

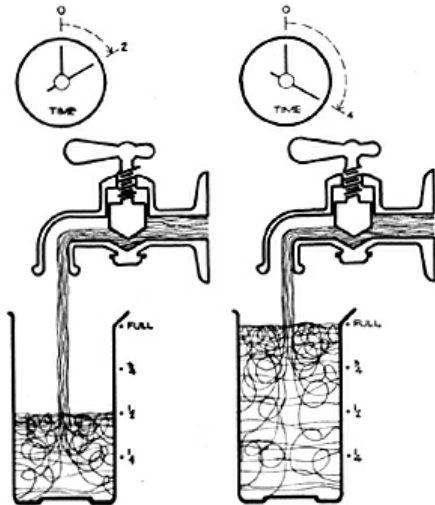


GraphicDesign

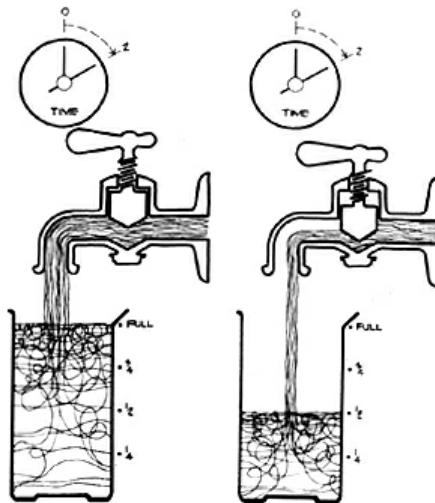
Fine & Applied Arts Department
Parkland College / Champaign IL USA

GDS 251: Applied Photography
Instructor: Paul Young

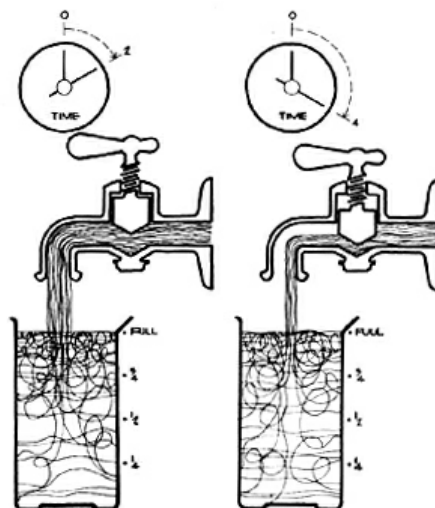
Aperture and Shutter Speed
(from "Photography" by Barbara Upton and John Upton)



The amount of light that enters a camera, like the amount of water that pours from an open faucet into a glass, depends on how long the flow of light continues. If a glass is filled halfway in 2 sec, it will be filled to the top in 4 sec. In the same way, if the shutter is left open twice as long, the film will be exposed to twice as much light.



The flow of light into a camera can be controlled by aperture size just as the flow of water into a glass can be controlled by the faucet setting. Here a faucet running wide open for 2 sec fills a glass. If it runs half shut it fills only half a glass in that time period. The same is true for light. In a given length of time, an aperture opened to any f-stop admits half as much light as one opened to the next larger f-stop. Thus the aperture setting controls the rate at which light enters the camera—in contrast to shutter setting, which controls how long the light flow continues.



The quantity of light that reaches a piece of film inside a camera depends on a combination of aperture size (f-stop) and length of exposure (shutter speed). In the same way, the water that flows from a faucet depends on how wide the valve is open and how long the water flows. If a 2-sec flow from a wide-open faucet fills a glass, then the same glass will be filled in 4 sec from a half-open faucet.