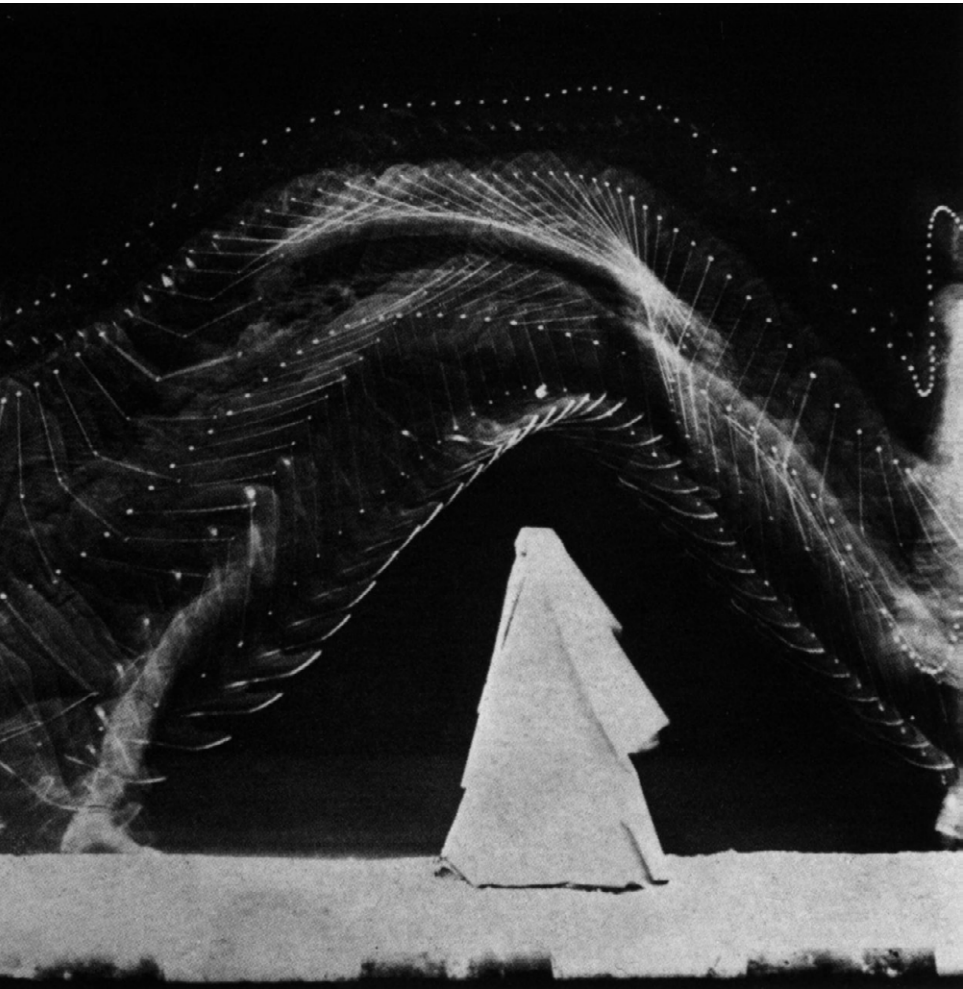


UN-MAKING IMAGE SESSION #1



November 25, 2017

Optics; Photography in its Entirety

Program

1. Introduction to Sarmad's one-year project, "Un-making Image" Golnar Abbasi

History of Sarmad platform, description of the project "Un-making Image", the introduction of the two themes: "Optics, Photography in its Entirety" and "Image and Power"

2. Opening up of the theme "Optics: Photography in its Entirety" Alireza Abbasy

History vs. prehistory of photography, Camera Obscura as the essence of the Projected Image

3. Film screening

Documentary, "David Hockney: Secret Knowledge" (BBC, 2002)

4. Brainstorming/Discussion

We will collectively discuss ideas and possible contributions to the project. If you have work to share or suggestions for a reading/lecture/skype interview/screening, etc, feel free to join the discussion.

“Un-making Image”

The year-long project *Un-making Image*, that is launched with this publication and the corresponding event, investigates two main topics. Each of these topics take six months to develop and be discussed, and the results will be compiled in two publications.

“Optics: photography in its entirety”

Photography is as old as humans’ basic knowledge of optics. Using a camera goes back to several centuries before Christ, to the earliest notes on “camera obscura”: literally a dark room with a hole on one side used by mathematicians, astronomers, philosophers, physicists and architects.

Before the invention of the chemistry that enabled to fix the image produced by a camera (19th century), drawing and painting were used to record the projected image. The aim of this theme is to rethink the practice of image making, particularly in photography and architecture, through re-discovering the very basic roots of the processes and devices used historically to make images. This project will re-read the history of image making devices and their different scientific, artistic and sociopolitical applications, then to reflect on this knowledge and on its current applications in various disciplines.

“Image and Power”

The unlimited utilitarian applications of photography distinguish it from any other medium of art. The supreme power of distributed image, in seduction, normalization, intimidation and repression create an inevitable bond between image-making and power. Some examples include surveying demographics through photographic evidences, in creating future visions for cities, creating “visual economies” through economization of digital images, and advancing consumerism.

At the same time, image has played an unparalleled role in empowering practices of resistance. In many cases, the very same images that were instrumentalized to expand power or violence were used by others as proof of inequality, and as arguments in favor of (fundamental) change. In particular, the role of the image culture would be examined in the context of the Netherlands, and particularly city of Rotterdam. We would look at the role of images from the destructed city of Rotterdam (1940) on its reconstruction, development of the squatting scene, and in “resistance” movements from the 1950s onwards, e.g. the awakening of the minority communities through their literature, publications, newspapers, and films.

The Projected Image

Alireza Abbasy

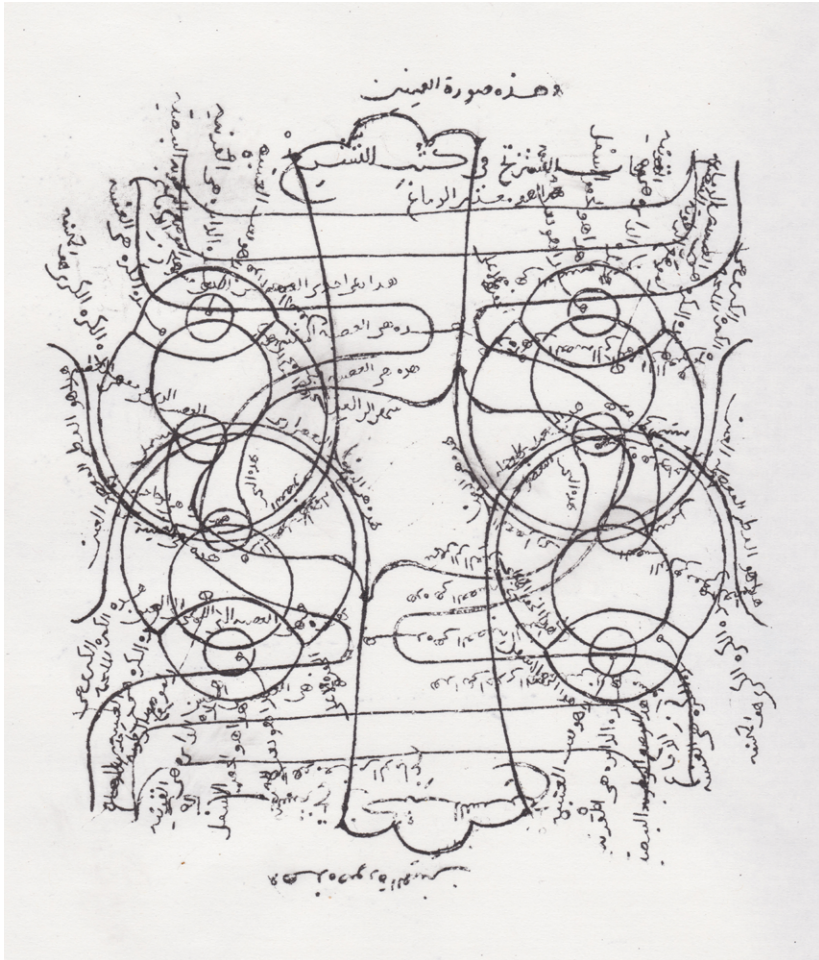
What is generally perceived as the “invention” of photography, in the 19th century, by the introduction of the daguerreotype process, is just the invention of the “chemistry” which allowed us to fix the reproduced image inside a box (camera) on a light-sensitive surface. Photography, however, is as old as humans’ basic knowledge of optics. Seeing what happened after 1839 as the “history of photography” and whatever was before that as the “prehistory” has some serious consequences in narrowing our perception of photography as the art, or simply the practice of image making.

Seeing Camera Obscura as the primitive ancestor of modern cameras is a fundamental mistake. One should even be reluctant to call it a “device”. Literally meaning “dark room”, all there is to camera obscura is a hole. It does not even have to be dark (obscura). Whenever there is a hole, there is an image projection (from the brighter into the darker side of the hole), it just has to be made dark enough for the human eye to see that projection.

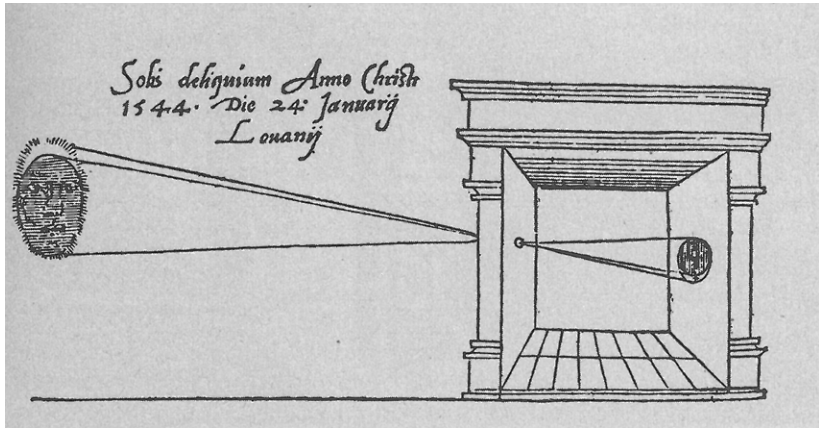
That’s why there are notes on the workings of camera obscura (without calling it that) since antiquity. That is why Aristotle, three centuries before Christ, talks about an image seen through the leaves of a tree or through a hole made by “joining the fingers of one hand over the fingers of the other”.

When camera obscura becomes equipped with a lens, by the late 16th century, “optical camera obscura” is born, which in contrast to the common belief, is nothing different than the modern (analogue or DSLR) cameras.

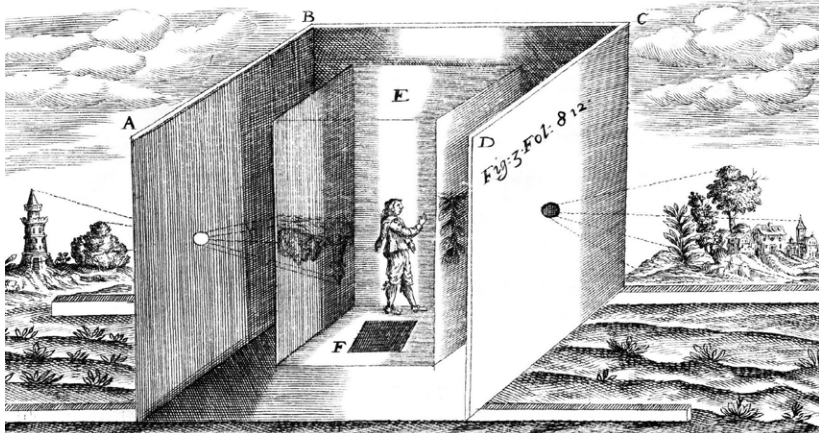
Considering Camera Obscura not as a device, and certainly not as the most basic “camera” possible, but as the essence of the Projected Image is of critical importance in determining our perception of photography, not as the practice of working with manufactured and apparently sophisticated machines, but simply as the practice of image making.



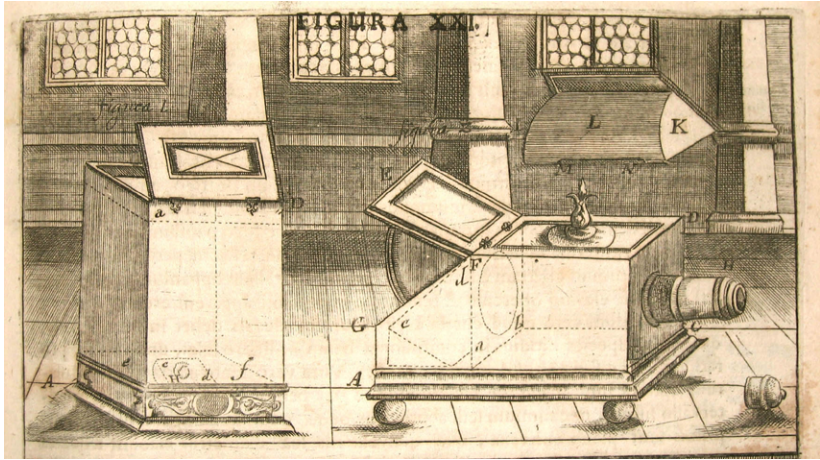
Ibn Al Haytham's (965-1040, born in Basra, Iraq) studies of the eye gave the first modern understanding of lens, retina and optic nerve, as well as the mechanics of vision and perception. An important part of his groundbreaking book "Optics" (Al-Manazir) deals with the Projected Image, through experiments with what he calls "Bayt al-Muthlam", البيت المظلم, or Dark House.
Image: a reproduction of a drawing from the book of "Optics" by Ibn Al Haytham showing the nerve system of human eye, the image was reproduced by Sarmad, re-drawn and printed with a Mimeograph machine.



The oldest employment of camera obscura, dating back to antiquity, was for astronomical purposes, for safely observing phenomena connected with the sun, in particular solar eclipses and sunspots. The Dutch mathematician and physician Reinerus Gemma-Frisius (1508-1555), observed an eclipse of the sun with a camera obscura at Louvain in 1544. A year later he used this illustration of the event in his book *De Radio Astronomica et Geometrica*.



In 1646, Athanasius Kircher (1601-1680) described a camera obscura consisting of two nested darkened rooms: an outer one with lenses in the center of each wall, and an inner one with transparent paper walls for drawing. The artist was obliged to enter the inner room by a trapdoor.



In *Oculus Artificialis Teledioptricus* (1685), Johann Zahn (1641-1707) portrayed two forms of portable box cameras. The long lens tubes were probably for close-up work and for telescopic lenses. The image was reflected by an inclined mirror upwards to a transparent paper screen.



Portable camera obscura used for aviation training and bombing practice, the precursor of modern radar systems. Hamilton Field, California (1935)

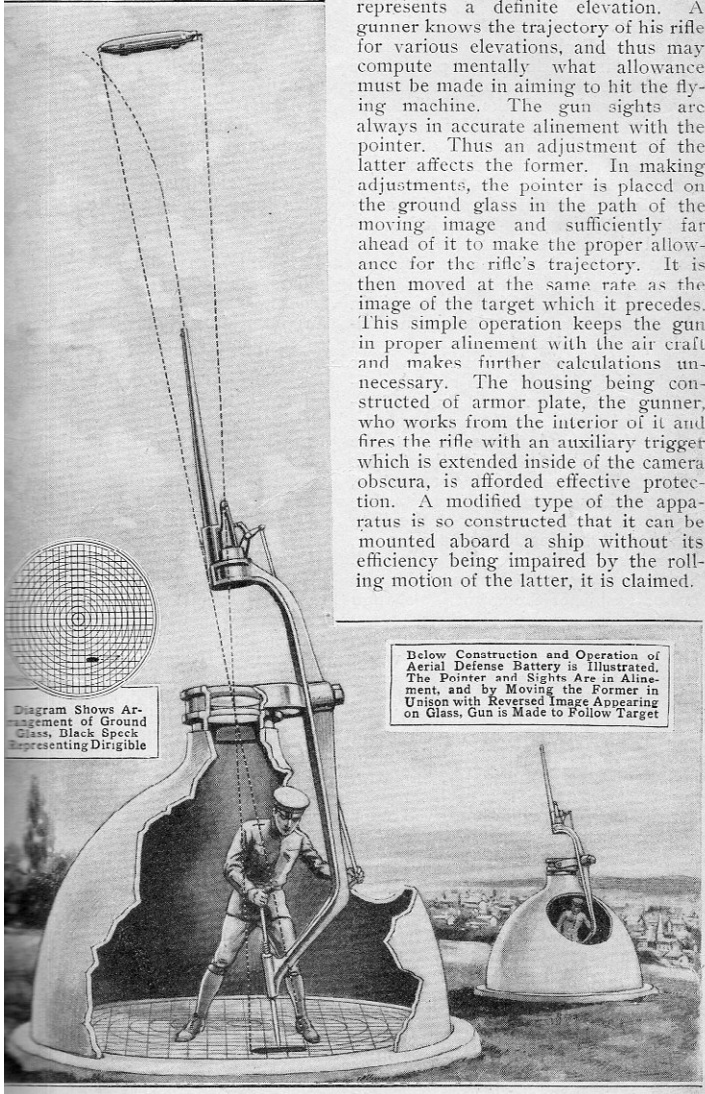


Diagram Shows Arrangement of Ground Glass, Black Spot Representing Dirigible

Below Construction and Operation of Aerial Defense Battery is Illustrated. The Pointer and Sights Are in Alignment, and by Moving the Former in Unison with Reversed Image Appearing on Glass, Gun is Made to Follow Target

represents a definite elevation. A gunner knows the trajectory of his rifle for various elevations, and thus may compute mentally what allowance must be made in aiming to hit the flying machine. The gun sights are always in accurate alignment with the pointer. Thus an adjustment of the latter affects the former. In making adjustments, the pointer is placed on the ground glass in the path of the moving image and sufficiently far ahead of it to make the proper allowance for the rifle's trajectory. It is then moved at the same rate as the image of the target which it precedes. This simple operation keeps the gun in proper alignment with the air craft and makes further calculations unnecessary. The housing being constructed of armor plate, the gunner, who works from the interior of it and fires the rifle with an auxiliary trigger which is extended inside of the camera obscura, is afforded effective protection. A modified type of the apparatus is so constructed that it can be mounted aboard a ship without its efficiency being impaired by the rolling motion of the latter, it is claimed.



Application of camera obscura in war

Cover of the book *Vitellonis Thuringopoloni opticae libri decem* (Ten Books of Optics by Thuringo-Pole Witelo), 1270-1278

Opposite: Semi-automatic anti-aircraft gun (1916), the image of the sky is projected on the floor, through the use of an optical camera obscura. The image of the target on the floor is followed by the skilled technician, who at the right time presses the release button.

David Hockney: Secret Knowledge (documentary)

In his book *Secret knowledge: rediscovering the lost techniques of the old masters* (2001), David Hockney provides evidence and arguments regarding the use of optical devices by Old Masters in their paintings, from the early 15th century onwards. Caravaggio and Jan van Eyck are among the painters whose works are analysed in detail in the book.

He makes the point that those painters created their works using optical projections; and that is how many of those works contain a photographic quality. They almost look like photographs.

Despite all the controversies that arose because of this work, there are certain things in the argument that are quite undebatable.

The usage of camera obscura, mirrors, and lenses in painting for many centuries constitutes a major part in the historical role of optical devices in arts.

This BBC documentary (2002) was inspired by David Hockney's book, and follows him as he explains in detail the procedure of his research work and the arguments that he provides.



Still from the film *David Hockney: Secret Knowledge* (2002).



Stills from the film *David Hockney: Secret Knowledge* (2002).

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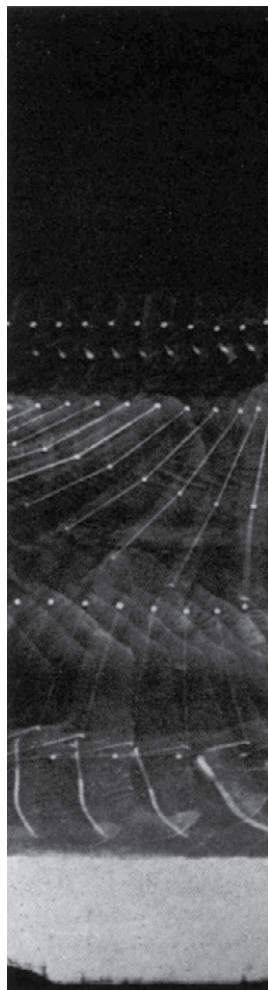
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Sarmad

Sarmad is an independent platform dedicated to *Image*, which deals with various forms of image-making and their technical, artistic and socio-political importance and influence. Working in different disciplines particularly photography, visual arts and architecture, we look critically at the processes and tools of image-making as well as the role of the photographer/visual artist/architect as the main producer of images.

The publications of Sarmad, particularly the (biannual) 'Sarmad Books' series, are representations of the various activities carried out within the platform.



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