

THE SILVER SALT PRINT — Process outlines

THE silver salt photographic print, today in a precarious balance between being 'traditional' and 'historical', is the one that granted photography an unchallenged role in the field of communication until the advent of digital that has replaced it.

But since its birth in the middle of 19th century — also through improvements due to both in technology and to a greater knowledge of the photographic process — the communicative capacity of photography has always been confronted with an expansion of its expressive syntax (1). Without wishing to make an essay of the item, this last feature is the one that, according to the writer, made it to progress more than any other, as an autonomous form of art.

For each material with which the photographic silver salt has been in contact, it showed an ever new capacity to regenerate reality.

Of course it's photography on paper I am talking about, omitting the daguerrotype and the 'metallic' techniques in general; photography on paper has been experimented with countless supports and innumerable couplings until the last decade of the nineteenth century.

After the simple 'salting' of the paper, that means applying the sensitive salt on the paper without the vehicle of any glue or colloid, there was the fearsome collodion (the *gun-cotton*), of far vegetable nature, then a great love with the languid proteins of albumin (2). But at the end of the 19th century the combination with animal gelatin — never ceased since — was sharpened; not only a binding agent but also active and functional in the fulfilment of the photographic process.

Such an indissoluble alliance, that even today there is no substitute of equal quality (3). A mixture of precious and versatile proteins, to such an extent that even the sparkling papers for inkjet printing make use of it.

The animal gelatine, refined, matured and calibrated in all its recesses, gave the silver salt (the most sensitive to light among the metals of the Periodic Table) a rapidity of action, a tonal depth and density of blackening that has been perfected only with the reduction — over time — in size of the silvery crystal.

The *snap-shot* was born having gelatin as 'colloid' for silver halides, favouring the reduction of exposure time in the camera to values equal or inferior to the traditional eyelash blinking, or more prosaically at the time of persistence of the image on the retina (1/15").

The ability to confer countless tone transitions to a background up to the dimmest lights of a third dimension to infinity, was born with the active contribution of gelatine.

The power of the densities, the brightness and scanning inside the shadows — in antagonism with the strained albumin — was born from the sensitive union between that silver salt and gelatine.

But at least two other elements should be mentioned for their contribution to the specificity, versatility and diffusion of silver process as we know it (for those who know it).

To make the 'negative' substrate sufficiently translucent to be printed by transparency - excluding the 'waxed paper' of the calotypes - the first element was the liberation from the glass on which to spread the silver gelatine, with the introduction of a flexible medium (the first «*rollfilm*» was inserted in Kodak No.1 camera on February 1900); very gradual transition of course, since photographic glass plates were used until after World War II.

The second element - also part of the photographic syntax - was the 'developing' liquid: a precise knowledge of the image formation process unveiled a variety of compounds and treatments that provided, on film and on paper, a very wide spectrum of results for a single analogue 'shot'.

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(1) A poorly known english book that talks little of photography and much of 'graphic mark' and its powerful expressive modulation power is at <http://www.archive.org/details/printsandvisualc009941mbp>: free download. The author - William M. Ivins jr. - was curator of the Cabinet of Prints of the MOMA of N.Y. in the first half of the 20th century. A couple of his pages about photography - translated in italian - you can see at: <http://www.heliogravures.it/pdf/IVINS.pdf>

(2) see <http://www.heliogravures.it/pdf/Albumen-paper-1890.pdf>

(3) see <http://www.heliogravures.it/pdf/proce.pdf>