that extraneous sources of light are under control. Such sources may be daylight from a window, or light sources that overpower my strobes or quartz lights. Another problem is reflections. You would prefer not to see a TV set reflected in your model's eye.

One of the ways I can control both these problems is by making walls. I usually do this with seamless paper or with light panels.

Panels are one of my basic studio tools. They let me diffuse light, bounce light and block light. All this is accomplished by changing the fabric cover of the panel.

Studio Set-Up
© John Siskin
All rights reserved

Usually I use a black cover, probably Duvateen to kill reflections. These are easy to set up and put away, so they work well in a temporary studio. I can build a whole room within a room from panels.

If you are outfitting a garage as a studio,

or making a permanent home studio, there is another choice. Mount rolls of black seamless paper onto the ceiling and bring down the paper as a "wall" to control reflection. This is quick and easy, especially if you use a chain drive on your paper roll. Bogen, also called Manfrotto, has a nice chain drive for raising and lowering the seamless.

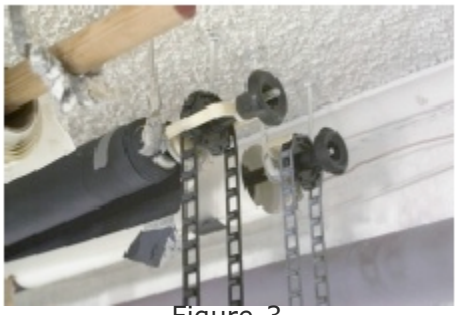


Figure 3
© John Siskin
All rights reserved

Even simpler is to buy a roll of black seamless and staple it to your wall. Seamless is available in widths of 4.5, 9 an12 feet, with lengths of 10 meters, 50 meters and 100 meters. Those hundred meter rolls are really heavy.

Another option is to hang brackets and put up a curtain. If you did use white here, you could use it as an oversize light panel!

Any of these ideas can be adapted to your circumstances to bring your location "under control".

Another concern is the area above the shot. My ceiling is not in very good condition, so I do not bounce light off it. If I need an overhead bounce, I either put up a light panel or pull white seamless along the ceiling. I have a set of rails mounted on the ceiling that make either possibility more practical. Have another look at my set-up:

I have mounted two 10 ft. poles to the ceiling using all thread and expansion bolts. Then I have two more poles that run between the original ones. This second set of poles moves. I am able to hang lights, reflectors and props from these poles; very handy!

I admit that this will not work in most living rooms, but it would fit in a garage studio pretty well!

Studio Set-Up
© John Siskin
All rights reserved

Everything should be available from your local Home Depot or other large home improvement store. This rail system also holds all my lights.

This is a Norman head mounted on a Bogen Magic Arm. The Magic Arm is mounted into a super clamp.

It is critical to be able to mount backgrounds in your studio. In addition to

Magic Arm on Rail System
© John Siskin
All rights reserved

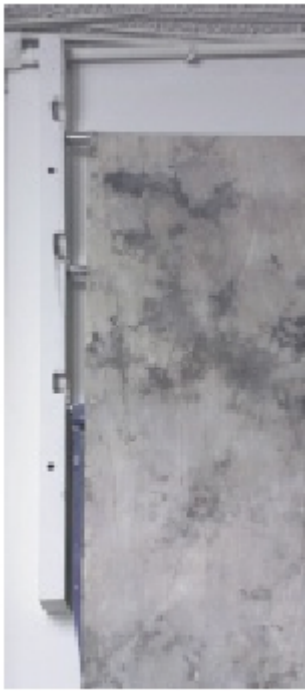
the brackets shown above, there are temporary ways to hold seamless or other backgrounds. It is easier to set up smaller backgrounds.

In fact, you can hold a small roll of seamless or a light background with two regular light stands and a top made of PVC (just like the top of a light panel, but wider). For bigger backgrounds you can buy a set of background stands, but you might be better off with a set of C-Stands.

C-stands are critical around the studio. They are like light stands on steroids! If you use two C-stands and a couple of extension arms you can easily hold seamless or other background.

You can also use them to hold lights or to hang things in the shot. These are really heavy duty! Another permanent method it to make wall brackets out of wood 2x4s.

© John Siskin
All rights reserved



This works well, as you can have several backgrounds set up at once. However, the Bogen background rollers work with U-brackets and won't work with wall brackets.

With all these lights, you will want to design some extra power outlets into your studio. We usually need extra power to use strobes or quartz equipment.

Also, it is important to keep the power cords from going all over the studio; you don't want anyone to trip!

I have seen a lot of home studios and I have identified one major problem: home studios become home storage areas.

© **John Siskin**
All rights reserved

It starts out with storing photographic stuff and suddenly everything that has no other place is ends in the studio. This kills your ability to do work in the studio.

Actually, storage is a problem every studio faces. I have a large number of things I keep, such as props as well as an 8x10 inch enlarger. My studio is in a commercial space. I have almost as much space dedicated to storage as I do to shooting. It's important that your clients do not see your mess! The alternative is to clean out the studio every time you want to use it. This would then become a physical and emotional energy trap!

This next studio is very space efficient.

This is a smaller studio space than the garage, but maybe because of this, a great deal of thought has been put into storage. The thing I like is the stand of storage along the side wall. This is a great use of space. But it is even better because of the curtain that covers all of this storage.

Tom's Studio, Overall
© **John Siskin**
All rights reserved

The curtain is placed here so that the gear on the sidewall does not create a reflection issue. Another thing to notice in this shot of the sidewall is the trashcan. It's not a trashcan at all - but an umbrella storage container.

I use trashcans in my studio also. I use one for umbrellas, light panels and another for light stands. Trashcans are the best light stand storage I have found. I am adding a picture of the back wall, because I want you to note that it is also devoted to storage. This is a very efficient little studio!

Something I like to have in a studio is a rolling cart filled with supplies. I can put my laptop on top of cart, or film holders and a loupe for the view camera. You can see a cart in the shot of the above studio and see my cart in this next shot.

Underneath I have such things as clay, cleaning products, reflectors and all those little things that are often critical to a shoot. I really like to use my digital camera tethered to the computer, this is a great way to keep the computer close to the shoot.

© **John Siskin**
All rights reserved

Your Assignment: Good Light

Using light, make two portraits of the same person. Use the same pose. In one image use the light to make the face appear slimmer and in the other image make the face broader. The purpose of this assignment is to prove that you can control your light to make a specific visible difference in a portrait. I would particularly suggest the ratio techniques to create your slim image while you might use large light modifiers to make the broader version of the face. Keep in mind that your goal is to change the light rather than the pose.

Thanks!

John
Ps. Scroll down for note on posing!

-
-

A portrait should invite a stranger into a more intimate relationship with the subject. It creates an almost formal introduction to the subject. You may want to examine the portraits taken by a guy named Karsh; he was an absolute master at this. Plus he was terrific at posing people. Can you imagine posing John Kennedy, Fidel Castro and Sophia Loren?

You can get the subject to stand up; this gives structure to the body. The background should be out of focus. This makes the portrait feel more three-dimensional. I also crop in on the subject. If there are some soft catch lights in the eye that is better. Catch lights are a really important thing in a photo they make the eye appear lively.

A pose is not very flattering when the body is flat to the camera; this generally makes people look broad and fleshy. If you get the subject to stand up and place his/her body at an angle to the camera, then turned her/his face toward the camera, the shot will work better. Turning the head makes the neck tighten up, reduces double chins.

There are a couple of small things I would consider: first straighten the tie. Remember people look at the details of a portrait more carefully that they look at a person in life. It is considered impolite to stare at a person, but it is perfectly acceptable to examine a photograph. There can be a particular difficulty with a woman's make up. Women do make-up to be seen a few feet away, often this is too garish for a photograph. Make-up for a portrait must be very subtle.

It is one of the great pleasures of a photograph that you can look at someone in great detail without violating their personal space. When we do photography we break down a wall around a person. In order to do that effectively we need to see the subject's face, as it will appear on a print. To make an intimate portrait we need to have some intimacy with the subject.

There are several things about the way people manage their faces that can create better portraits. The first is a look that the viewer can comprehend: a face that is looking directly at the camera with a firm jaw looks better than a staring off into space with a slack jaw. The most important things are the eyes and the mouth. Most good portraits have the eyes as an important part of the image. If nothing else they should be open and visible. I like to have the eyes at the camera, but it is possible to create an effective look that communicates emotion by having the eyes down or away from the camera. The face and demeanor of your subject should suggest certain things. I have a definite opinion about the mouth: half open showing a black space is not good. One again a definite expression is the easiest. So a strong smile, if it doesn't interfere with the way the eyes are seen is good. A firm decisive jaw is very fine on men, but sometimes less attractive on women. Often I will ask men to clench their jaw when I take their picture to make a stronger jaw.

When doing studio portraits my clients often want to appear slimmer. If you have the person stand almost sideways to the camera and turning their neck to bring the face to the camera the neck will be firmer and the chin will be stronger. If you have the belly facing

the darker side of the shot the viewer will pay less attention to this problem region. Have your subjects stand up for their pictures; this positions the weight better! Finally if the chin is raised just a bit the jaw will look stronger and the chin less fleshy.

One of the most difficult skills for a photographer to acquire is directing a subject. It seems an embarrassing moment to tell someone to raise his or her chin or look at you. First this is the job. Second this is a skill you need to practice and practice some more. Thirdly as long as you keep the camera glued to the front of your face the subject can't hurt you, they will, in fact, believe you. I told a bank president to straighten his tie.

I try to avoid black backgrounds for people or babies. I don't like the effect of people coming out of black, but dark grey is fine. Other people do. If I were going to do this I would use a very black fabric called Duvateen. This is available from large photo retailers. Hi-key is fancy way of saying very light subject on a white or whitish background. Use very large light sources and a lot of white stuff, I prefer fabric to paper. Rim light is done two ways: first you can use a controllable light source like a snoot pointed at the subject's neck back and head, be careful of lens flare. Alternatively, and I prefer this method, put a bare bulb strobe behind the subject. Bare bulb means a tube with out a reflector, so you can't do this with a Canon or Nikon strobe with out an accessory. This will also light your background. Be careful not to get the strobe tube in the shot.

One good thing about direct strobes is that they are less of a problem with glasses. Since they are such a small light source they often don't show up in glasses or only in the frames.

If you try working with a larger light source you will notice that the glasses are more of a problem. One way to improve the situation is to have the glasses further down the nose and look at the subject's eyes over the frames. Alternatively have the subject face away from the light source and bring their eyes back to the camera. This usually requires you to have the subject point there face to one side and slowly bring their face to camera. I usually do this several times while looking for all the factors, pose glasses and expression to fall into place.

I want to say some things about working with people of different ethnic backgrounds. Please understand that in saying these things I hope to offer offence to no one. If I do offend you or any other person in the class, please let me know, first so I can apologize and second so that I can avoid being offensive in the future. Different peoples skin requires different treatment with light. Although you can say general things about how to photograph persons of various backgrounds nothing is absolute. Here's the deal as I see it: African skin tones are much richer and the face has a greater degree of variation then many other skin tones. As a consequence of this you can put a harder light onto the face and create more tonal separation. This means smaller light sources, say small umbrellas or silver umbrellas. You can put a shine onto an African face that would be less attractive on a person of European background. In general a shine on European skin makes the person look as though perspiring, not necessarily good for a portrait. You can see this effect on a subject's brow and cheeks. The way to improve light for this shot would be to make a much larger light source. You could do this with a light panel and an umbrella, as explained elsewhere in the class, or you could use a soft box, or even a big umbrella. Another difference is that you can but a longer tonal range on an African face than a

European face with less feeling of excessive drama. So a ratio (4th week of class) of 5:1 on a European is really hard and often works well on an Africa. Another consideration is the reflectors you use. On most ethnic Africans, Europeans and Native Americans I will use a gold reflector for fill; but I am less likely to use this on Asians. Because a gold reflector adds a warm or yellow color to the skin it is dangerous on any skin tone that includes a lot of yellow: this includes some Africans, Some people from the Indian sub-continent and many Asians. Another consideration with some Asians is to put more shape in the face. This can be done with both light and lens. I generally think about a shorter focal length with Asians to give more shape to the face. I think there is probably a Eurocentric idea, but I live in a Eurocentric culture.