



THE FOUR STAGES OF PHOTOGRAPHY

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Photograph (from the Oxford English Dictionary, obsolete): A picture or other image obtained by the chemical action of light or other radiation on specially sensitized materials such as film or glass.

The Four Stages of Photography:

- I. Contact printing processes using materials of low light sensitivity.
- II. Image capture through the use of latent images in silver compounds.
- III. Image capture using electronic sensors.
- IV. Printing systems utilizing digital files.

I.

It has always seemed to me that five people invented photography. The first was Joseph Nicéphore Niepce, who, in 1826, made a lens-derived image in hardened asphaltum. He was followed by Louis Jacques Mandé Daguerre, who produced perfect images in mercury amalgam on silver plates in the late 1830s, and then William Henry Fox Talbot, who produced silver pictures on paper around 1840. These three men are regarded as the genuine inventors, but two others were important right from the start. Hippolyte Bayard produced autographic photographs on paper in the early 1840s, and Sir John Herschel, knighted for his work as an astronomer, solved the problem of photographic permanence by proposing that sodium thiosulfate¹ be used as a “fixer” for silver images.

History sets Bayard and Herschel aside, as less important figures in the early years of photography, but I hold them in highest esteem. Bayard because he was the real artist of the bunch, making pictures that carried rich visual complexity, and Herschel because he solved the last piece of the chemical puzzle that allowed silver photography on paper to mature. Niepce has been largely forgotten because his method, which involved the action of light hardening a material, had no functional descendant in the silver-dominated years of photography that were to come. We remember Niepce because he partnered with the younger Daguerre, but his method

Jerry Burchfield, *Lemore Rana, Prunus myrtifolia, Primal Images Amazonas*, from “The Paradise Suite,” 2000.

¹ Sodium thiosulfate, later joined by ammonium thiosulfate, could dissolve the undeveloped silver salts in photographic coatings while having little effect on the metallic silver deposit of the image. Commonly called “fixer,” we also find these chemicals referred to as “hypo.”