Topic 008

Applied Lighting Design Method - Overview

"**Lighting** may be defined as the use of light to create a sense of VISIBILITY, NATURALISM, COMPOSITION and MOOD, (or ATMOSPHERE)".

Visibility:

Visibility is often considered to be the most basic and fundamental function of stage lighting. What we don't see, we seldom clearly understand. Visibility is dependent on far more than just the intensity of light. Other factors such as; contrast, size, color and movement all can influence visibility. Distance, age and the condition of the eye also play important roles in visibility. "Good visibility is essentially selective. Its purpose is to reveal things selectively in terms of degrees of acuity". - (S. McCandless, 1933).

Naturalism (and Motivation)
Naturalism provides a sense of TIME and PLACE.
Stage settings may be highly realistic or completely abstract, absurd, or stylized. If time of day is important or the place is realistic, then MOTIVATION is often provided by sunlight, moonlight, firelight, lamplight, or other naturalistic stage sources.
Style concepts include: naturalistic, un-naturalistic, realistic, surrealistic, pointillist, futuristic, minimalistic, impressionistic, expressionistic, expansionistic, abstract, modern, religious, romantic, Victorian, primitive, gothic, Elizabethan, Georgian and many, many more.

Composition:
Composition refers to the overall pictorial aspect of the stage or SET, as influenced by the lighting. Composition also deals with the FORM of an object. A stage scene may be broadly flooded with soft, even lighting, revealing every object equally, or it may be illuminated by highly localized lighting on the actors only - or anything in between. So, composition in lighting must reveal actors, objects and scenery in proportion to their importance, by building a visual picture.
Composition concepts include: balanced, unbalanced, symmetrical, asymmetrical, simple, complex, abstract, geometric, fragmented, symbolic, dynamic, linear, random, crude, horizontal, vertical, diagonal, and many more.
Mood (and Atmosphere)
Mood considers the basic psychological reactions of the audience. If other lighting elements have been properly applied, the result is a specific MOOD, created by the lighting design. Lighting can cause an audience to feel a wide range of different emotions. Feelings of 'happy, sad, content, horrified, excited, (and often 'bored'), all depend on a wide number of psychological and physiological factors. This is also true in respect to how the audience interprets naturalistic or

atmospheric moods, such as sunny, cloudy, rainy, lightning, etc. The stage lighting designer rapidly learns that: "Things are not what they are, things are what they appear to be." (author).

Direction of Light
Simply moving a light to a new position alters the effect of the light. When you have the time, have fun and experiment!

Frontal Lighting
Light aimed from the camera's viewpoint reduces modelling of figures and minimizes their surface textures.
For some faces, indirect frontal lighting is 'pretty' lighting—it smooths out face wrinkles and minimizes other skin bumps and variations.

Edge Lighting or Rim Lighting
Lighting from the side emphasizes texture and modelling. It's good for bringing out interesting surfaces, dramatizing facial features and highlighting objects in relief.

Under Lighting
This gives a wonderful, scary image, good for grotesques. Because it inverts the usual facial modelling and shadowing, it's a device used for mystery stories.
One thing to be careful about—hand gestures may sometimes throw shadows onto the face.

Overhead Lighting
This can leave the eyes looking like deep black cavities. It's not a flattering lighting, but it can emphasize some moods—possibly isolation or desolation. It certainly works well for interrogation scenes. More often than not, though, it's a mistake, which happens from not paying attention to the placement of location lighting. If you seat someone under a ceiling light because that's where the room is brightest, you'll get back to the edit room to discover that your image is dull, disappointing and filled with people with cavernous eyes. However, a large soft light is sometimes shone from overhead through diffusion material to raise the general light level in a studio set. It can send an overall wash of light into the set, letting individual key lights isolate and accent the actors and important set elements.

Back Lighting
Lighting from behind can outline a figure or object with light. It can be beautiful used on its own. But usually a back light is part of a total lighting set-up, adding its halo effect to separate the figure from the background.
Back light is terrific for illuminating smoke, which tends to disappear with front lighting. You need to have a dark background and the back light set just right, then the smoke will 'materialise' in your video image. For those for whom the screen dimension is not a smoke-free zone, cigarettes, pipes, 'steaming' mugs of coffee, genies, even guns, can waft and coil their varied spirits for posterity onto magnetic tape.

Silhouette Lighting
This is achieved by lighting the background but letting no light fall on the camera side of the subject. The subject's outline is apparent, but little or no surface detail can be seen. The background can either be lit from the front, or, if it's a translucent screen, it can be lit from behind. Before you record this image, make sure there are no hot spots on the rear wall.

Indirect 'Firelight'
You can simulate the flicker of a campfire. To do this, place a shallow tray of water in front of your actor and direct a light downward onto it. You may decide to put a red gel on the light, too. Then you have an assistant, who remains out of shot, agitate the water. The light bounces erratically off the wavelets and produces an effect like firelight on the actor's face. Rippled chrome plastic sheeting (you can get wrapping paper like this) wrapped around a board will give you a similar effect. And it will allow you more flexibility because you can tip it and angle it as needed. With the water tray you're limited to a horizontal and immobile reflecting body, so you have to get your actors right over close to it. Another old firelight effect is achieved by hanging strips of colored gels from a stick and waving them in front of the light source.

Colored Lighting
Lights can be given different colors by attaching gels in front of them. A gel is made of a heat-resistant material which won't melt or burn when attached to very hot lights. It's not just colored plastic from the newsagent, and needs to be purchased from a supplier.
Gels are expensive, and are usually bought by the roll and then cut off into the sizes needed for each shoot. They're slippery and uncooperative when you try to carry them about, but if they're rolled up, secured with elastic bands and stored carefully at the end of the shoot, gels can be reused many times. It's worth taking care of them and not just crumpling them into the light kit.
Gels can be clamped into metal frames which can either be attached directly to the light fixture or held separately in front of it on a *C-stand*. Alternatively, gels can be pegged to the *barn doors*—those four black metal flaps mounted on the outer front rim of the light fixture—using wooden clothes pegs (not plastic ones, which will melt). Gels come in any colour. (It's fun to look through the manufacturer's sample book!) The most frequently used colours are blue and red.
There are special blues which are calibrated to raise the color temperature of incandescent lights to that of sunlight. You can get them in *half daylight*, *quarter daylight* and *full daylight*. They're useful if you need to match a portable light to sunlight on a location shoot.
The darker blues cut down the intensity of the light quite dramatically, so if you want lots of blue light, you'll need heaps of lights. They can give coolness to the image, and can be used to indicate night time. The reds are popular when people are taping musicians. They can give a feeling of nightclub lighting or theatre lighting. Yellows can be tricky. They can make people look rather sallow. But a peach colored gel, on the other hand, can make people look healthier than they are.
Colored accent lights, in an otherwise normal looking image, have become quite popular. And then there are those images which look red all over.

Spot Light and Flood Light
Some lights have movable globes. By turning or sliding a knob you can vary the type of light between *spot light* and *flood light*. The knobs are labelled with arrows showing which way is spot and which is flood.
Spot Light
When the globe is in the spot position, it's held well back inside the light fixture's curved metallic reflector. This causes the beam of light to be controlled by the reflector. It produces a limited and intense, direct beam of hard light.

If you watch someone walk across this beam, you'll see that the intensity of it varies. It's bright in the middle, and much less bright at the sides.

Flood Light

When the globe is in the flood position, it's thrust forward towards the open front of the light fixture's reflector. This allows less control of the light beam, which spills out the sides. The result is a less intense, broader spread of direct light. It's a somewhat softer light, too. The intensity of the light beam is more even across its spread, just dropping off a bit at the edges.

Fresnel Lights

Fresnel lights have a glass lens with raised circular ridges of glass on its outer surface. This lens is mounted on the front of the light fixture and can be swung aside like a door when you need to change the globe.

On a fresnel lamp, when you move between spot and flood, the whole inside of the lamp—both globe and reflector—moves forward and backward. The focusing of the beam is done by the glass lens, rather than by the relationship between the globe and the reflector.