

Lighting



Three-Point Lighting



Three lights

- key light (lights key side)
- fill light (lights dark areas)
- back light (halo)

Key Light



Fireplug by Christophe Bouffartigue

Key Light



- main light
- dominant angle
- darkest shadow
- creates specular highlights

Fill Light



Fill Light



- extend illumination
- soften light
- simulates ambient (reflected, secondary) light

Fill Light



- test fill lights and key lights separately
- can use false colors
- use multiple fill lights

Multiple Fill Lights



Just Fill Lights

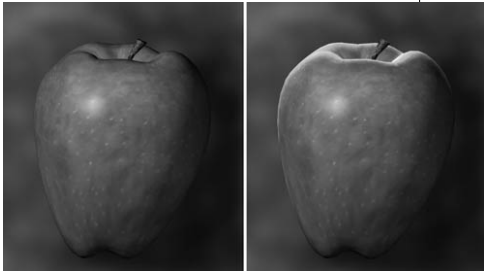


Back Light



- defining edge, halo effect
- distance objects from background

Back Light



Jeremy Birn. Tutorial on 3point light
(<http://www.3drender.com/light/3point.html>)

All Lights



Just Back Lights



Another Example



Key Light Only

Jeremy Birn. Tutorial on 3point light
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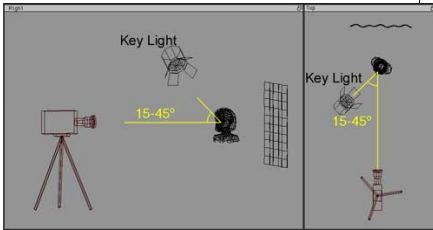
Positioning of Key Light

- spot light
- 15-45 degree to side
- 15-45 degree above camera

Jeremy Birn. Tutorial on 3point light
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Positioning of Key Light



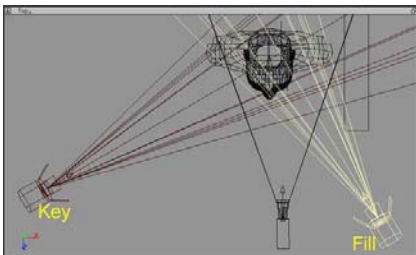
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Positioning of Fill Light

- opposite of key light (wrt camera)
- lower than key light
- at most 50% of key-light (add up lights)

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Positioning of Fill Light



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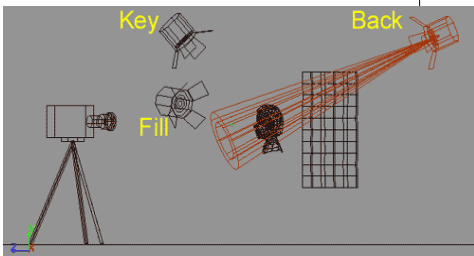
Positioning of Back Light



- behind the subject
- above camera
- lower than key light
- at most 50% of key-light (add up lights)

Jeremy Birn. Tutorial on 3point light
(<http://www.3drender.com/light/3point.html>)

Positioning of Lights



Jeremy Birn. Tutorial on 3point light
(<http://www.3drender.com/light/3point.html>)

Back Lights in Computer Graphics



- light behind subject will not create halo (unless subject has fuzzy edges)
- might have to use multiple lights, not entirely behind subject

Lighting



All Quiet on the Western Front

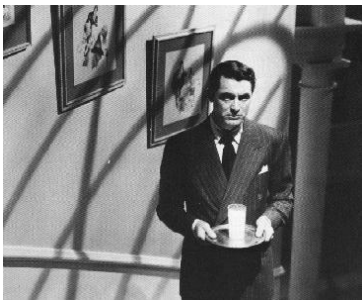
Lighting



I was very much aware of the superiority of the photography in American movies to that of the British films. At eighteen I was studying photography, just as a hobby. I had noticed, for instance, that the American always tried to separate the image from the background with backlights, whereas in the British films the image melted into the background. There was no separation no relief.

Alfred Hitchcock in interview with François Truffaut

Lighting



Suspicion

Lighting



All Quiet on the Western Front



Lighting



Are Parents People?



Lighting



Great Expectations



Lighting



Nosferatu

Lighting



Great Expectations

Lighting



Destiny

Low-angle Key Light



Cat and the Canary

Low-angle Key Light



Side Light



Dr. Caligari

High-Angle Lighting



Dr. Mabuse

Key-to-Fill Ratio



Ratio
intensity key light : intensity fill light

Key-to-Fill Ratio ∞ :1



Key-to-Fill Ratio 4:1



Key-to-Fill Ratio 2:1



Low Key-to-Fill Ratio



- interiors with high ambient light (reflective surfaces such as tiles, etc.)
- lack of strong sunlight (overcast days, scattered light)
- creates cheerful mood

Jeremy Birn. (digital) Lighting & Rendering

High Key-to-Fill Ratio



- dramatic
- night-scenes

Jeremy Birn. (digital) Lighting & Rendering

High Key-to-Fill Ratio



Maltese Falcon

High Key-to-Fill Ratio



Maltese Falcon

Lighting



Queen Christina



Queen Christina

Lighting



Queen Christina

Shadows without Light



Shadows without Light



Shadows without Light



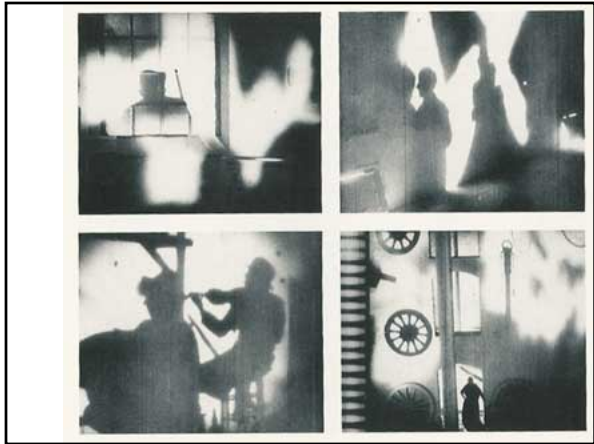
Shadows



- can hit at world outside the scene
- add atmosphere












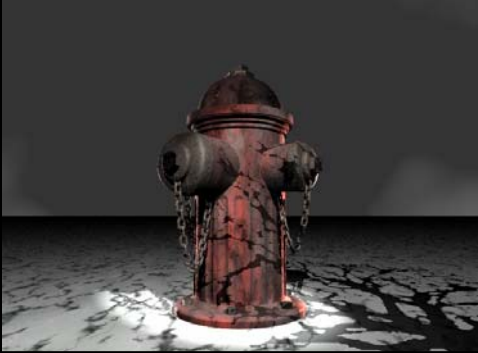
Gobos and Cookies

- masks between light and scene
- throw interesting shadows



http://www.lighttrader.com/rosco_gobos.htm

Gobos and Cookies



Shadows

- indoor scene
- light through window



Exercise

