

Photojournalism

WEEK ELEVEN: Lighting techniques in digital photojournalism

Learning Outcomes



At the end of this week, you should be able to:

1. Understand photographic lighting
2. Explore the photographic lighting techniques and principles
3. Apply lighting techniques in photojournalism.

Introduction

What is photographic lighting?

In our previous lessons, we learned how your camera uses shutter speed and aperture to control how much light reaches the sensor. However, these settings are only part of the equation; the other part is the actual lighting. Lighting can come from the sun or moon, which are natural lighting, and your camera's flash, a lamp, or ceiling lights, which are artificial lighting (stage lighting for example in scene design and stage lighting). The direction, brightness, and color of the lighting can have a dramatic effect on the appearance of your photos. The heart of Photojournalism is reporting human experience accurately, honestly, and with an overriding sense of social responsibility. Lighting should not be manipulated to create false impressions.

Photographic lighting refers to the use of artificial or natural light sources to illuminate a subject or scene for the purpose of capturing photographs. It is a fundamental aspect of photography that plays a crucial role in creating well-exposed and visually appealing images. The use of different lighting techniques can significantly influence the mood, composition, and visual impact of a photograph.

The Photographic Lighting Techniques and Principles

Photographic lighting is the deliberate use of artificial or natural light to illuminate a subject or scene in photography. It is a critical aspect of photography that significantly impacts the quality, mood, and aesthetics of an image. Different lighting techniques and setups can be used to achieve various effects and meet the specific needs of a photographic project. The following are some key aspects of photographic lighting:

1. **Natural Light:** Natural light refers to the illumination provided by the sun, moon, or other natural sources. Photographers often use the quality and direction of natural light to create various effects in their images. For example, soft, diffused sunlight at sunrise or sunset can produce warm and flattering portraits, while direct midday sunlight can create harsh

shadows. According to ExpertPhotography (2023), the best source of natural light is either the sunrise or sunset. Mornings and evenings offer the softest light as the lower sun casts softer shadows. Morning has the added advantage of being quiet. This allows you to capture a lot of the natural light's progression along with the sun.

Twilight occurs during the transition between the day and night is happening. It is before the sun rises and after it sets. This time of day has a cool color with diffused lighting. If it is almost night, you will have to rely on some artificial light as well. There are numerous ways of playing with natural lighting. Whether it is the time of day or the angle of the light, different types of light in photography create different results (ExpertPhotography, 2023).

2. **Artificial Light Sources:** Photographers use various artificial light sources to control and manipulate lighting conditions. According to Coleman (2023), artificial light in photography can cover a wide range of light sources: on-camera flash, off-camera strobes, constant lights like LEDs, or even sources in your environment like lamps and neon signs. The most common artificial light sources in photography include:

- **Continuous Lighting:** These are lights that stay on continuously, such as tungsten or fluorescent lights. They are commonly used in studio photography and video production. According to Farace (2022), photographers have used photoflood, tungsten, quartz, and all kinds of continuous light sources that fall under the general heading of "hot lights." These light sources have many advantages over flash: They can be inexpensive; they let you see the light as captured, allowing you to use your camera's in-camera meter; and they are generally smaller and lighter than electronic flash units.
- **Flash or Strobe Lighting:** Vorenkamp (2021), argues that the traditional way to get maximum power for a flash in the studio and out in the field was with the use of power packs and strobe heads. While the monolight is a self-contained unit, this flavor of flash separates the capacitors and the strobe head. Integral, built-in, or pop-up flashes are common on many point-and-shoot cameras, as well as entry-level and prosumer DSLR and mirrorless interchangeable-lens cameras. Monolights are commonly used in studios to provide powerful flashes of light. Like the speedlight, the monolight is self-contained with a capacitor and strobe light in a single unit. These lights produce brief bursts of intense light, commonly generated by electronic flashes or strobes. They are frequently used in both studio and outdoor settings.

3. **Light Quality:** Light quality refers to the characteristics of the light, which can be soft or hard, depending on how it interacts with the subject. Soft light creates gentle, gradual transitions between highlights and shadows and is often preferred for portrait photography. Hard light creates distinct, sharp-edged shadows and is used for more dramatic effects. Meghan B in PictureCorrect (2003-2023) asserts that Sunlight and moonlight produce hard "pinpoint" lighting, characterized by quick transitions between bright highlights and dark shadows.

Soft light, on the other hand, is often produced by diffusion or reflection. On an overcast day, clouds act as a massive natural soft box, scattering the sun's rays. Because the clouds are much closer and larger relative to Earth, you'll see smoother, more gradual transitions between darks and lights. Often times, soft light is described as "wrapping around" a subject. Of course, light cannot turn corners; rather, soft reflective light hits more of the subject's surface and leaves less detail shrouded in shadow (Meghan B in PictureCorrect, 2003-2023).

4. **Direction of Light:** According to Dempsey (2022), there are just five essential lighting directions you need to know. The direction from which light strikes a subject or scene significantly influences the appearance of the photograph. Common lighting directions include:

- **Front Lighting:** Light comes from in front of the subject, reducing shadows and providing even illumination. Front light will give you a well-lit subject, so it can be a good go-to when in a pinch. But front light also results in very flat images, because your subject doesn't have any shadows that can be seen by your camera. Note: More shadows equals more three-dimensionality. And three-dimensional images are generally stronger than flat images. Front light is also a very strong type of lighting because it hits your subject directly.
- **Side Lighting:** Light strikes the subject from the side, creating more pronounced shadows. Unlike front light, offers a lot of three-dimensionality. It illuminates one side of your subject while casting shadows on the other half, making for significant depth, which in turn creates drama. Since sidelight illuminates one part of your subject while shrouding the other part in shadow, your images may turn out a bit more contrast-heavy and lacking in detail.
- **Backlighting:** Light comes from behind the subject, often creating silhouettes and rim lighting effects. While backlit images tend to be the most noticeable when they're taken in nature, thanks to the powerful sun, there are plenty of indoor photographers that shoot with backlight of some sort. Product photographers and portrait photographers, for instance, love using what's known as a "rim light" to create a glow around the subject. You can create images with softly-lit subjects and bright backgrounds or images with stunning background bokeh or images with dramatic silhouettes.

You do have to be very careful when working with backlight, however. Backlight is versatile, but that also means that it's easy to create the wrong look, by making your photo too dark or too bright.

- **Top Lighting:** Light shines from above the subject, casting shadows downward. as a rule, photographers rarely shoot with overhead light. When the light comes from overhead, it creates unpleasant shadows that fall over your subject in unflattering ways. Plus, overhead light, in nature, comes when the sun is high in the sky, so the

light is also very harsh. Street photographers and architectural photographers often do like harsh light, for one big reason:

- i. It creates all sorts of interesting, dramatic, contrast-heavy shadows.
 - ii. That allows for very cool results, with lots of dark tones and light tones, all mixed together.
 - iii. In the studio, portrait and product photographers also use some forms of overhead lighting. You'll often see portrait subjects lit from above and slightly behind, to better illuminate their hair (the "hairlight," it's called!).
- **Upward Lighting:** Upward lighting is the rarest, form of directional lighting in photography. As the name suggests, upward lighting comes from underneath your subject, and will upward-moving shadows. It is rare to find upward lighting in nature, because the sun doesn't come from below subjects. The rare exceptions are when a person is standing above a bright object, like lava or a fire, or when a person is lit by a reflective surface of some sort (such as white sand on a beach).

Upward lighting isn't very popular, that doesn't mean it doesn't get featured. Portrait photographers sometimes light their subjects from below using a weaker light, while more strongly lighting the subject from above; this is called "clamshell lighting." You see, the upward lighting helps remove some of the shadows caused by the high-up main clamshell light, which keeps the photo looking good.

5. **Modifiers and Accessories:** Photographers use various modifiers and accessories to shape and control the light. These include soft boxes, umbrellas, reflectors, and diffusers that help diffuse, bounce, or shape the light to achieve the desired effect. Modifiers and accessories in photography refer to various tools and equipment used to modify or enhance the lighting in a photograph. These tools can help control the direction, intensity, and quality of light to achieve desired results. According to Pro Photo Studios (2021), Lighting modifiers are essential tools for product photography. They help to create the perfect lighting conditions for any product shot, allowing photographers to achieve the desired look and feel. Some commonly used modifiers include:

- **Softboxes:** These are large, fabric-covered boxes that soften and diffuse the light, creating a more flattering and even illumination.
- **Umbrellas:** They are used to bounce or shoot light through, providing a softer and more diffused lighting effect.
- **Reflectors:** These are surfaces, often in silver or white, used to bounce light back onto the subject, filling in shadows and providing additional illumination.
- **Snoots:** These are attachments that narrow and concentrate the light, creating a spotlight effect.

- **Grids:** Grids are used to control the spread of light, narrowing the beam and preventing it from spilling onto unwanted areas.
 - **Gels:** These are colored filters placed over the light source to add creative or corrective color effects.
 - **Scrim:** It is a material placed in between your light source and subject matter. A scrim helps to reduce or diffuse light. Scrimms are available in a range of sizes and shapes.
 - **Beauty dishes:** These modifiers create a soft, yet slightly more contrast light, often used in portrait photography.
 - **Parabolic lighting:** These gives off a sparkling light that helps to beautify an object. Parabolic lighting comes with a range of options. You can attach a front diffuser which more or less turns them into a softbox. The shape of a parabolic light is not suitable for all products and genres, its versatility means that you have many modifiers in one light source.
6. **Color Temperature:** The color of light is measured in kelvin (K). Different light sources have different color temperatures, ranging from warm (e.g., candlelight or incandescent bulbs) to cool (e.g., daylight or fluorescent bulbs). Photographers must consider color temperature when shooting and may use color correction techniques to achieve accurate color rendering in their images.

According to Mishra (2023), Color temperature is the relative warmth or coolness of light. Every light, from the sun to your computer screen, has a unique color. The color of the light tints all the colors in the scene, including skin tones. Some lights make the colors cooler. Others make the scene look warmer. The human eye is good at adjusting to different types of light. We often do not even notice that it has a color.

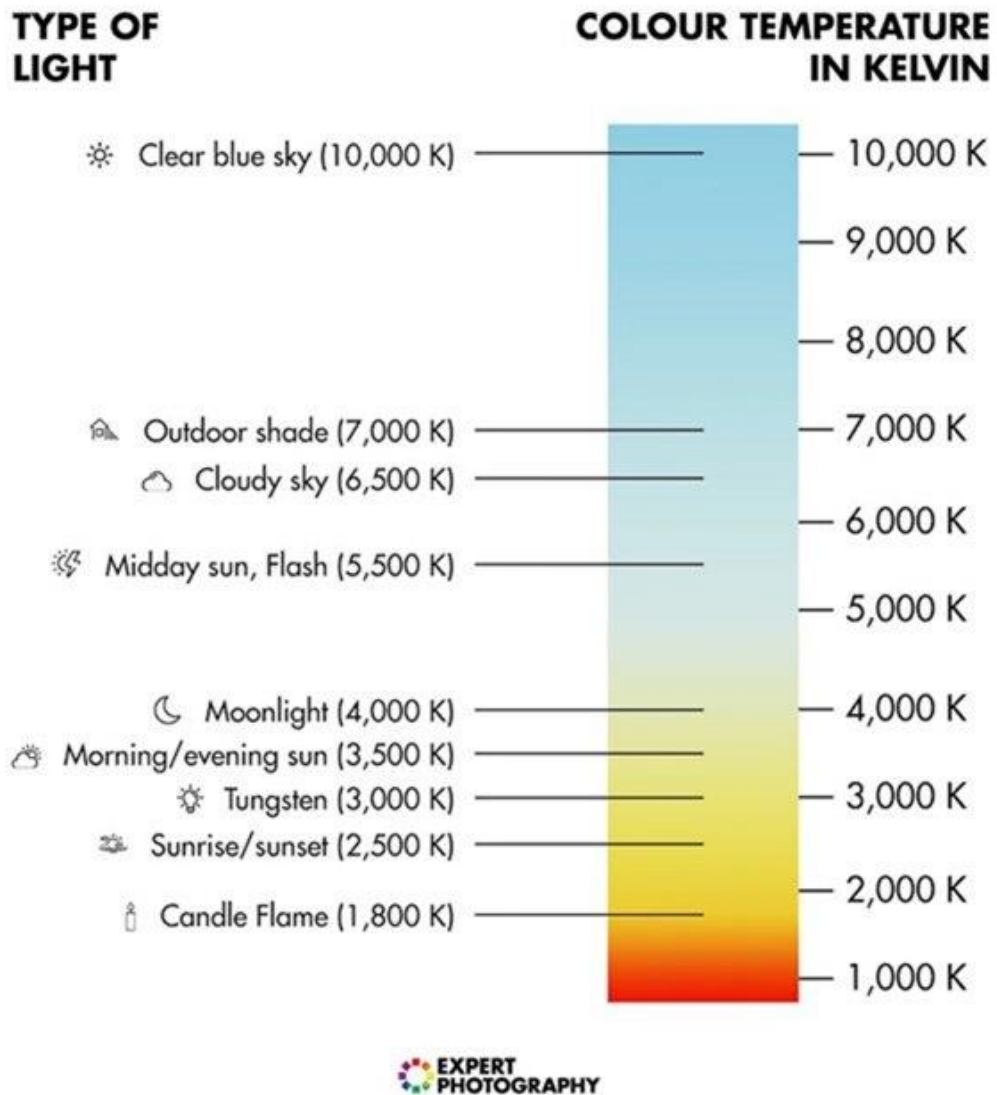
Our eyes see something as white, even if the lights tint the white surface. But our cameras record the color. They ‘see’ the yellow of candles or the blue of a flash. If you have taken a photo that looks orange or blue, the temperature needs adjusting. In photography, we often interchange the terms color temperature and white balance. Our goal is to adjust the colors so that the whites are not tinted. To do this, we adjust the colors around a neutral shade of grey (Mishra, 2023).

On a color temperature scale, the lowest numbers are the warmest. The higher numbers are cooler. Daylight is around 5,500 – 6,500K. Shade is often cooler, and sunset warmer. We counter the tints by adjusting in the opposite direction. We know a cloudy sky will have a cool color temperature. To make the scene look more natural, we add warmer tones. We can do this either when we take the photo or in post-processing. (Mishra, 2023).

Color temperature is a personal preference. Some photographers favour cooler or warmer tones as part of their editing style. Most cameras, including some smartphone apps, have color temperature presets. The most common are Tungsten, Fluorescent, Daylight, Cloudy,

Shade, and Flash. Professional models also allow you to set a specific temperature. The preset adjusts for the color cast by the light source (Mishra, 2023).

Color temperature scale showing the Kelvin temperatures of many light sources. Color temperature scale showing the Kelvin temperatures of many light sources.



Color temperature scale showing the Kelvin temperatures of many light sources.

Source: <https://expertphotography.com/color-temperature/#:~:text=Color%20temperature%20is%20a%20measurement,camera%20or%20during%20post%2Dprocessing.>

7. Light Sources:

- Photographers can use various light sources, including natural light (sunlight), studio lighting equipment (such as strobes and continuous lights), flash units, LED panels, and even reflectors.
- According to Walton (2021), ambient lighting doesn't just mean sunlight – though that's the most abundant and cheapest form of ambient lighting for photographers. If you're indoors, ambient lighting simply refers to light that already exists in that room – a lamp, ceiling light, light from a TV and so on. Ambient light is basically a light that you don't add to your photo; it's the light that already exists before you took the shot.

8. Three-Point Lighting:

- This is a classic lighting setup used in studio and portrait photography. It consists of a key light (the main light source), a fill light (to reduce shadows), and a backlight (to separate the subject from the background). This is aimed at photographers who are looking for a more rounded image where the subject is illuminated evenly to show shape, depth and texture. There are a couple of variations on where to position these 3 lights but the principles are the same. You'll always have a key and fill light but in different quantities.
- When you are using multiple lights, remember to keep the balance of power output consistent. Aim to avoid lights with different colour temperatures too. And positioning these lights at the right angles is also important to consider (Walton, 2021).

9. High Key and Low Key Lighting:

- According to Discovery Center Team (2023), high Key and Low Key photography make use of lighting and contrast (or lack thereof) to create a specific mood. Originally high key photography emerged as a solution for screens that could not correctly display high contrast ratios. Today capturing high key photos, like low key photos, is a stylistic choice in photography. High key lighting involves using bright, even lighting to create a soft, shadow less look. Low key lighting employs strong contrast between light and shadow for a dramatic effect.

10. Lighting Ratios:

- In photography, lighting ratios refer to the relative intensity of light falling on a subject from different light sources or directions. It helps photographers control the contrast and mood of an image by manipulating the ratio between the key light (main light source) and fill light (secondary light source).
- A lighting ratio is typically expressed as a numerical value, such as 1:1, 2:1, 4:1, etc. These values indicate the difference in intensity between the key light and the

fill light. For example, a 2:1 ratio means the key light is twice as bright as the fill light.



Look at how the light intensity changes as the ratio increases. Photo by DINFOS PAVILION

Team. Source: <https://pavilion.dinfos.edu/Article/Article/2290092/studio-lighting-ratios/#:~:text=Lighting%20ratios%20describe%20the%20difference,between%20the%20highlights%20and%20shadows.&text=Look%20at%20how%20the%20light%20intensity%20changes%20as%20the%20ratio%20increases,-Photo%20by%3A%20DINFOS>

11. Creative Lighting Effects:

- According to PhotographyCourse.net (2023), Lighting is what makes or breaks a photograph, and in portrait photography, knowing how to use the light to flatter your subject or create the mood you want is key to capturing stunning images. Photographers often experiment with creative lighting effects, such as silhouettes, lens flares, and light painting, to produce unique and artistic images.

12. Rembrandt Lighting:

- Named after the Dutch painter Rembrandt, this technique creates a triangle of light on the subject's cheek and opposite eye. It adds depth and dimension to the subject's face, often used in portrait photography. According to PhotographyCourse.net (2023), this is the same technique as loop lighting, but the light source is usually set up at that 45 degree angle from the subject. You move the light further to the side of the subject until the opposite side of the face (the side in the shadows) has a small triangle of light on the cheek just below the eye. You should also set the height of the light a foot or two above eye level. If you're using a single light source, you can use a reflector to create this lighting setup.

How to apply lighting techniques in photojournalism.

Applying lighting techniques in photojournalism is a crucial aspect of capturing impactful and compelling images that effectively tell a news story. While photojournalists often work with available light, they may also use lighting techniques to enhance the quality of their photographs in various situations. The following are some suggestions on how to apply lighting techniques in photojournalism:

1. Understand the Story:

- Begin by thoroughly understanding the news story you're covering. Determine the key elements, emotions, and context of the story to guide your lighting decisions. Knowing the context and significance of the story will guide your choice of lighting techniques.

2. Use Available Light:

- In many photojournalistic situations, you'll rely on available light, such as natural light or existing ambient light. Make the most of the light sources at the scene to capture authentic and candid moments. Observe the light sources and direction and work with what you have.
- Use modifiers like reflectors or diffusers to modify available light. Reflectors can bounce light onto the subject, reducing shadows, while diffusers soften harsh light.
- Invest in fast lenses (those with wide apertures like f/1.4 or f/2.8) to allow more light into the camera. These lenses are especially useful in low-light situations.

3. Light Direction and Quality:

- Pay attention to the direction and quality of the available light. Natural light can vary from hard, direct sunlight to soft, diffused light. Position yourself and your subjects to make the most of the available light.
- When ambient light is insufficient, use flash to supplement it. Consider off-camera flash or a flash modifier to soften and control the flash output.

4. Reflectors:

- Reflectors can be invaluable tools for photojournalists. They bounce available light onto the subject, filling in shadows and providing additional illumination. A white or silver reflector can help create soft, flattering light.

5. Diffusers:

- Diffusers can soften harsh sunlight or artificial light sources. In situations with strong, direct sunlight, using a diffuser can create more even and pleasing illumination on your subjects.

6. Flash Photography:

- Use your flash when necessary to balance exposures or to fill in shadows. Photojournalists often use flash to illuminate subjects in dimly lit environments or to capture details in situations with mixed lighting. According to GCF Global, an eLearning platform, many photographers actually use their flash on sunny days to reduce unwanted shadows. This is known as fill flash because it "fills in" the shadows with additional light. You should only use fill flash when you notice problematic shadows; in other situations, flash may make the photo look worse.

7. External Flash Modifiers:

- If you have an external flash unit, consider using modifiers like diffusers, softboxes, or bounce cards to soften and control the flash's output. This helps avoid harsh shadows and overexposed highlights. When photographing individuals, especially in controlled settings, consider using controlled flash setups like three-point lighting or softboxes to achieve studio-like results in the field.

8. Environmental Lighting:

- Embrace the existing lighting within the environment, such as streetlights, signs, or indoor lighting. These can add context and atmosphere to your photojournalistic images. In low-light situations, consider using long exposures to capture movement and drama in events like protests, marches, or performances.

9. Balancing Ambient and Artificial Light:

- In situations where you're capturing both the subject and their surroundings, consider using your flash to balance ambient light with the main subject, ensuring that both are correctly exposed. For environmental portraits, use ambient light to capture subjects in their natural surroundings. Pay attention to how the existing light interacts with the subject and setting.

10. Composition and Light Direction:

- Pay attention to the composition of your shots. Place the light source and your subjects in ways that create visually interesting and well-lit images. Be mindful of white balance settings to ensure that colors are accurate, especially when using mixed lighting sources. In post-processing, make subtle adjustments to enhance the image without altering the reality of the scene. Maintain the integrity of the photograph for ethical reasons.

11. Silhouettes and Backlighting:

- Use backlighting to create silhouettes when the situation calls for it. Position your subjects in front of a bright light source, making sure their shapes are well-defined. Backlighting can be used to emphasize the shape and outline of a subject.

This technique can be particularly effective when capturing protests, rallies, or events.

12. **Environmental Portraits:**

- When photographing people in their natural environments, use a combination of available light and fill flash to highlight your subjects and their surroundings effectively. Creative gels can add unique color effects to your images. Consider using them to convey mood or atmosphere, especially in feature stories.

13. **Respect Ethical Guidelines:**

- Ensure that your lighting techniques adhere to ethical standards in photojournalism. Avoid overly manipulating images or staging scenes in a way that misrepresents the reality of the situation.

14. **Capture Authentic Moments:**

- Photojournalism is about capturing real, unscripted moments. Use lighting techniques to enhance the mood and emotion of the scene, but never compromise the authenticity of the story. In photojournalism, it's often about capturing candid, and without posed moments. Use available light to create authentic, documentary-style images that convey the story's real emotions

15. **Adapt to Changing Conditions:**

- Photojournalists often work in dynamic and unpredictable environments. Be ready to adapt your lighting techniques to changing lighting conditions or unexpected developments in the story. In sensitive or conflict situations, being unobtrusive is essential. Use available light or minimal flash to avoid drawing attention to yourself.

16. **The golden hour:**

- The majority of photographers find that their photos look best when taken just before the sun sets, or just after it rises. According to GCF Global.org, this is commonly known as the "**golden hour**".
- Since the sun is lower in the sky, it creates **longer, softer shadows**. These shadows can add contrast to your photos while still giving them a soft, pleasant appearance. In addition, the sunlight has a more golden color, which adds warmth to your photos.



Photographic lighting techniques encompass a variety of methods used by photographers to achieve specific lighting effects, moods, and styles in their images. Different lighting techniques are employed depending on the subject, purpose, and desired outcome of the photograph.

In any photo, the light will fall on the subject in a certain way, creating highlights (bright areas) and shadows (dark areas). The highlights and shadows create contrast, which can help to make the photo more interesting but can also create problems in some situations. For example, if you're taking a portrait you probably don't want your subject's face to be covered in shadow or overwhelmed by harsh light. You'll usually want a balance of highlights and shadows so your subject's features are clearly visible.

Light Intensity is the quantity brightness of the light. The light ratio is the difference in intensity between the areas that receive the most light and those that receive the least. The lighting ratio is high on a sunny day or in a room with bright lights. On a cloudy day or in dim indoor light, the ratio is probably low.

Light Colour variations in the colour of light makes little difference in black and white photographs. However, they produce a wide variety of effects in colour pictures. The colour of light varies according to its source, though most of these variations are invisible to the human eye.

Light Direction refers to the direction from which light strikes a subject. Light may reach a subject from the front, the back, the side, or the top. Light may also strike the subject from several directions at once. To fill in the shadow, additional light from an electronic flash can be used. This technique is called Flash fill-in

There are three very popular types of light: backlight, front light, and sidelight (where the light comes from behind the subject, from in front of the subject, and off to the side of the subject, respectively). But you can also shoot with upward light, where the light comes from underneath your subject, or with overhead light, where the light comes from above your subject. Note that you can mix lighting types for interesting results—for instance, you might use overhead light to create interesting shadows, but then put a reflector under your subject's chin for a bit of upward light to cancel out dark areas.

In photojournalism, the primary goal is to capture authentic moments and tell a story through images. Being proficient in various lighting techniques allows photojournalists to work in different environments and lighting conditions while delivering powerful visual narratives. Follow the following tips:

- 1.** Use the right type of light quality for your subject (hard, soft or reflected).
- 2.** Don't mix light sources with different colour temperatures.
- 3.** Key lights don't always have to be pointed straight towards a subject – try out other angles.
- 4.** Hard lighting can be diffused through modifiers to capture more depth and texture.
- 5.** Use a fill light (or a reflector) to eliminate shadows on a subject.

Applying lighting techniques in photojournalism requires adaptability and a deep understanding of the story you're covering. The goal is to use lighting to enhance the storytelling process and create images that resonate with the audience while maintaining the integrity and truthfulness of the story.

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