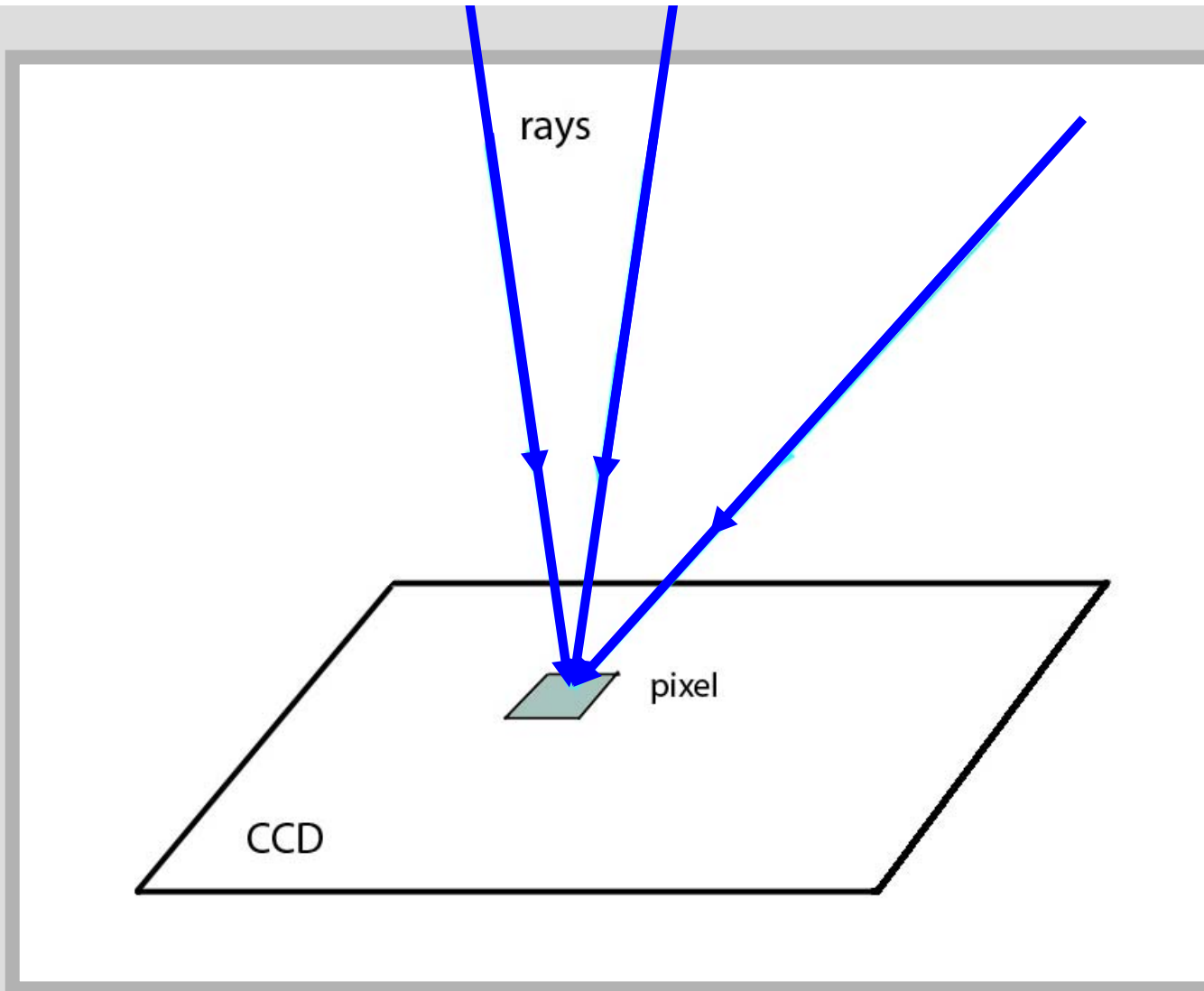
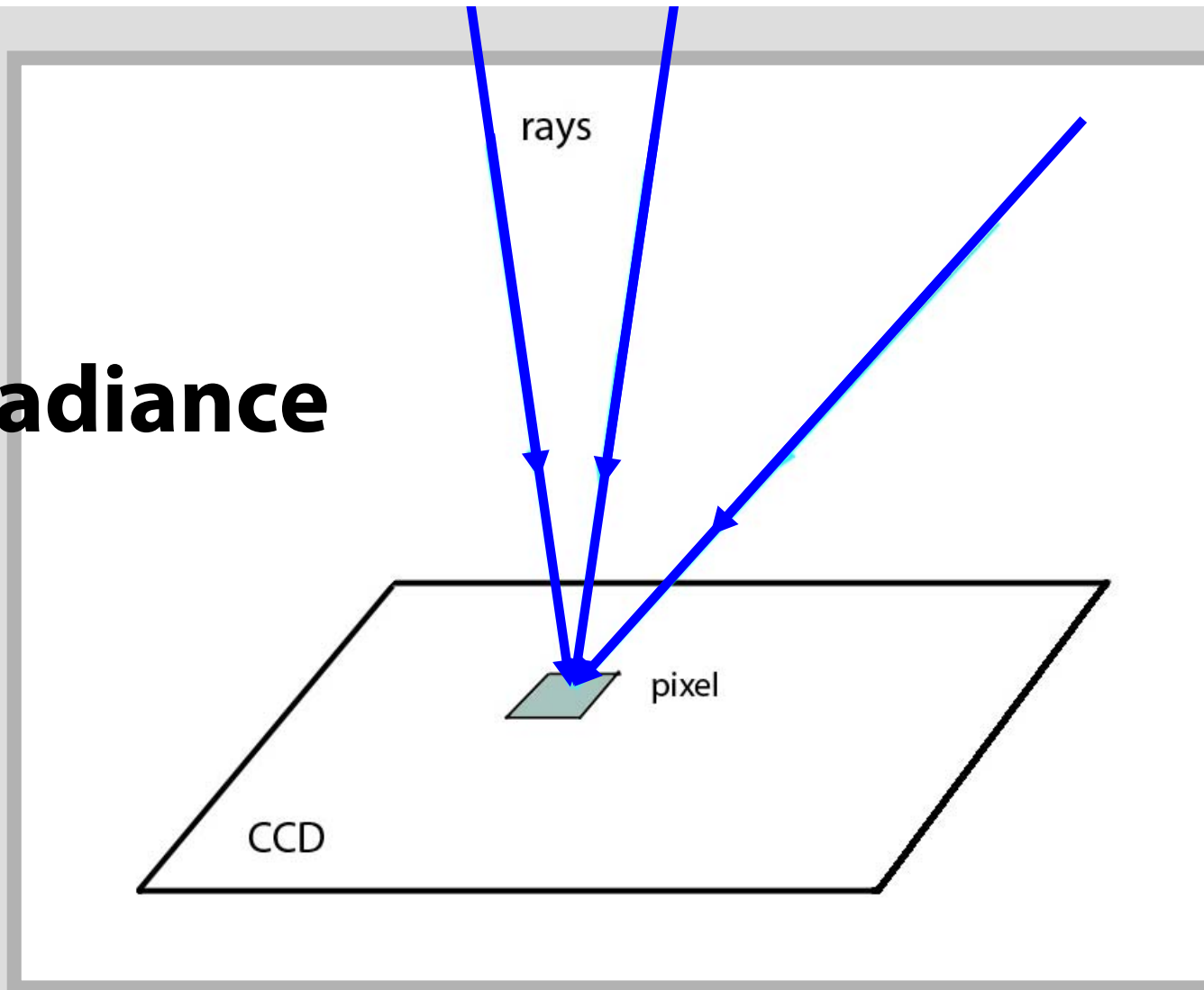


What is **Light-Field** ?

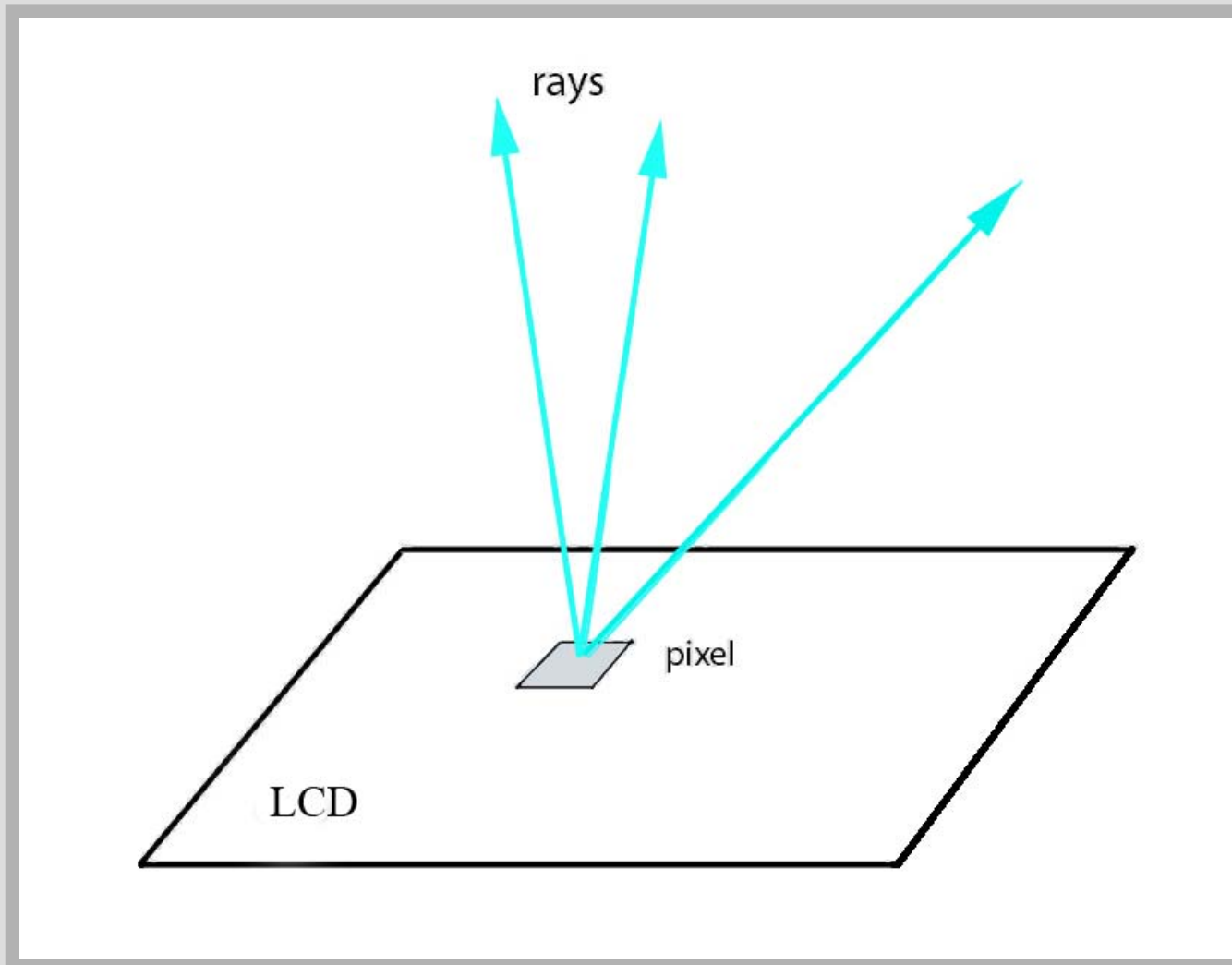


What is **Light-Field** or **directional** imaging?

4D radiance



What is **Light-Field** or **directional** display?

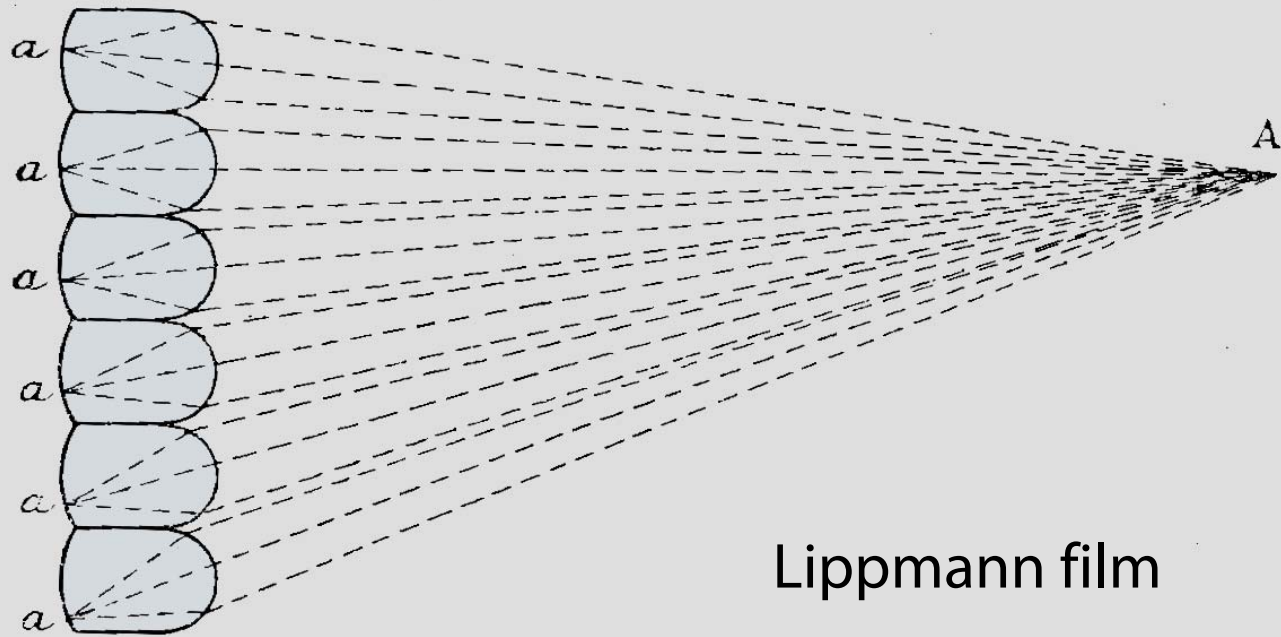


Lippmann



Nobel Laureate for Color Photography 1908

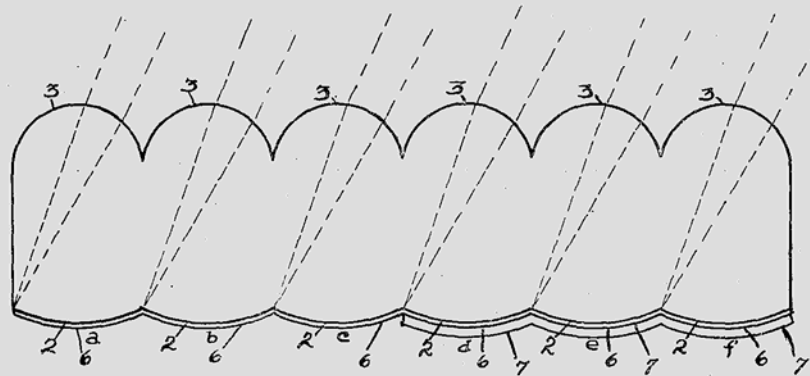
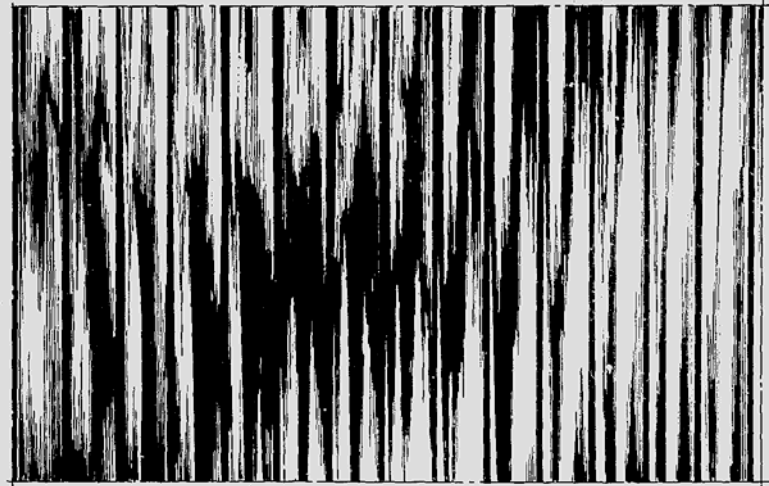
Lippmann



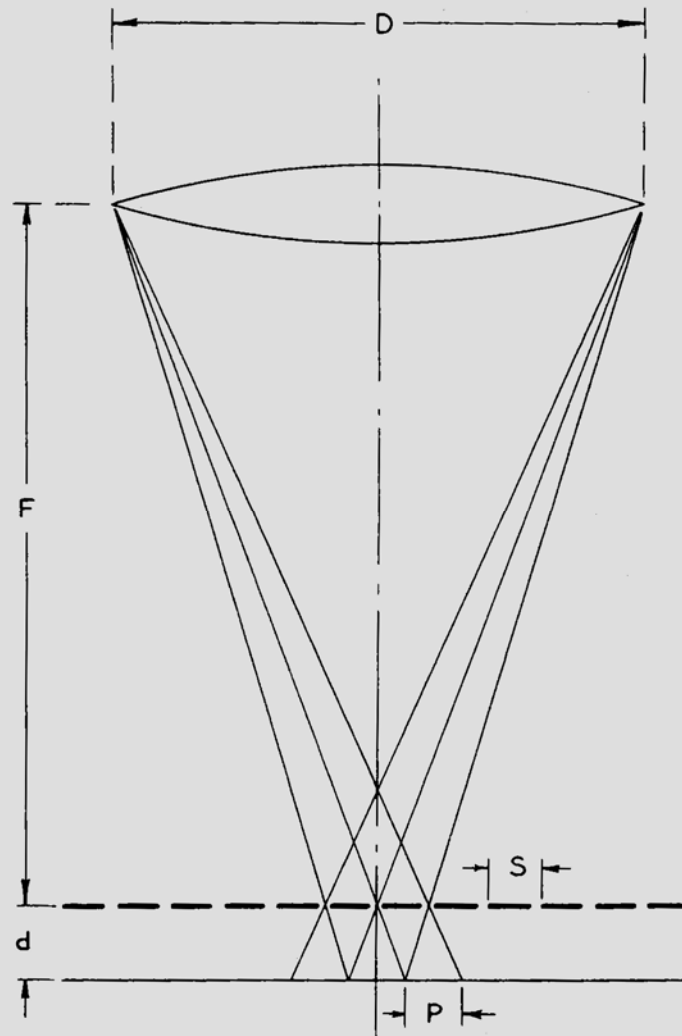
Lippmann film

Integral Photographs (Light-Field Photography) 1908

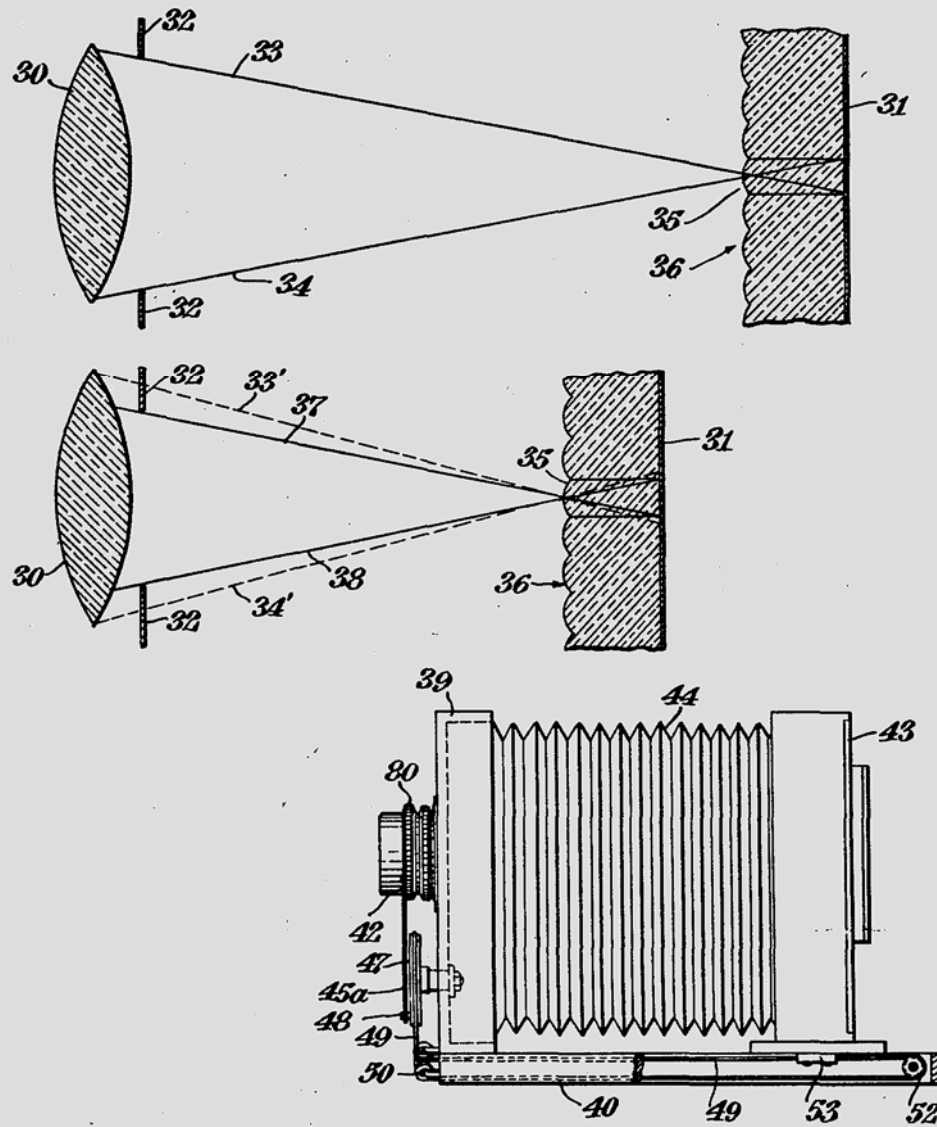
Ives 1930 (Lenticulars)



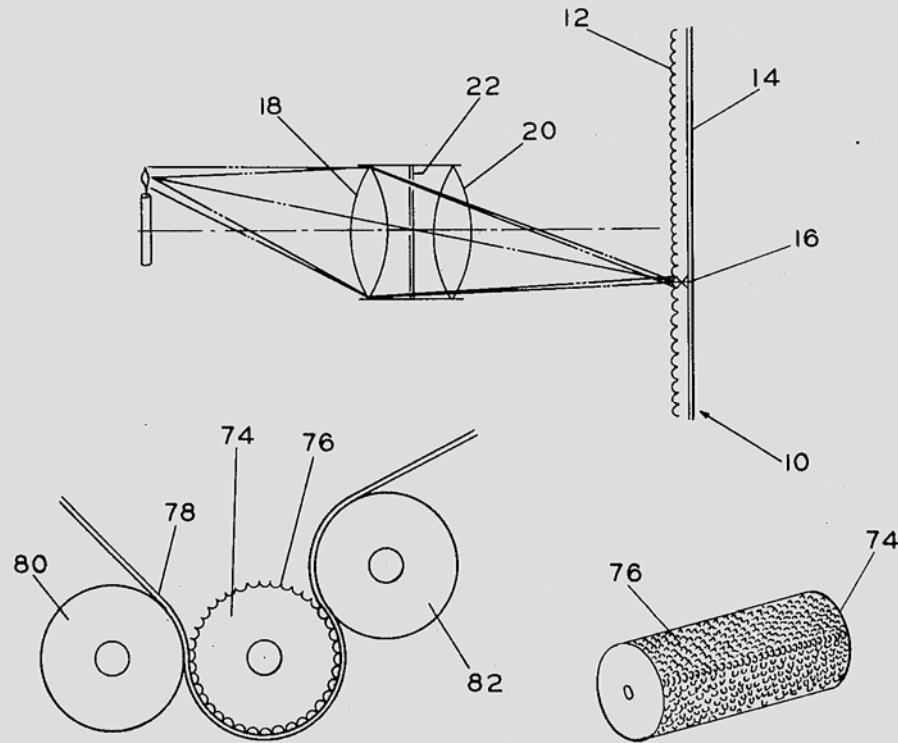
Ives 1930 (Large Lens)



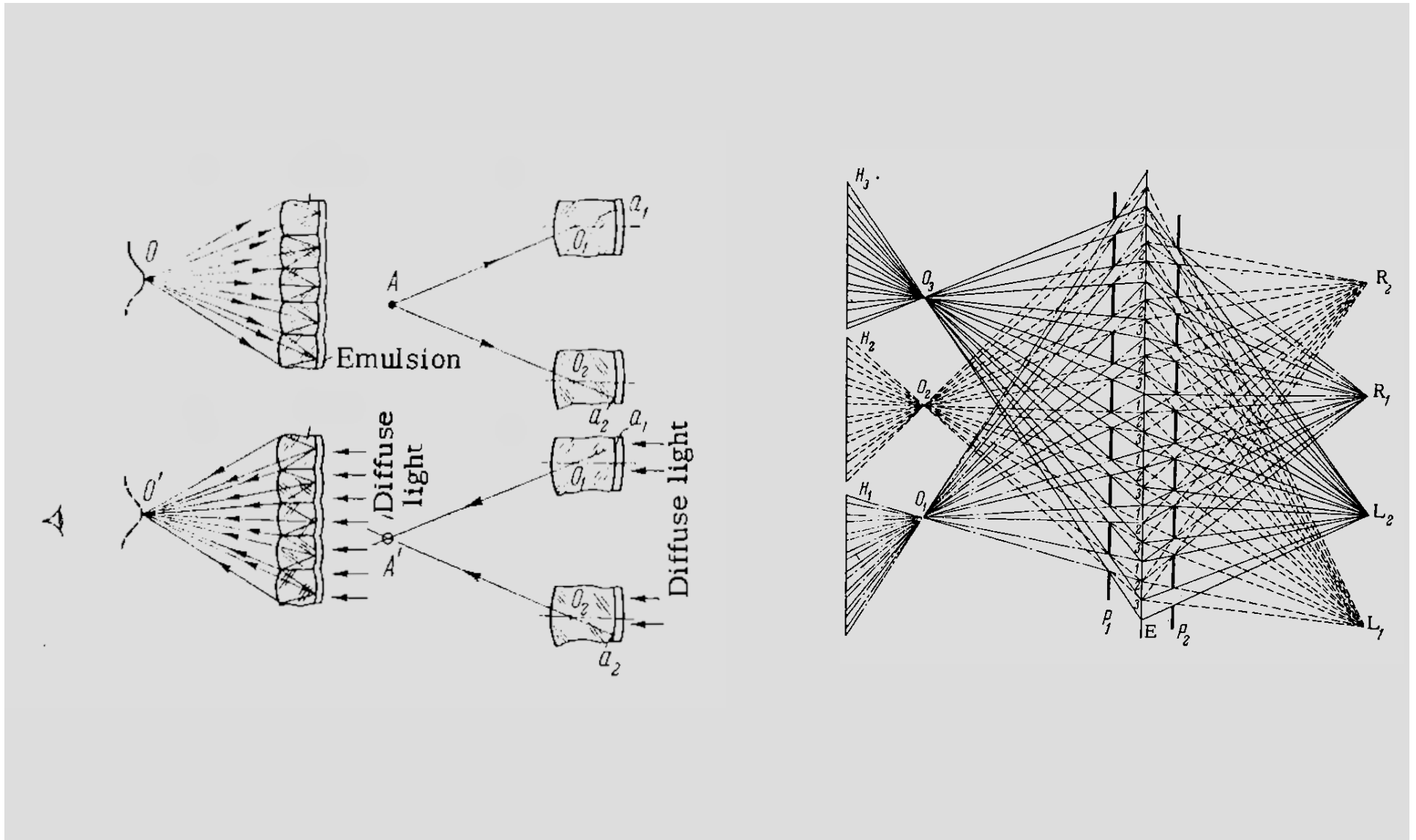
Coffey 1935 (F/# matching)



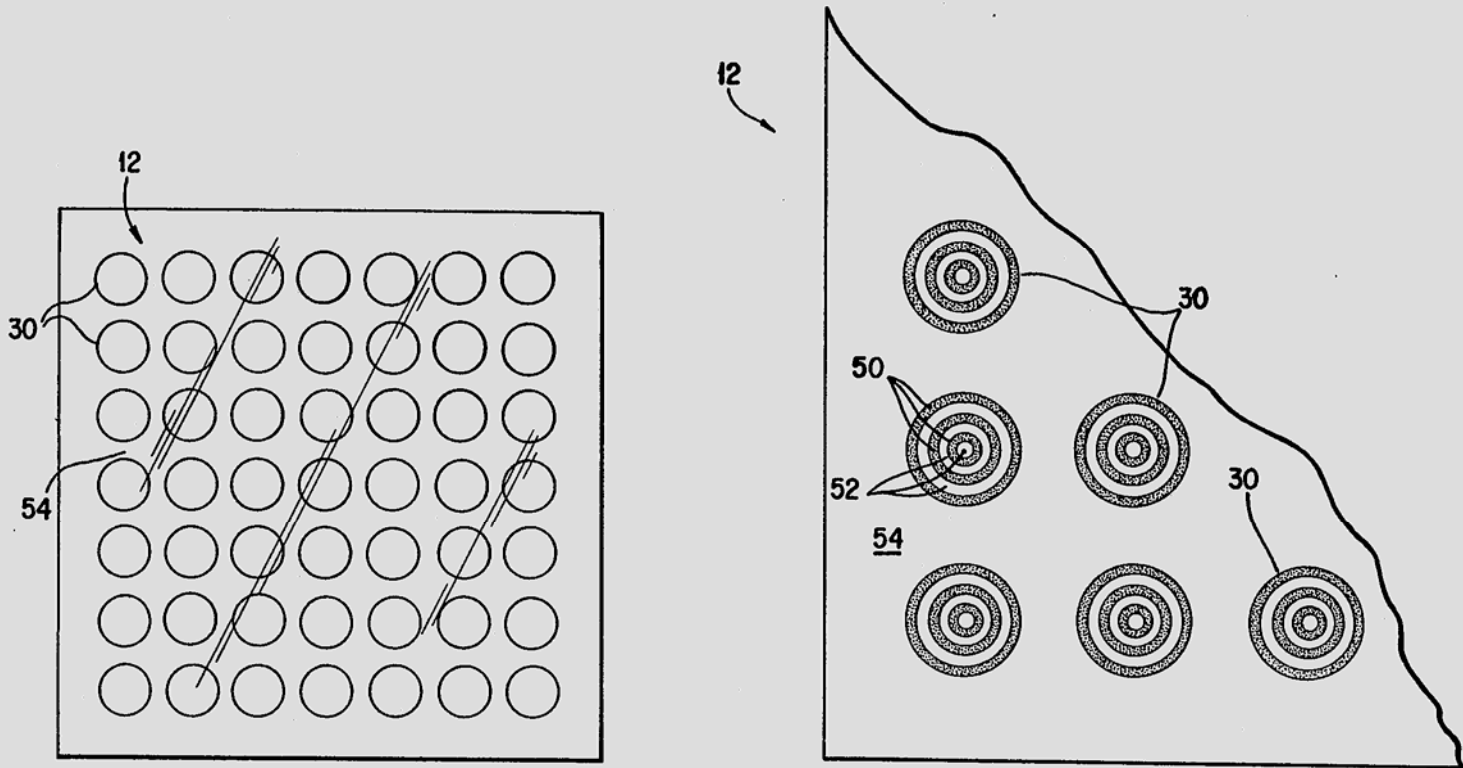
Gruetzner (1952) commercial camera



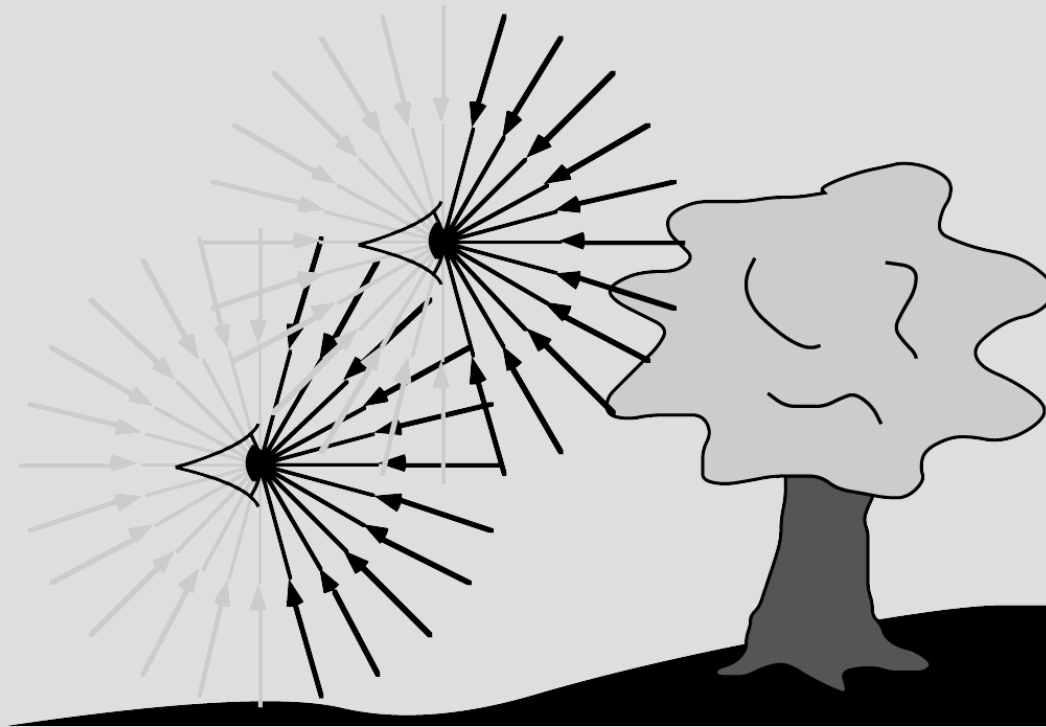
Dudnikov 1970 - 1982 (detailed research)



Ivars 1988 (Diffraction lenses)

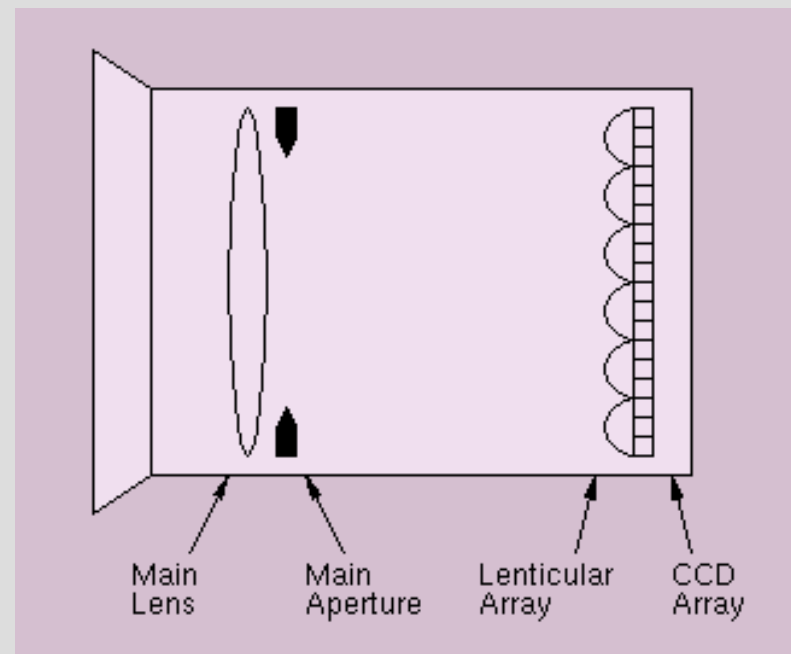


Adelson 1991 (Plenoptic Function)

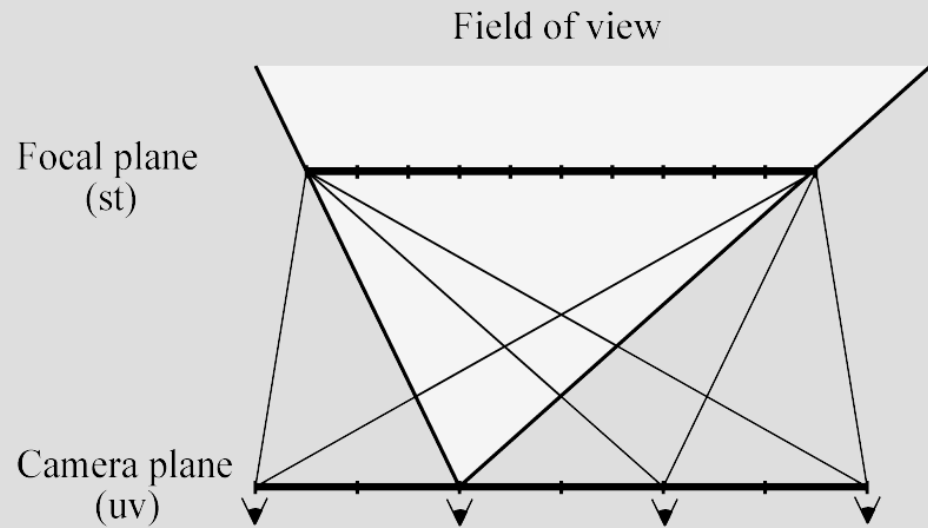
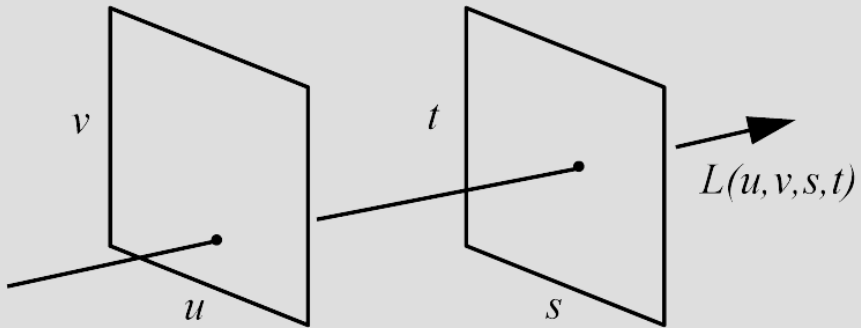


Adelson 1992 (Plenoptic Camera)

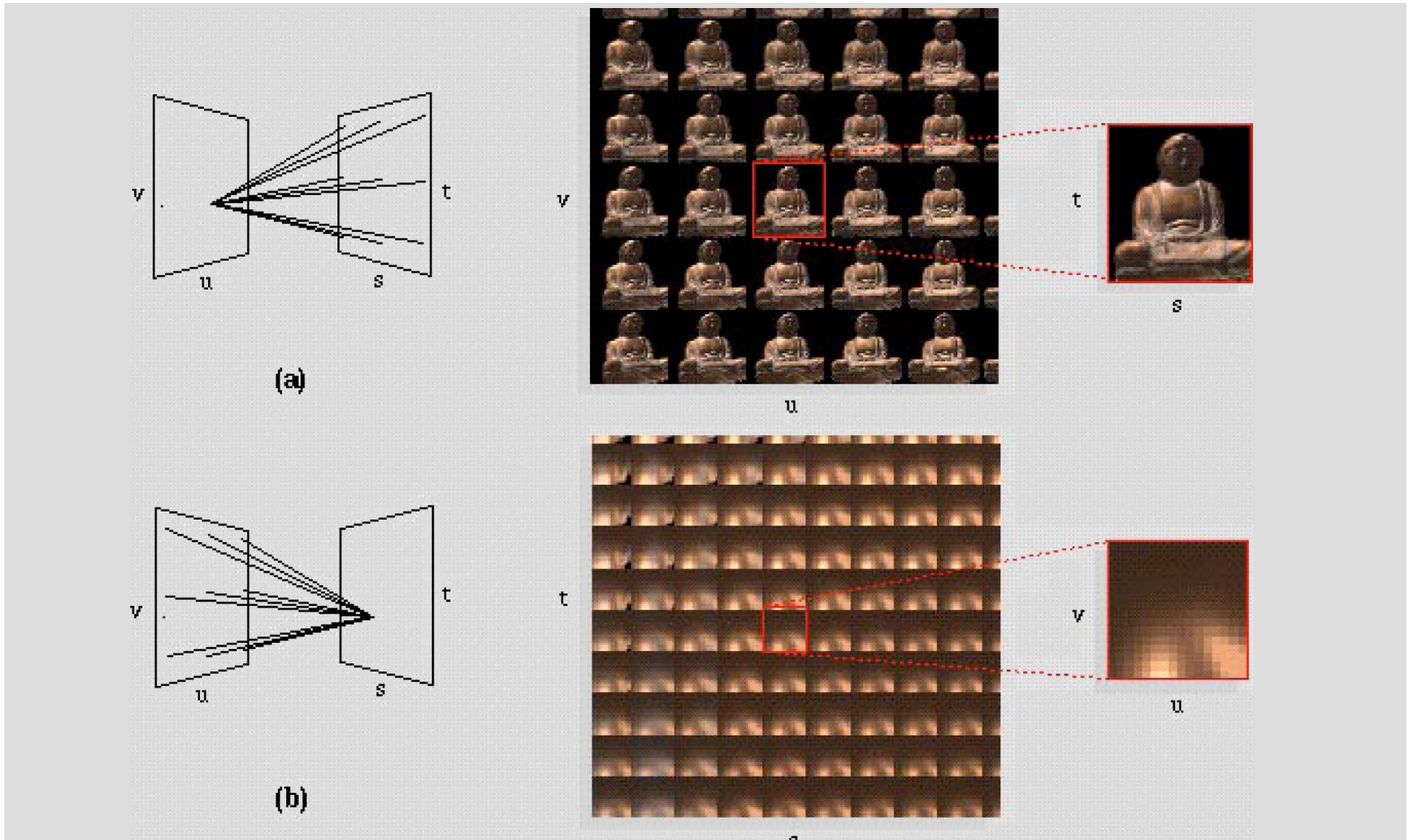
Designed with the idea to solve **Computer Vision** problems



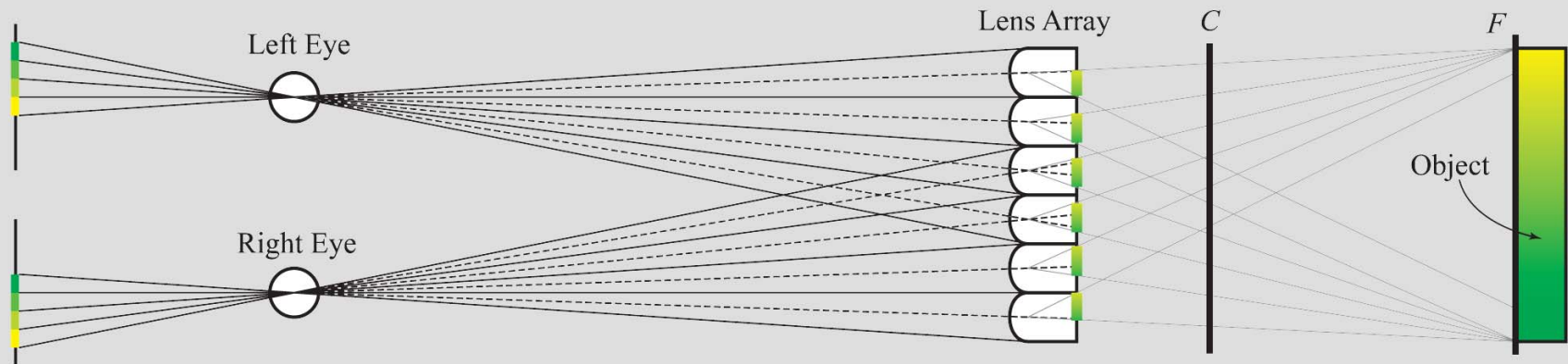
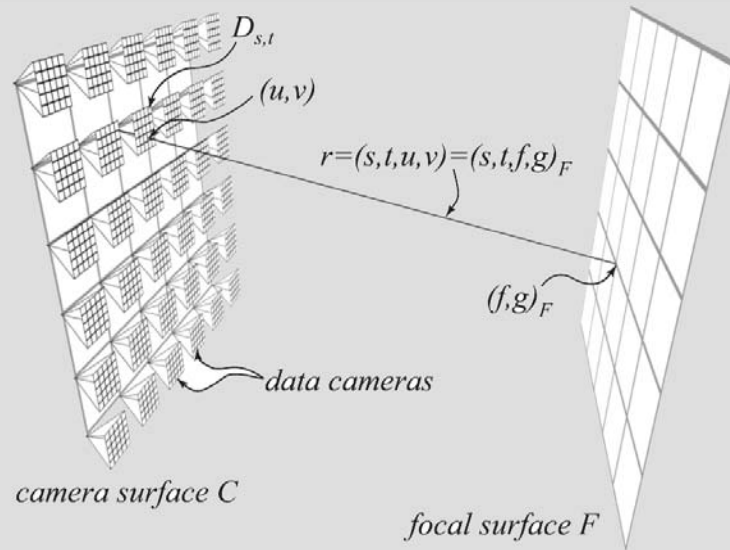
Levoy 1996 (Light Field Rendering)



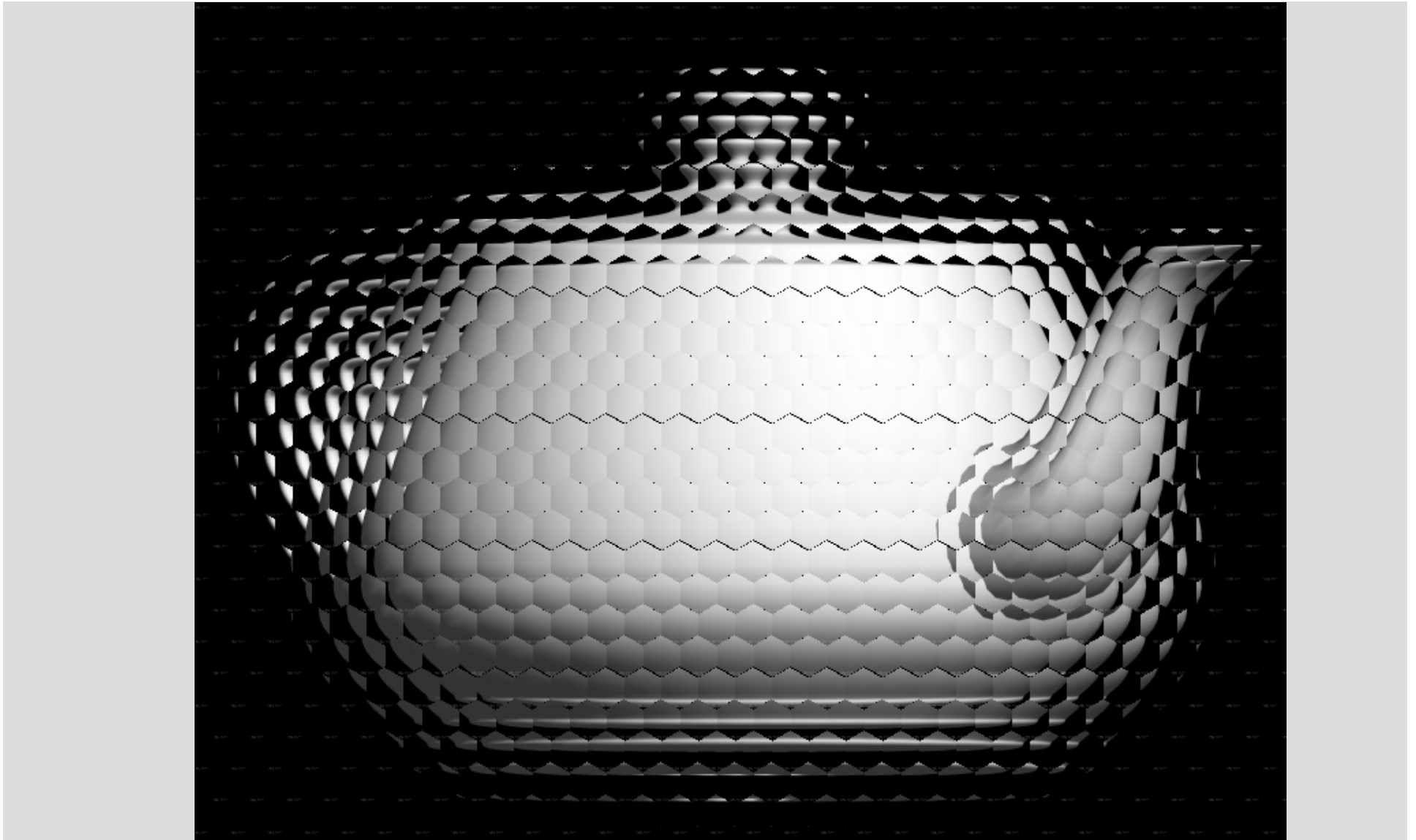
Levoy 1996 (Light Field Rendering)



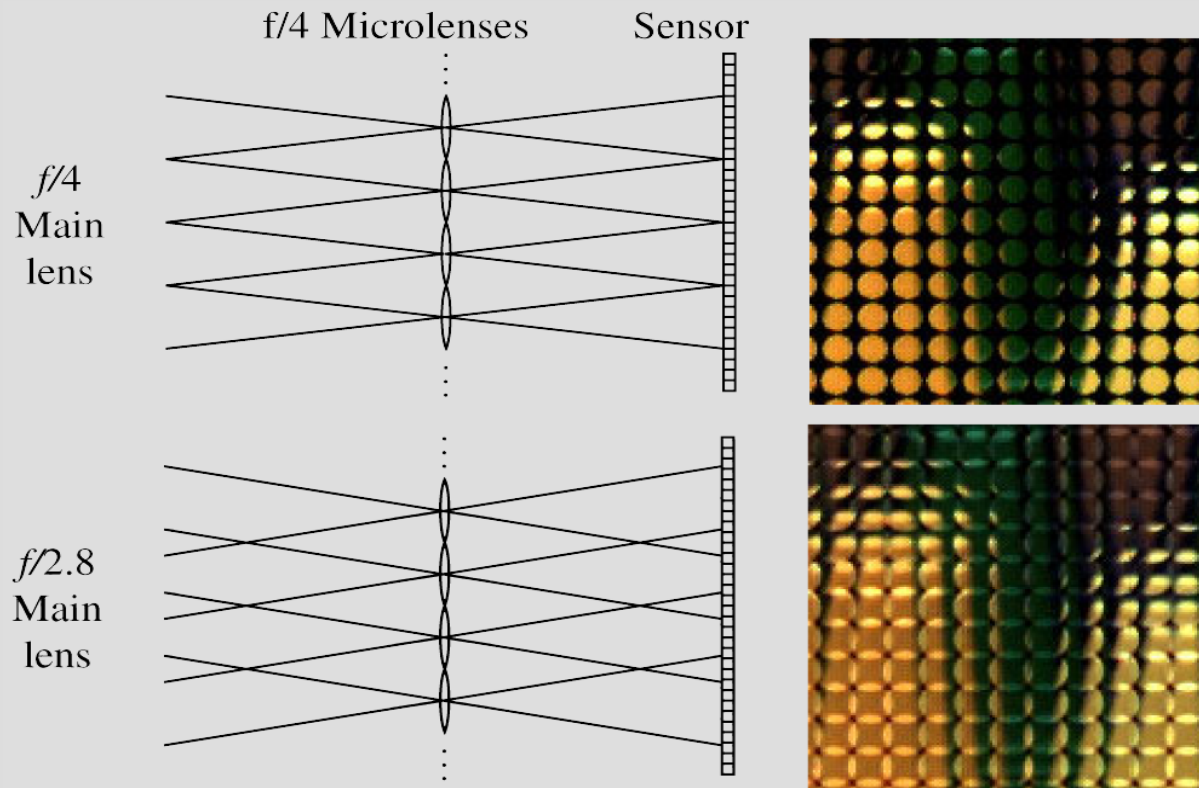
Isaksen 2000 (Light Field "Reparametrization")



Billy Chen 2002 (Autostereoscopic Display)



Ng 2005 (Hand-Held Plenoptic Camera)



Note: The first digital camera (1975) produced image 0.01 Megapixels.
The first digital lightfield camera (2005) produced image 0.1 Megapixels. Ren is 10 times better!

Fife 2008 ("Light-Field" Chip)

