

## Chapter 1 terminology

- camera obscura: box (or room) with a hole in it; used as an optical aid to drawing
- biconvex: a lens which is curved on both sides; thickest in middle
- focal length: distance from the center of the lens to point of sharpest focus; longer distance = greater magnification
- physionotrace: silhouette-making contraption (person sits on one side of a screen, light shines against the person, someone on the other side traces the shadow)
- camera lucida: stick with a magnifying lens on the end of it; another optical aid to drawing
- eidophusikon: miniature theater with slide projections, lighting effects and sound effects
- phantasmagoria: slide show in reverse
- diorama: dark circular chamber with linen paintings seen through a window half lit from the front and half lit from behind
- retinal afterimage: the image you continue to see after the stimulus has been removed
- persistence of vision: a quality of vision which leads to the discovery that because of the existence of the afterimage, if drawings (or photographs) are made of the same object in slightly different positions, and they are looked at in rapid succession, they will appear to move
- zoetrope: a contraption with holes cut into it and pictures drawn on the inside; when spun very quickly, it uses the persistence of vision to create the sense that the drawn object is in motion
- heliograph: the name given by Niepce to his one-of-a-kind plates with exposed images on them

Additional key ideas from chapter 1:

the implications of both the daguerreotype and calotype for the invention of photography

why the calotype is a forerunner of photography as it largely came to be known in the late 19<sup>th</sup> and 20<sup>th</sup> centuries but the daguerreotype was not

the conditions and motivations at the end of the 18<sup>th</sup> and beginning of the 19<sup>th</sup> centuries that led to the invention of what we might think of as “pre-photography”:

If, as John Szarkowsky suggests, there are three sources for the invention of photography (optics, chemistry, and poetry), then optics appears to be a good place to start since it probably provided the first motive through the chance discovery of the effect of light passing through a small hole in a darkened room and producing a reversed image on a white piece of paper.

Optical tools: camera obscura, camera lucida, physionotrace

The contributions of chemistry:

Schulze's "magic words": begins his experiments by attempting to replicate an alchemical experiment

Herschel's blueprint process: the cyanotype and Talbot's photogenic drawings.

These early experiments share the characteristics of placing an object on a chemically treated piece of paper, and exposing it to light. The resulting image is a negative image (solids appear as white rather than dark or black shapes). These processes did not involve the use of a camera.

The cyanotype and photogenic drawing process are very similar, differing primarily in the chemicals used to produce the negative image and in the case of the photogenic drawing, to fix it after the image has been made.

Niepce: produced a positive image instead of a negative (used bitumen of Judea dissolved in lavender oil)

Daguerre: different motivations from the others (entertainment rather than science); also produces a positive image but it is a stable image, relatively resistant to light, with a great amount of detail; proves to be very popular for portrait-making; he also develops a daguerreotype camera

Talbot: invents the calotype; does not get as much attention at the time but it more directly leads to the photographic process we usually think of since he produces a negative image which is then printed as a positive image on paper

Begin comparing the calotype with the daguerreotype – we'll make a chart in class.

PS: Your personal reading log should have all of this information in it (in your own words)!