



Storia ed identificazione delle tecniche fotografiche

Udine. 20 dicembre 2017 – barbara.cattaneo@beniculturali.it

La nascita

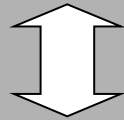
- Ha più a che fare con la storia della scienza che con la storia dell'arte
- L'evoluzione dello stato sociale e dei costumi influenzerà l'uso, le tecniche e i materiali della fotografia
- Il 90% delle tecniche fotografiche si basa sulla fotochimica dell'argento

Tecniche argentiche e non argentiche

- Le tecniche non argentiche si basano sulla **fotochimica di altri sali metallici** (es. viraggio dei composti del ferro nelle cianografie) **o sulla modificazione fisica di alcuni leganti esposti alla luce** (per esempio l'indurimento della gomma bicromatata per le stampe ai pigmenti)

Steps dell'immagine fotografica

- Esposizione [Ripresa]
- **Sviluppo**
- Fissaggio

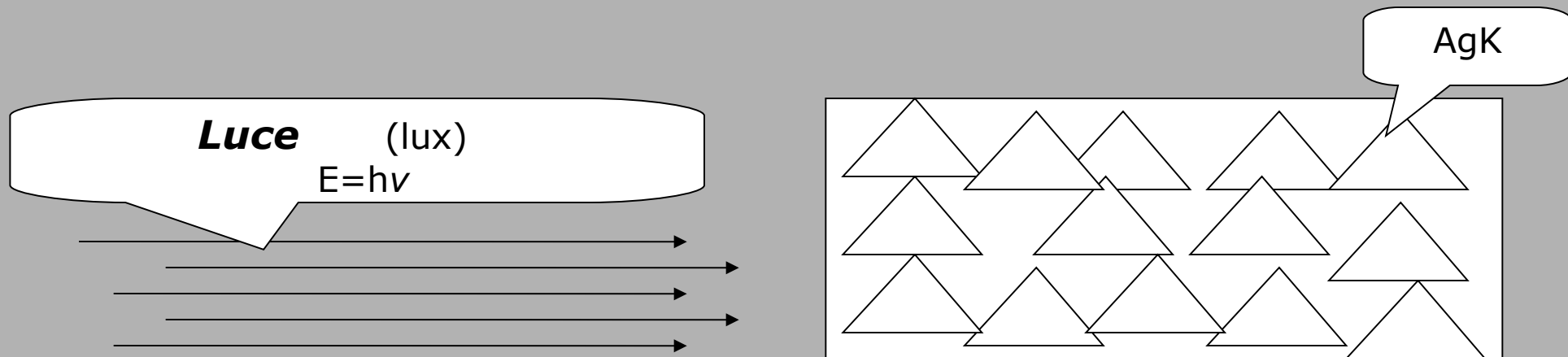


- **Stampa**

[+ bagni intermedi]

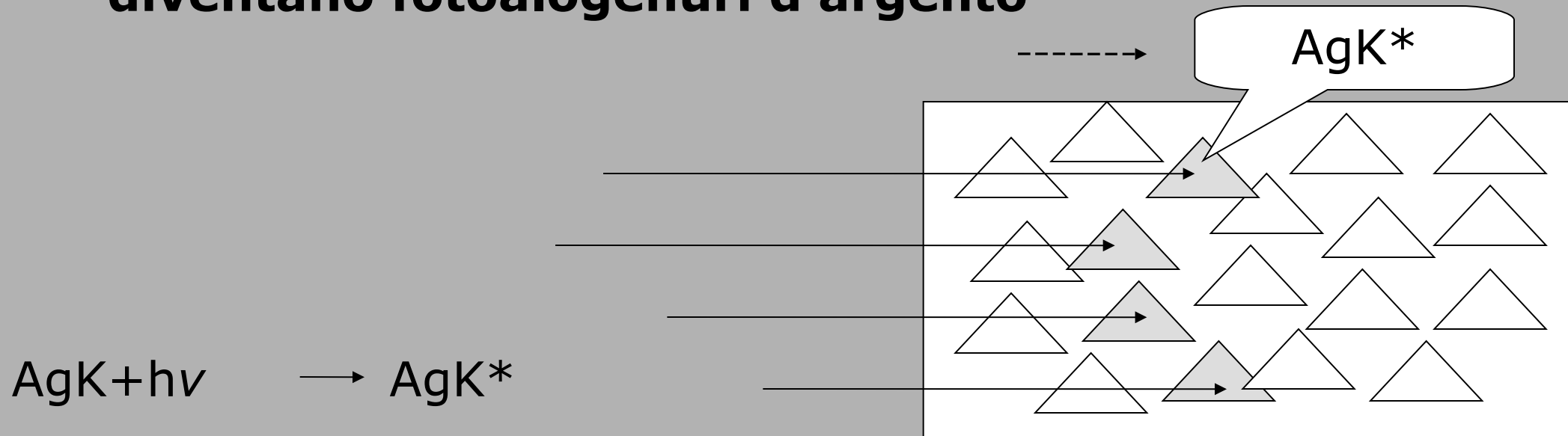
L' esposizione

- La luce provoca un'alterazione molecolare degli alogenuri d'argento. Questa *alterazione* non è immediatamente visibile...



...si forma l'immagine latente

**Gli alogenuri assorbono fotoni e
diventano fotoalogenuri d'argento**



Lo sviluppo

- I fotoalogenuri possono essere trattati CHIMICAMENTE per rendere visibile l'immagine
- L'immagine si ***rivela***: l'argento fotosensibile si riduce ad argento metallico (Ag^0)
- L'argento diviene tanto più scuro quanto più *energizzato*

Lo sviluppo fisico

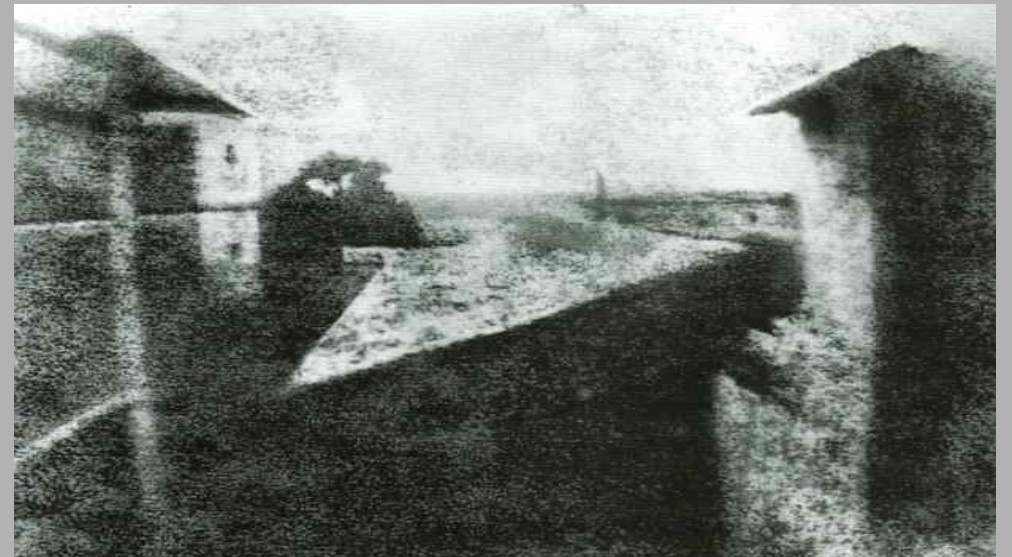
- Esiste anche lo sviluppo FISICO ottenuto tramite una esposizione più lunga.

*Le tecniche delle origini si basano sulla fotolisi dell'argento e si dicono **ad annerimento diretto** (v.oltre)*

Talbot: 12 ore di posa

Niépce: 8 ore di posa

Joseph Nicéphore Niépce: veduta dalla finestra,
Gras, 1826

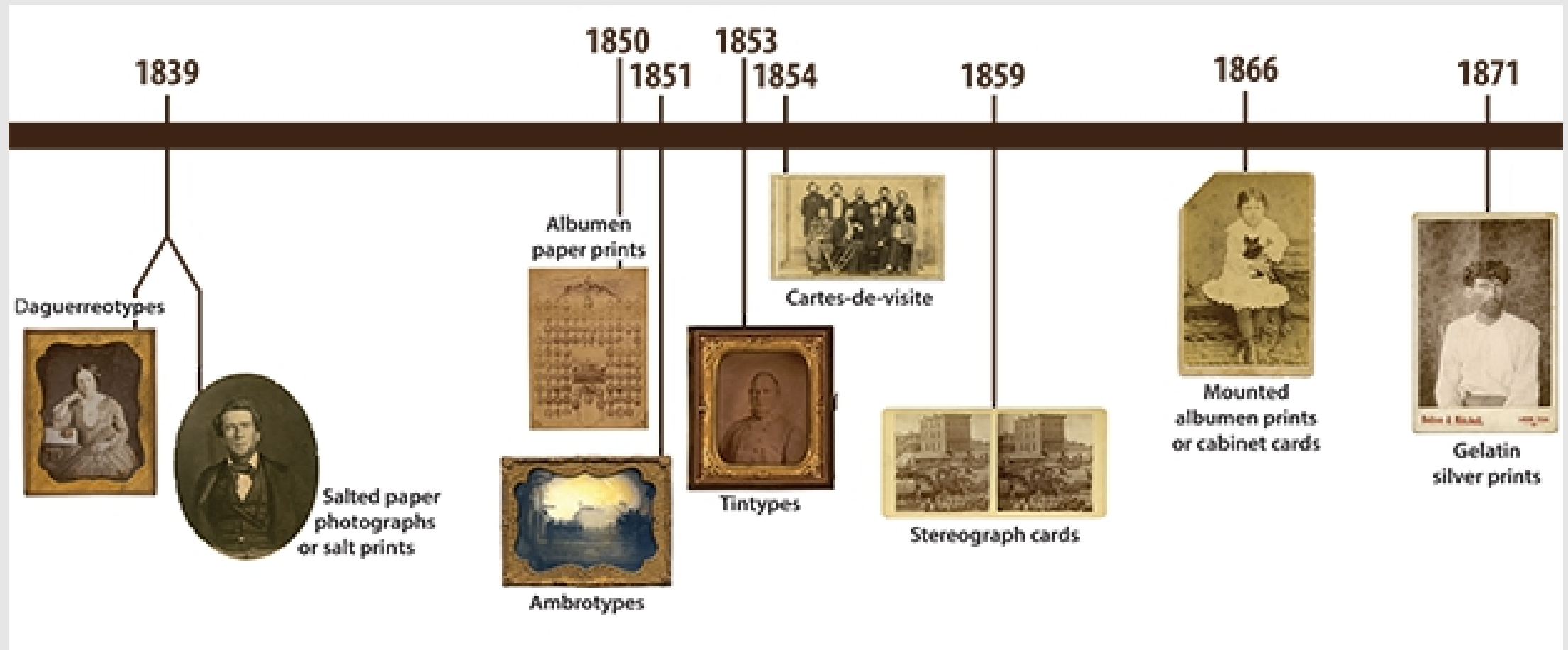


La stampa

- Il *procedimento di stampa* comprende tutti i passaggi appena descritti
- Vale per il trattamento di materiali sia NEGATIVI sia POSITIVI, su supporti vari
- Le stampe delle origini avvenivano per contatto, quindi le dimensioni del positivo erano le medesime del negativo
- L'ingranditore entra in uso dal 1870circa, grazie all'uso di carte sempre più sensibili ed obiettivi più luminosi

A timeline of photographic processes

<http://graphicsatlas.org/guidedtour/#timeline-wrap>



Identificazione delle tecniche

- Tramite osservazione visiva, diretta o sotto lente o microscopio
- in luce riflessa, radente, retroilluminazione
- Si osserva prima DA LONTANO, poi DA VICINO



10x

30x



Object View

Image Color/Tone

- Black
- Purple/Red
- Brown
- Yellow
- Other Color
- Full Color
- Hand Colored



Come si identifica un oggetto fotografico

- è un positivo o negativo?
 - di quanti strati è composto?
 - qual è la natura degli strati?
 - è POP (printed out print -annerimento diretto) or a DOP (developed out print – a sviluppo), è NON argentario?
 - quali sono le caratteristiche della texture?
 - e il montaggio/ presentazione?
 - mostra segni di deterioramento?
- Autore – data ?



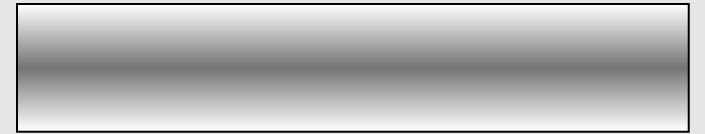
Si tratta di un positivo o di un negativo?

- Dagherrotipi, Ambrotipi, Ferrotipi
- Disegni fotogenici, calotipi, Albume/collodio/gelatina su un supporto *trasparente* (carta cerata, vetro, plastica)



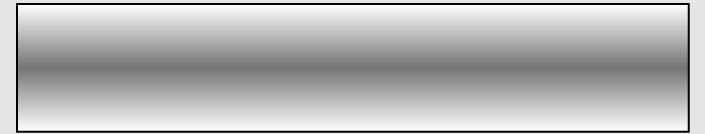
Quanti strati ha?

- UNO strato
 - Il composto fotosensibile è disperso direttamente sul supporto
-
- DUE strati
 - Il composto fotosensibile è disperso in un legante
-
- ° TRE strati
 - Barite* presente tra il supporto e il legante (strato immagine)



Quanti strati ha?

- UNO strato
 - Il composto fotosensibile è disperso direttamente sul supporto
-
- DUE strati
 - Il composto fotosensibile è disperso in un legante
-
- ° TRE strati
 - Barite* presente tra il supporto e il legante (strato immagine)



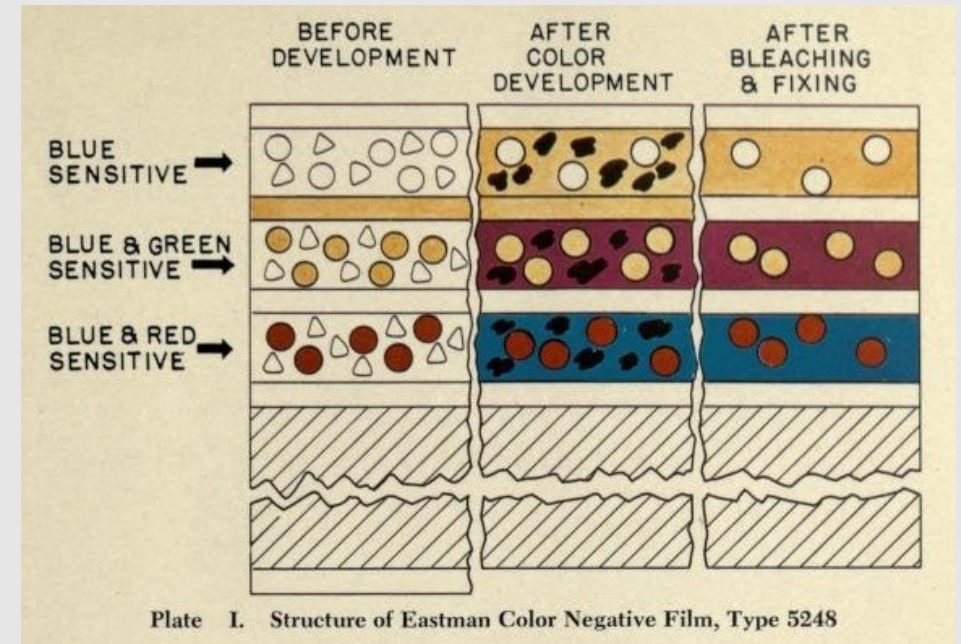


Qual è la natura degli strati?

- SUPPORTO secondario: cartoncino, carta, legno (montaggio incollato)
- SUPPORTO primario: metallo (rame+argento, ferro verniciato), vetro, carta, plastica, stoffa
- Strato IMMAGINE: composti argentici/non argentici, LEGANTE + composti, immagine VIRATA
- BARITE

La complessità stratigrafica aumenta con l'era industriale:

- Carta salata: 1 strato
- Ektachrome 1980: 20 strati

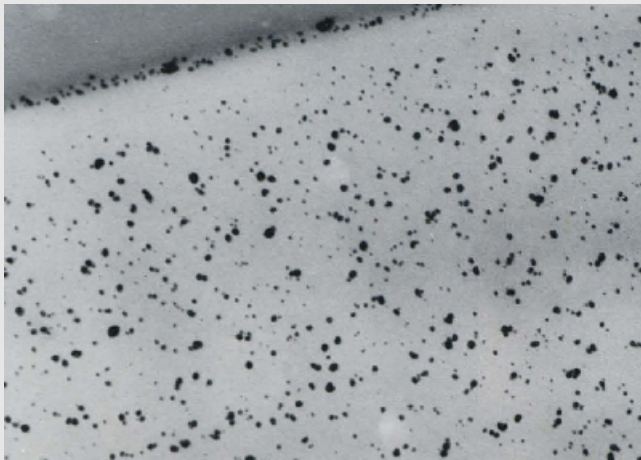




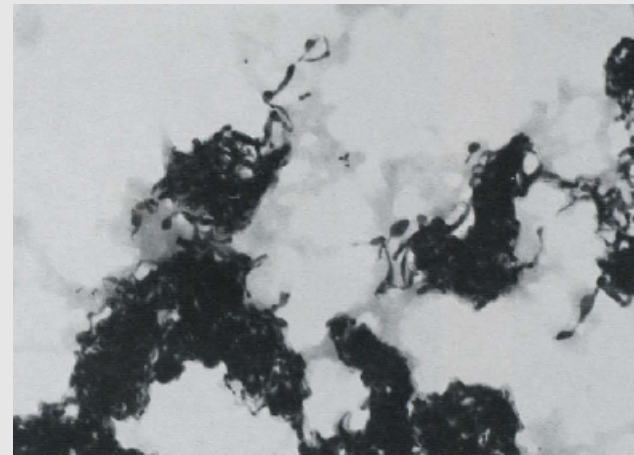
POP o DOP?

POP / Annerimento diretto: argento fotolitico, argento colloidale

DOP / a sviluppo: argento fotochimico, cristalli globulari di Ag°



SEM 40.000 X





Si tratta di una tecnica NON argantica?

SALI DI FERRO:

- Cianotipie,
- Stampe al Platino/Palladio,
 - Van Dyck,
 - Kallitipi,

SALI DI CROMO:

- Stampe al Carbone/Pigmenti
 - Gomma bicromatata

Aspetto superficiale *texture*

Si osserva con luce incidente e/o radente

Glossy Lucido / Smaltate - Ferrotyped

Mat (Matte) Opaco

Semi

Finitura sulle carte industriali (velvet, goffratura)

Una fotografia del Novecento montata su cartone

IMMAGINE A TRE STRATI

Strato immagine: legante

Barite (non sempre presente!)

Supporto primario

Supporto secondario

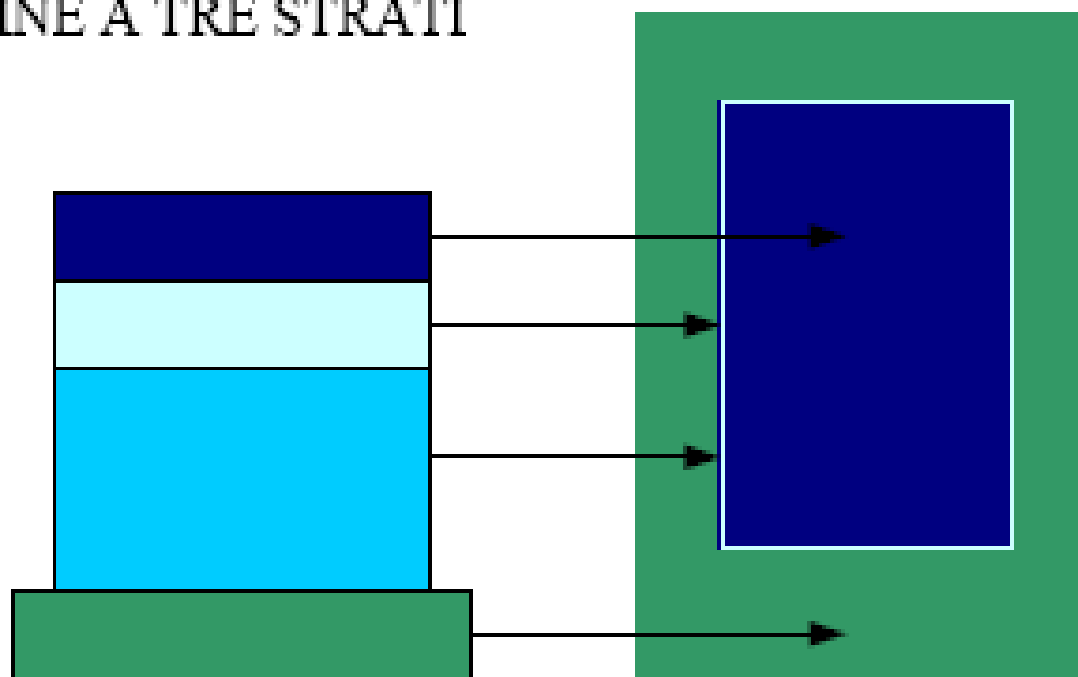


Fig. 1. La fotografia come materiale composito: gli strati costitutivi.

Mostra segni di deterioramento?

- Peculiarità per tecnica, ID
- *yellowing, darkening, stains on binder, support*
- *pattern of image fading, silver mirroring*
- *cracks of the binder, lifting of the emulsion, surface scratches*
-
-
- Ingiallimento, imbrunimento, macchie a carico del legante, del supporto
- Perdita di dettaglio, specchio d'argento
- Craquelures, sollevamenti dell'emulsione, graffi superficiali



Negativi, positivi e i modelli unici

rame	dagherrotipi	(1839- 1865circa)
vetro	ambrotipi	(1851-1865circa)
	negativi e positivi all'albumina	(1846-1855circa;1850-1920)
	negativi e positivi al collodio	(1851-1870circa;)
	negativi e positivi alla gelatina	(1871- oggi)
metallo	tintotipi (ferrotipi)	(1855-1880circa)
pellicole	nitrato di cellulosa	(1889, Eastman)
	acetato, poliestere	
carta		

n.b.: anche se la caratteristica della fotografia è la serialità, ogni stampa è un unicum

Positivi Unici

Dagherrotipi: rame argentato

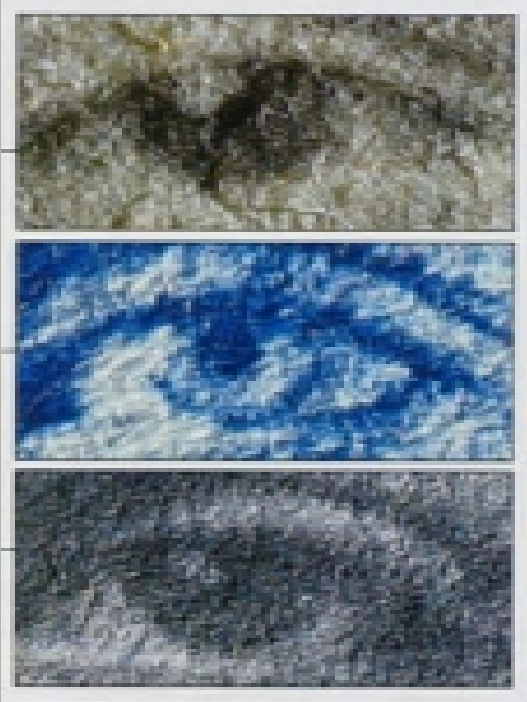
Ambrotipi: vetro

Ferrotipi: : ferro verniciato

Anonimo, dag americano



Stampe fotografiche e stampe fotomeccaniche



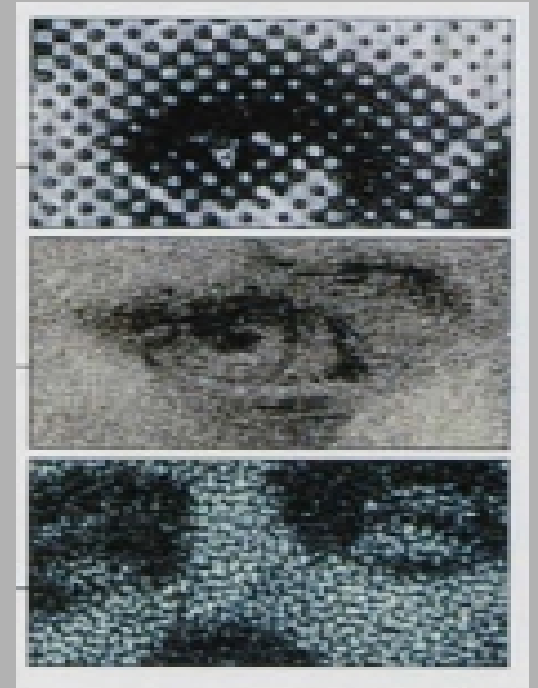
1 strato



2 strati



3strati



fotomeccaniche

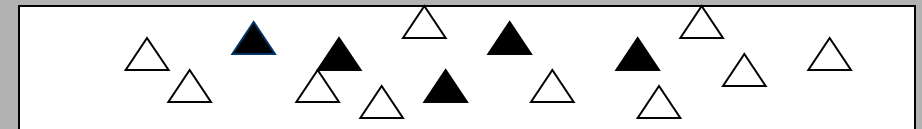
Le tecniche a 1 strato

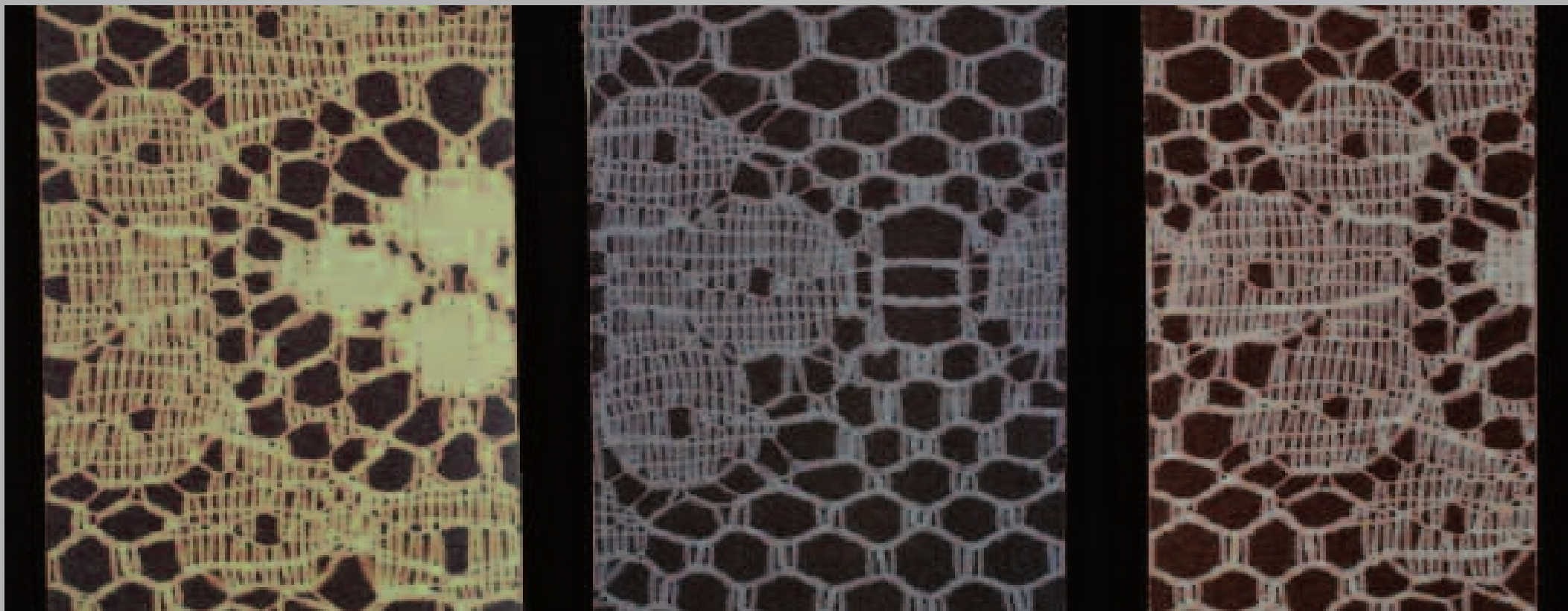
- L'immagine sembra immersa tra le fibre: il supporto è sensibilizzato direttamente

Calotipi (Negativi su carta) (1840-1851circa)

Henry Fox Talbot

Carte salate (o calotipi positivi) (1841-1930 circa)

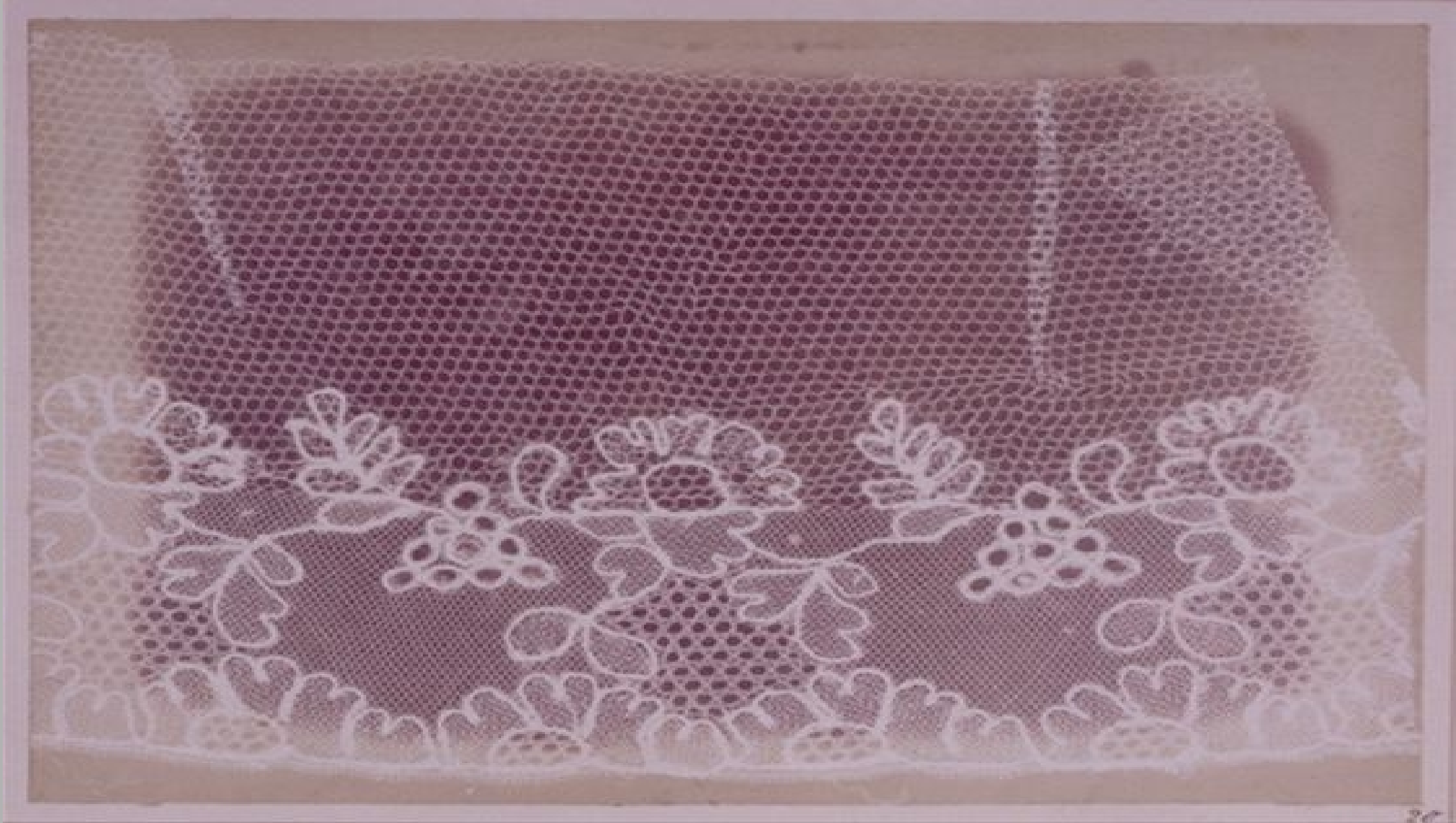




Disegni fotogenici: si tratta di un processo fotografico vero e proprio (William Henry Fox Talbot, pre 1843)

Da sx, le immagini sono STABILIZZATE (non fissate!):

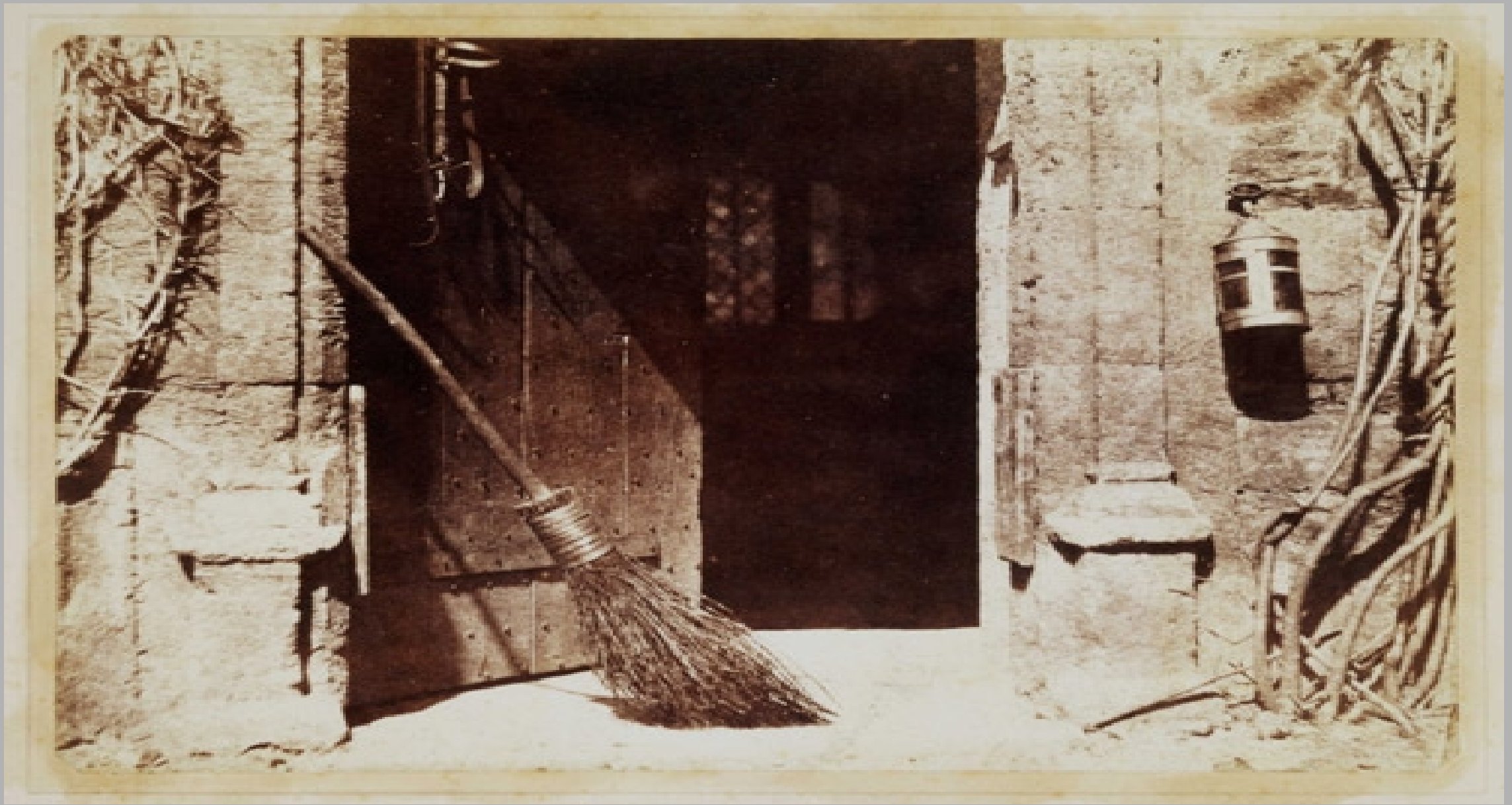
con Cloruro di sodio, Bromuro di Potassio, Ioduro di Potassio



Lace (Plate XX in 'The Pencil of Nature', 1844-46), 1844 William Henry Fox Talbot
British, 1800 - 1877 Photogenic drawing 16 x 21.4 cm RCR.1 National Art Library © V&A



William Henry Fox Talbot, *The Open Door*, 1843, salted paper from calotype (Pl. VI, *The pencil of Nature*)



William Henry Fox Talbot, *The Open Door*, 1843, salted paper from calotype (Pl. VI, *The pencil of Nature*)

Roger Fenton
The artist's van , 1855
Crimean war





Captain Webb's hut, 4th Dragoon Guards

http://lcweb2.loc.gov/cgi-bin/query/D?ils:1:./temp/~pp_UiUW::

Le tecniche a 1 strato non argentiche

- **L'immagine sembra immersa tra le fibre: il supporto è sensibilizzato direttamente**

stampa ai sali di ferro (1842-1910 circa)
o cianotipo ma in uso ancora oggi

Sir John Herschel

kallitipia (1899-1910 circa)
o van Dyck

W.J.Nichol, a base di ossalato ferrico e nitrato d'argento: immagine finale è argentica!

Platinotipia (1873 – 1930 circa)

William Willis

(*Permanence*, fotografia artistica, fotografia pornografica)

Palladiotipia (1916 – 1930 circa)

(Variante meno costosa del platino)



Stampa cianotipica (Sun Print) da negativo originale (inizio '900)



Van Dyck (Van Dyke)

<http://www.alternativephotography.com/wp/processes/kallitypes/beyond-the-blues-vandyke-brown-printing>



Frederick H. Evans
England, 1853-1943

Ely Cathedral, a Fifteenth Century Doorway to North Choir,
1908

Platinum print
9 7/16 x 7 9/16"



Anonimo, XIX fine, Stampa al platino dettaglio della texture, si notano le fibre

Paul Strand (American, 1890–1976),

Blind, 1916,
Platinotype

Alfred Stieglitz Collection, 1933 (33.43.334), The
Metropolitan Museum of Art

www.netmuseum.org



Le tecniche a 2 strati

■ L'immagine galleggia in superficie, è ben visibile lo strato di legante

Carte albuminate (1847-1920circa)

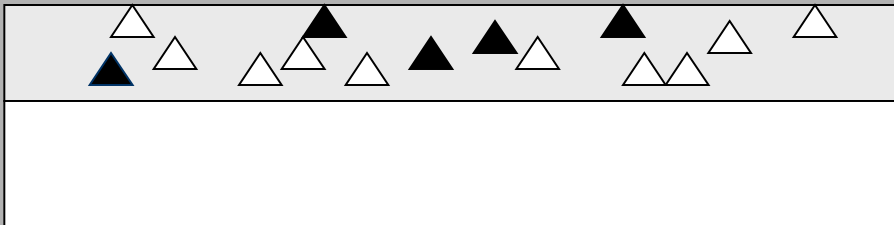
Louis Desiré Blanquart-Evrard (dominano fino agli anni Ottanta dell'Ottocento)

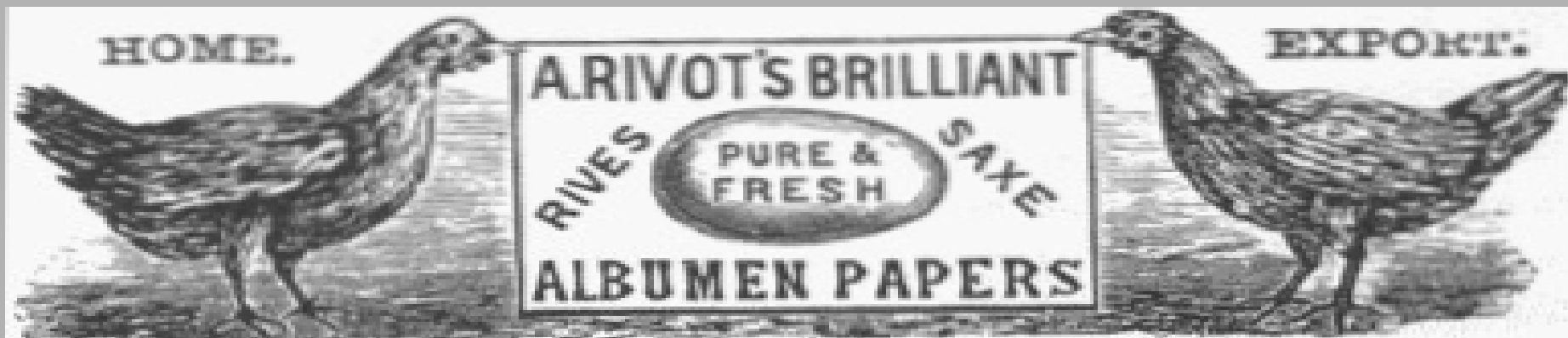
Carte gelatinate non baritate (1871- 1920circa)

Cartoline fotografiche

(1871-1950circa)

alla gelatina cloruro/bromuro d'argento (POP e DOP)





Pubblicità di una fabbrica di albumine che usa carte Saxe e Rives, 1885.
immagine tratta da James Reilly, *The Albumen & Salted Paper Book*,

Blanquart-Evrard aprì una fabbrica a Lille, ma fu a Dresda che l'industria si affermò davvero. All'apice della propria attività, negli anni Ottanta, la Vereinigte Fabriken photographischer Papiere vantava svariate migliaia di uova rotte al giorno e 200 operaie addette all'albuminatura. Il destino dei tourli avanzati, invece, non è stato ancora accertato. Tuttavia, un indizio curioso è dato dal «British Journal of Photography» del 1861, in cui un articolo dal titolo *A hint to Albumenizers*, si rivela essere la ricetta di una deliziosa *cheesecake*, definita come «uno dei più piacevoli sotto-prodotti» della manifattura fotografica.



Residence of Mr. Meall.

Dresda, dal 1860ca. diventa il centro di produzione più importante, ma esistono molte fabbriche anche nel resto dell'Europa e in America.

ALBUMEN PAPER.



HAVE YOU TRIED THE
CELEBRATED

S. and M. DRESDEN

ALBUMENIZE**D**
PAPER?

Why

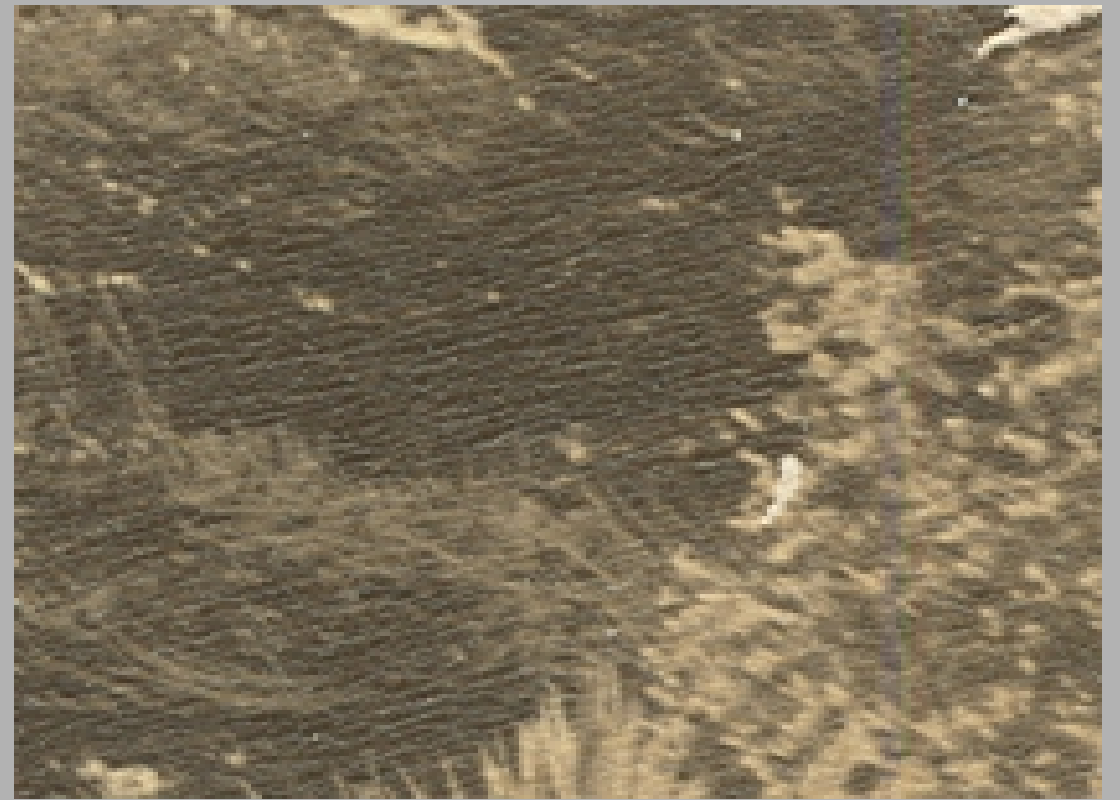
“THREE CROWN” ALBUMEN PAPER
IS ABSOLUTELY THE BEST.

Because none but the Best of the Rives Paper is selected for Albumenizing the THREE CROWN BRAND. It is therefore free from the imperfections often to be found in other brands, which arise from imperfections in the plain paper.



Fabrica di carta albuminata, immagini
tratte da Josef Maria Eder, *Ausführliches
Handbuch der Photographie*, Book IV, part
1, 1898





Anonimo, albumina, Italia



Paul and Virginia, 1864

Julia Margaret Cameron
British, 1815 - 1879

Albumen print from a collodion-on-glass
negative

24.5 x 19.8 cm

Ph.218-1969

© V&A

**Cameron, Julia Margaret
English (b. India, 1815-1879)**

TITLE ON OBJECT:

Sir J.F.W. Herschel (Bart)

1867

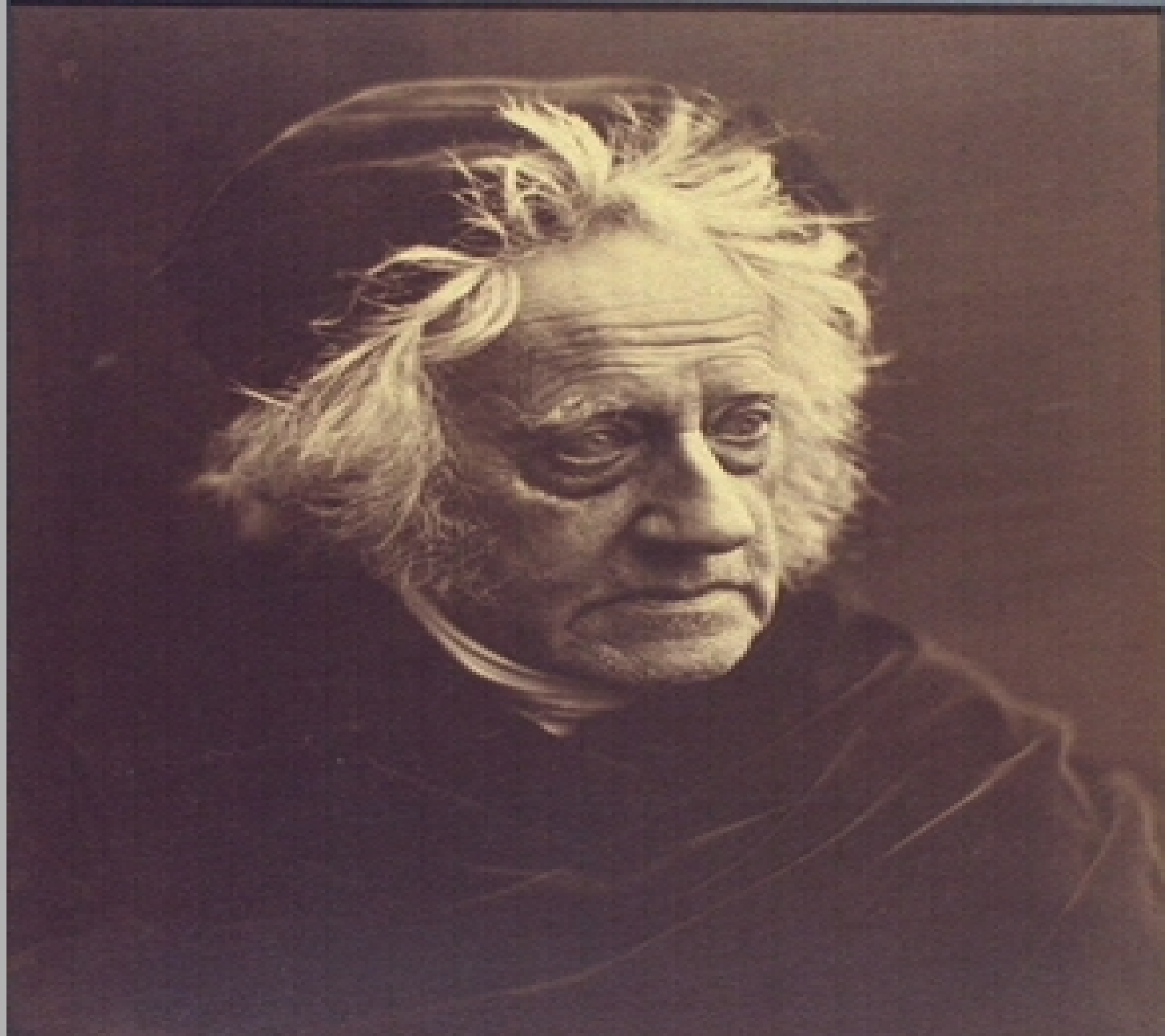
albumen print

30.3 x 24.3 cm.

Gift of Alden Scott Boyer

GEH NEG: 1987

81:1129:0004





The Bedfellows, c.1843-47 David Octavius **Hill**, british, 1802-1870 & Robert **Adamson**
British, 1821-1848 Salted paper print from calotype negative 15.8 x 21 cm 67.373 © V&A



Gustave Le Gray, French, 1820 – 1882, Solar Effect - Ocean, 1857- Albumen print from a collodion-on-glass negative, 31.5 x 40.5cm 67.998 © V&A



Eugène Atget
French, 1857 - 1927

Paris, 62 Rue de l'Hotel de Ville,
c.1900

Albumen print from gelatin dry
plate 21.6 x 17 cm Ph.2204-1903
© V&A

Church, Frederick

American (1864-1925)

DESCRIPTIVE TITLE:

**George Eastman on board S.S.Gallia
February 1890**

albumen print, Kodak #2 snapshot

9.1 cm. (diameter)

Gift of Margaret Weston

GEH NEG: 5253

81:1159:0026



Le tecniche a 2 strati non argentiche

- L'immagine galleggia in superficie, è ben visibile lo strato di legante

Processi al carbone o ai pigmenti (1856 a oggi)

Alphonse Louis Poitevin 1855, John Pouncy 1858, Joseph Wilson Swan 1864, a base di gelatina

Processi alla gomma bicromatata (1890 - a oggi)

A base di gomma arabica EFFETTO ARTSITICO, a imitazione delle stampe originali (litografie, ecc.)

Collotipia	(1870-1920)
-------------------	-------------

Fotoincisione (photogravure)	(1860 –1970)
-------------------------------------	--------------

Woodburytipia (o fotogliptia)	(1866-1900)
--------------------------------------	-------------

n.b.: si tratta di riproduzioni fotomeccaniche!



Eadweard Muybridge, 1830 - 1904

Dancing, waltz, two models, plate 197 from 'Animal Locomotion', 1887

V&A, (collotipia, in 20 volumi, più di 1000 "sequenze"); <http://photo.ucr.edu/photographers/muybridge/>

Stampa al carbone

Adolphe Braun
Cupidon
1864-1867

Carbon print
45.8 x 34.7 cm

<http://www.luminous-lint.com/app/image/312595323823531802457/>



Gomma bicromatata

Robert Demachy, Severity
1904,
gum-bichromate print

<http://photographyhistory.blogspot.it/2009/02/pictorialism.html>



Le tecniche a 3 strati

- Il supporto primario non è visibile, le fibre della carta sono coperte dallo strato baritato. La *texture* è liscia, l'immagine è superficiale e ben contrastata

aristotipia (POP)

Paul Edward Liesegang

al collodio *matte* (celloidine) (1884-1920circa)

al collodio *glossy* (celloidine) (1884-1920circa)

alla gelatina (citrati) (1885-1910circa)

Sono materiali di produzione industriale!

Gelatina a sviluppo (DOP) (cloro/bromuro d'argento) (1874 a oggi)

Atelier E.von Eggert, Riga 1887-1900



Aristotipo alla gelatina

Aistotipo al collodio

Gelatina su carta non baritata

Studio R.Paoli, Firenze, 1904



Arisotipo al collodio



gelatina AgBR, DOP, viraggio seppia

Carte industriali

- ─ Carta al collodio cloruro d'argento (a contatto)

(Chloride Printing Out Paper - Also known as Collodion Aristotype Paper - Mark Osterman)

- Charbon-satin (Fresson)

- Charbon-velours (Artigue).

- Autoviranti

- Gaslight Paper ((Kodak Velox, Agfa Lupex – gelatina cloruro d'argento)

(Osterman, Mark. 2007. Gaslight Paper. In The Focal Encyclopedia of Photography: Digital Imaging, Theory and Applications, History, and Science, ed. Michael R. Peres, 81-82, Focal Press.)

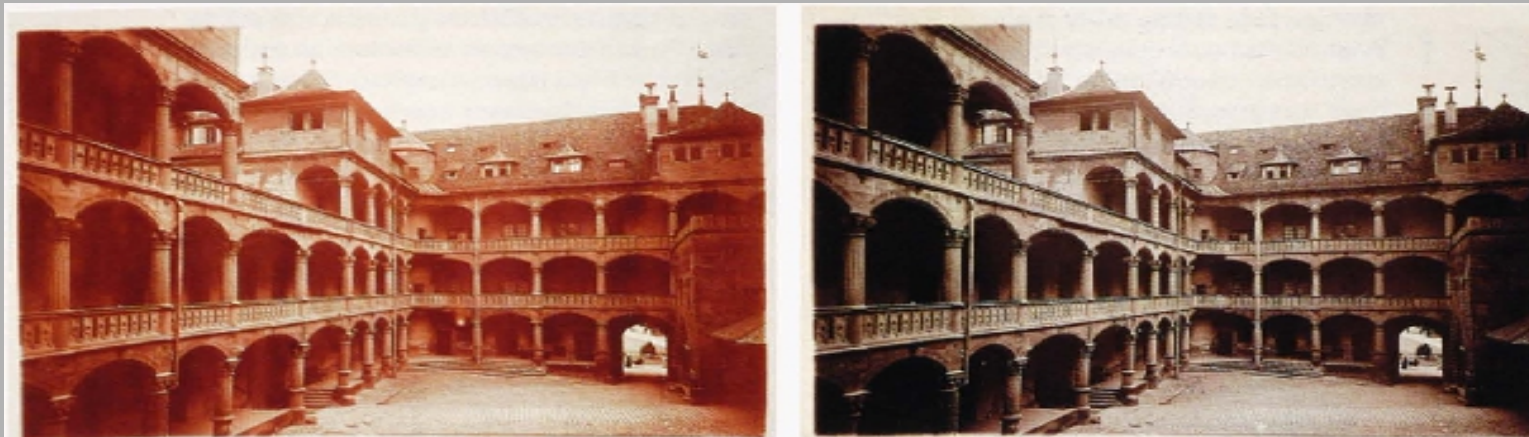
... prima del colore

I viraggi

- Nascono dal desiderio di aumentare la densità e di cambiare il colore della fotografia b/n stampata su carta
- Vengono effettuati tramite bagni in soluzioni chimiche (Au, Pt, Se, Cu, Fe, U) o in sostanze coloranti (aniline - mordenzature)

Il viraggio oro

- Il cloruro d'oro restituisce un'immagine stabile, dalle tipiche sfumature dal bruno porpora al blu violetto
- Largamente usato su carte salate e albuminate, anche accoppiato al platino



Gelatina annerimento diretto non virata

virata oro

Anonimo, negativo originale XIXese, stampa eseguita da James Reilly a fini didattici

LE FINITURE (Finishing)

Gomme e Resine

Naturali e Sintetiche

Gelatina, albumina, collodio, gomma arabica, gommalacca, mastice

→ oggi vernici sintetiche

Osservare a luce radente, per cogliere irregolarità superficiali

**Osservare i suporti secondari o il verso dei fototipi
per cogliere eccessi di applicazione**

Altri modelli: il colore

- Nonostante alcuni tentativi all'inizio del secolo XX, il colore si afferma dagli anni '30-'40.
- TRICROMIA è la denominazione generica dei due sistemi su cui si basa la formazione dell'immagine a colori :
 - il sistema di sintesi additiva (RGB)
 - il sistema di sintesi sottrattiva (CYMK)
- La vera rivoluzione è l'introduzione del materiale **cromogeno**: è basato sulla capacità di copulanti dei sali di dell'argento (già presenti nelle pellicole o nella carta) di produrre composti colorati durante lo sviluppo in uno specifico rivelatore cromogeno

▪



ONLINE TOOLS:

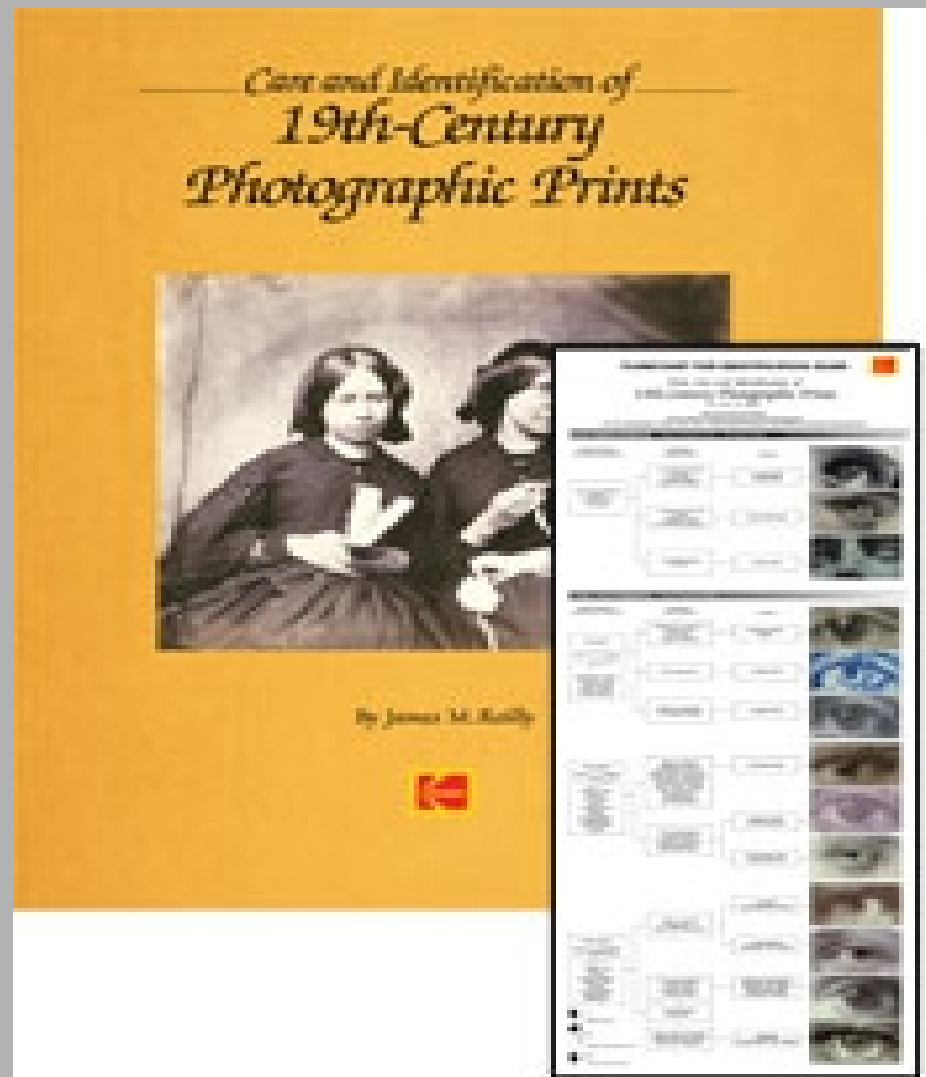
www.graphicsatlas.com

IPI WEBINAR

GOOGLE: Id of photographic processes ->

Gawain Weaver, Paul Messier, Anne Cartier Bresson, Atelier de
Restauration de la Ville de Paris, The Getty Conservation Institute,
Image Permanence Institute, George Eastman Museum

Grazie!



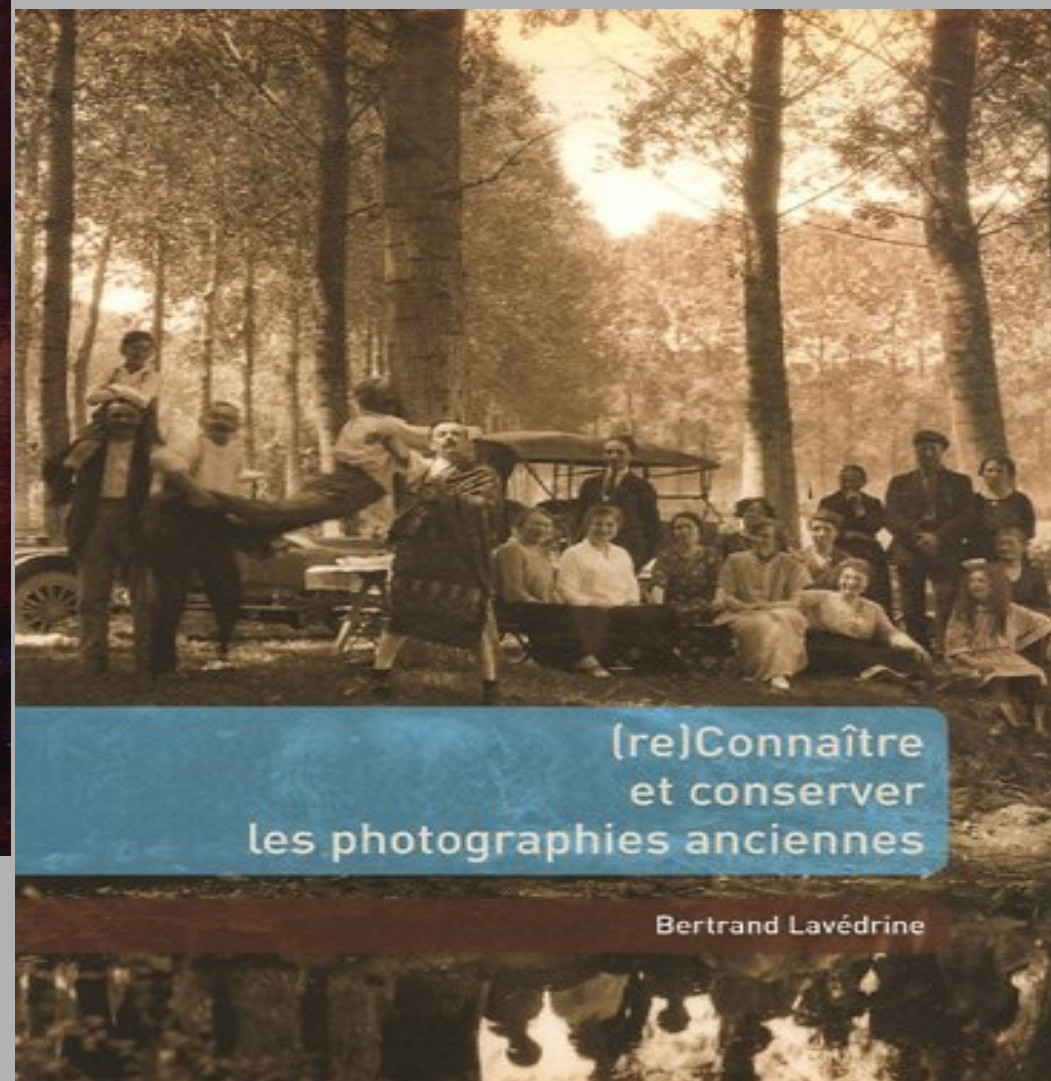
Il booklet sui negativi è disponibile qui:
https://www.imagepermanenceinstitute.org/webfm_send/302

SOUS LA DIRECTION DE
ANNE CARTIER-BRESSON

LE VOCABULAIRE TECHNIQUE DE LA PHOTOGRAPHIE

MARVAL

PARIS
musées



(re)Connaître
et conserver
les photographies anciennes

Bertrand Lavédrine

1888	First motion picture photograph taken by Louis J. M. Seybert in France.
1895	First motion picture shown in public by the Lumière brothers in France.
1903	First motion picture shown in public by the Edison company in the United States.
1905	First motion picture shown in public by the Vitaphone company in the United States.
1907	First motion picture shown in public by the Biograph company in the United States.
1909	First motion picture shown in public by the Mutoscope company in the United States.
1910	First motion picture shown in public by the Kinetograph company in the United States.
1911	First motion picture shown in public by the Pathé company in the United States.
1912	First motion picture shown in public by the Gaumont company in the United States.
1913	First motion picture shown in public by the Bioskop company in the United States.
1914	First motion picture shown in public by the Edison company in the United States.
1915	First motion picture shown in public by the Vitaphone company in the United States.
1916	First motion picture shown in public by the Biograph company in the United States.
1917	First motion picture shown in public by the Mutoscope company in the United States.
1918	First motion picture shown in public by the Kinetograph company in the United States.
1919	First motion picture shown in public by the Pathé company in the United States.
1920	First motion picture shown in public by the Gaumont company in the United States.
1921	First motion picture shown in public by the Bioskop company in the United States.
1922	First motion picture shown in public by the Edison company in the United States.
1923	First motion picture shown in public by the Vitaphone company in the United States.
1924	First motion picture shown in public by the Biograph company in the United States.
1925	First motion picture shown in public by the Mutoscope company in the United States.
1926	First motion picture shown in public by the Kinetograph company in the United States.
1927	First motion picture shown in public by the Pathé company in the United States.
1928	First motion picture shown in public by the Gaumont company in the United States.
1929	First motion picture shown in public by the Bioskop company in the United States.
1930	First motion picture shown in public by the Edison company in the United States.
1931	First motion picture shown in public by the Vitaphone company in the United States.
1932	First motion picture shown in public by the Biograph company in the United States.
1933	First motion picture shown in public by the Mutoscope company in the United States.
1934	First motion picture shown in public by the Kinetograph company in the United States.
1935	First motion picture shown in public by the Pathé company in the United States.
1936	First motion picture shown in public by the Gaumont company in the United States.
1937	First motion picture shown in public by the Bioskop company in the United States.
1938	First motion picture shown in public by the Edison company in the United States.
1939	First motion picture shown in public by the Vitaphone company in the United States.
1940	First motion picture shown in public by the Biograph company in the United States.
1941	First motion picture shown in public by the Mutoscope company in the United States.
1942	First motion picture shown in public by the Kinetograph company in the United States.
1943	First motion picture shown in public by the Pathé company in the United States.
1944	First motion picture shown in public by the Gaumont company in the United States.
1945	First motion picture shown in public by the Bioskop company in the United States.
1946	First motion picture shown in public by the Edison company in the United States.
1947	First motion picture shown in public by the Vitaphone company in the United States.
1948	First motion picture shown in public by the Biograph company in the United States.
1949	First motion picture shown in public by the Mutoscope company in the United States.
1950	First motion picture shown in public by the Kinetograph company in the United States.
1951	First motion picture shown in public by the Pathé company in the United States.
1952	First motion picture shown in public by the Gaumont company in the United States.
1953	First motion picture shown in public by the Bioskop company in the United States.
1954	First motion picture shown in public by the Edison company in the United States.
1955	First motion picture shown in public by the Vitaphone company in the United States.
1956	First motion picture shown in public by the Biograph company in the United States.
1957	First motion picture shown in public by the Mutoscope company in the United States.
1958	First motion picture shown in public by the Kinetograph company in the United States.
1959	First motion picture shown in public by the Pathé company in the United States.
1960	First motion picture shown in public by the Gaumont company in the United States.
1961	First motion picture shown in public by the Bioskop company in the United States.
1962	First motion picture shown in public by the Edison company in the United States.
1963	First motion picture shown in public by the Vitaphone company in the United States.
1964	First motion picture shown in public by the Biograph company in the United States.
1965	First motion picture shown in public by the Mutoscope company in the United States.
1966	First motion picture shown in public by the Kinetograph company in the United States.
1967	First motion picture shown in public by the Pathé company in the United States.
1968	First motion picture shown in public by the Gaumont company in the United States.
1969	First motion picture shown in public by the Bioskop company in the United States.
1970	First motion picture shown in public by the Edison company in the United States.
1971	First motion picture shown in public by the Vitaphone company in the United States.
1972	First motion picture shown in public by the Biograph company in the United States.
1973	First motion picture shown in public by the Mutoscope company in the United States.
1974	First motion picture shown in public by the Kinetograph company in the United States.
1975	First motion picture shown in public by the Pathé company in the United States.
1976	First motion picture shown in public by the Gaumont company in the United States.
1977	First motion picture shown in public by the Bioskop company in the United States.
1978	First motion picture shown in public by the Edison company in the United States.
1979	First motion picture shown in public by the Vitaphone company in the United States.
1980	First motion picture shown in public by the Biograph company in the United States.
1981	First motion picture shown in public by the Mutoscope company in the United States.
1982	First motion picture shown in public by the Kinetograph company in the United States.
1983	First motion picture shown in public by the Pathé company in the United States.
1984	First motion picture shown in public by the Gaumont company in the United States.
1985	First motion picture shown in public by the Bioskop company in the United States.
1986	First motion picture shown in public by the Edison company in the United States.
1987	First motion picture shown in public by the Vitaphone company in the United States.
1988	First motion picture shown in public by the Biograph company in the United States.
1989	First motion picture shown in public by the Mutoscope company in the United States.
1990	First motion picture shown in public by the Kinetograph company in the United States.
1991	First motion picture shown in public by the Pathé company in the United States.
1992	First motion picture shown in public by the Gaumont company in the United States.
1993	First motion picture shown in public by the Bioskop company in the United States.
1994	First motion picture shown in public by the Edison company in the United States.
1995	First motion picture shown in public by the Vitaphone company in the United States.
1996	First motion picture shown in public by the Biograph company in the United States.
1997	First motion picture shown in public by the Mutoscope company in the United States.
1998	First motion picture shown in public by the Kinetograph company in the United States.
1999	First motion picture shown in public by the Pathé company in the United States.
2000	First motion picture shown in public by the Gaumont company in the United States.
2001	First motion picture shown in public by the Bioskop company in the United States.
2002	First motion picture shown in public by the Edison company in the United States.
2003	First motion picture shown in public by the Vitaphone company in the United States.
2004	First motion picture shown in public by the Biograph company in the United States.
2005	First motion picture shown in public by the Mutoscope company in the United States.
2006	First motion picture shown in public by the Kinetograph company in the United States.
2007	First motion picture shown in public by the Pathé company in the United States.
2008	First motion picture shown in public by the Gaumont company in the United States.
2009	First motion picture shown in public by the Bioskop company in the United States.
2010	First motion picture shown in public by the Edison company in the United States.
2011	First motion picture shown in public by the Vitaphone company in the United States.
2012	First motion picture shown in public by the Biograph company in the United States.
2013	First motion picture shown in public by the Mutoscope company in the United States.
2014	First motion picture shown in public by the Kinetograph company in the United States.
2015	First motion picture shown in public by the Pathé company in the United States.
2016	First motion picture shown in public by the Gaumont company in the United States.
2017	First motion picture shown in public by the Bioskop company in the United States.
2018	First motion picture shown in public by the Edison company in the United States.
2019	First motion picture shown in public by the Vitaphone company in the United States.
2020	First motion picture shown in public by the Biograph company in the United States.
2021	First motion picture shown in public by the Mutoscope company in the United States.
2022	First motion picture shown in public by the Kinetograph company in the United States.
2023	First motion picture shown in public by the Pathé company in the United States.
2024	First motion picture shown in public by the Gaumont company in the United States.
2025	First motion picture shown in public by the Bioskop company in the United States.

Knowing and Protecting MOTION PICTURE FILM

Black-and-White

Black-and-white film is a photographic emulsion of silver particles suspended in a liquid carrier. This is coated on a flexible support, such as cellulose acetate, polyester, or paper. Emulsion is photosensitive to light.

Mentioned

Early attempts to use color in the film image have made the term "color" something of a misnomer. Color film is a photographic emulsion of silver particles suspended in a liquid carrier. This is coated on a flexible support, such as cellulose acetate, polyester, or paper. Emulsion is photosensitive to light.

Infred

Infred film is a photographic emulsion of silver particles suspended in a liquid carrier. This is coated on a flexible support, such as cellulose acetate, polyester, or paper. Emulsion is photosensitive to light.

Tinted Base (or Pre-tinted Film)

The film base was pre-tinted with dye during the manufacturing process. This resulted in a uniform color across the entire film, which was used for various purposes, including as a background for titles and as a color reference.

Toned

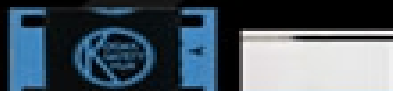
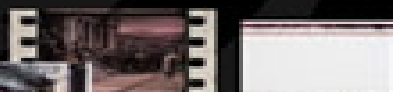
A film base was pre-tinted with dye during the manufacturing process. This resulted in a uniform color across the entire film, which was used for various purposes, including as a background for titles and as a color reference.

Kodachrome (1928 to mid-1930s)

A three-color additive process for motion cinematography. The film base was pre-tinted with red, green, and blue dyes. During projection, light passed through the film, creating a three-color image. This process was used for various purposes, including as a background for titles and as a color reference.

Dulaycolor (1931 to late 1940s)

The film base was pre-tinted with red, green, and blue dyes. During projection, light passed through the film, creating a three-color image. This process was used for various purposes, including as a background for titles and as a color reference.



FILM FORMATS



3-Color Technicolor Dye Transfer (1932 to 1977)

A three-color additive process using dye transfer technology. The film base was pre-tinted with red, green, and blue dyes. During projection, light passed through the film, creating a three-color image. This process was used for various purposes, including as a background for titles and as a color reference.

Kodachrome (1935 to 2006)

A three-color additive process for motion cinematography. The film base was pre-tinted with red, green, and blue dyes. During projection, light passed through the film, creating a three-color image. This process was used for various purposes, including as a background for titles and as a color reference.

Chromogenic Negative (1939 to present)

A three-color additive process for motion cinematography. The film base was pre-tinted with red, green, and blue dyes. During projection, light passed through the film, creating a three-color image. This process was used for various purposes, including as a background for titles and as a color reference.

Chromogenic Positive (1939 to present)

A three-color additive process for motion cinematography. The film base was pre-tinted with red, green, and blue dyes. During projection, light passed through the film, creating a three-color image. This process was used for various purposes, including as a background for titles and as a color reference.

Polluxion (1977-1979)

A three-color additive process for motion cinematography. The film base was pre-tinted with red, green, and blue dyes. During projection, light passed through the film, creating a three-color image. This process was used for various purposes, including as a background for titles and as a color reference.

THREE CRITICAL STEPS in the LONG-TERM CARE of FILM COLLECTIONS

1. **IDENTIFYING and UNDERSTANDING** the nature of film materials is key to determining vulnerability. Prints, acetate, and chromogenic film elements require cold storage to significantly decrease the rate of film decay.
2. **ASSESSING** condition will help organize preservation priorities and develop better storage practices. A.D. Series are a vital tool for surveying acetate film in motion picture collections. The more advanced the decay, the colder the storage temperature should be.
3. **STORING** film under proper environmental conditions prolongs film life. Cold storage and reduced relative humidity drastically improve film stability. The Image Permanence Institute has published several guides and management tools to help institutions plan the best storage for their collections.

For more information visit www.imagepermanencemuseum.org

SOUNDTRACKS



EXAMINING FILM

- 1. **Lighting and magnification** are key to examining film. Use a light source that is bright and even, and a magnifying glass to view the film. This will help you identify any damage or deterioration.
- 2. **Examine the film under a microscope** to identify any damage or deterioration. This will help you identify any damage or deterioration.
- 3. **Examine the film under a microscope** to identify any damage or deterioration. This will help you identify any damage or deterioration.
- 4. **Examine the film under a microscope** to identify any damage or deterioration. This will help you identify any damage or deterioration.

GLOSSARY

Acetate A type of film base made from cellulose acetate. It is used for various purposes, including as a background for titles and as a color reference.

Chromogenic A type of film base made from cellulose acetate. It is used for various purposes, including as a background for titles and as a color reference.

Dye Transfer A type of film base made from cellulose acetate. It is used for various purposes, including as a background for titles and as a color reference.

Emulsion A type of film base made from cellulose acetate. It is used for various purposes, including as a background for titles and as a color reference.

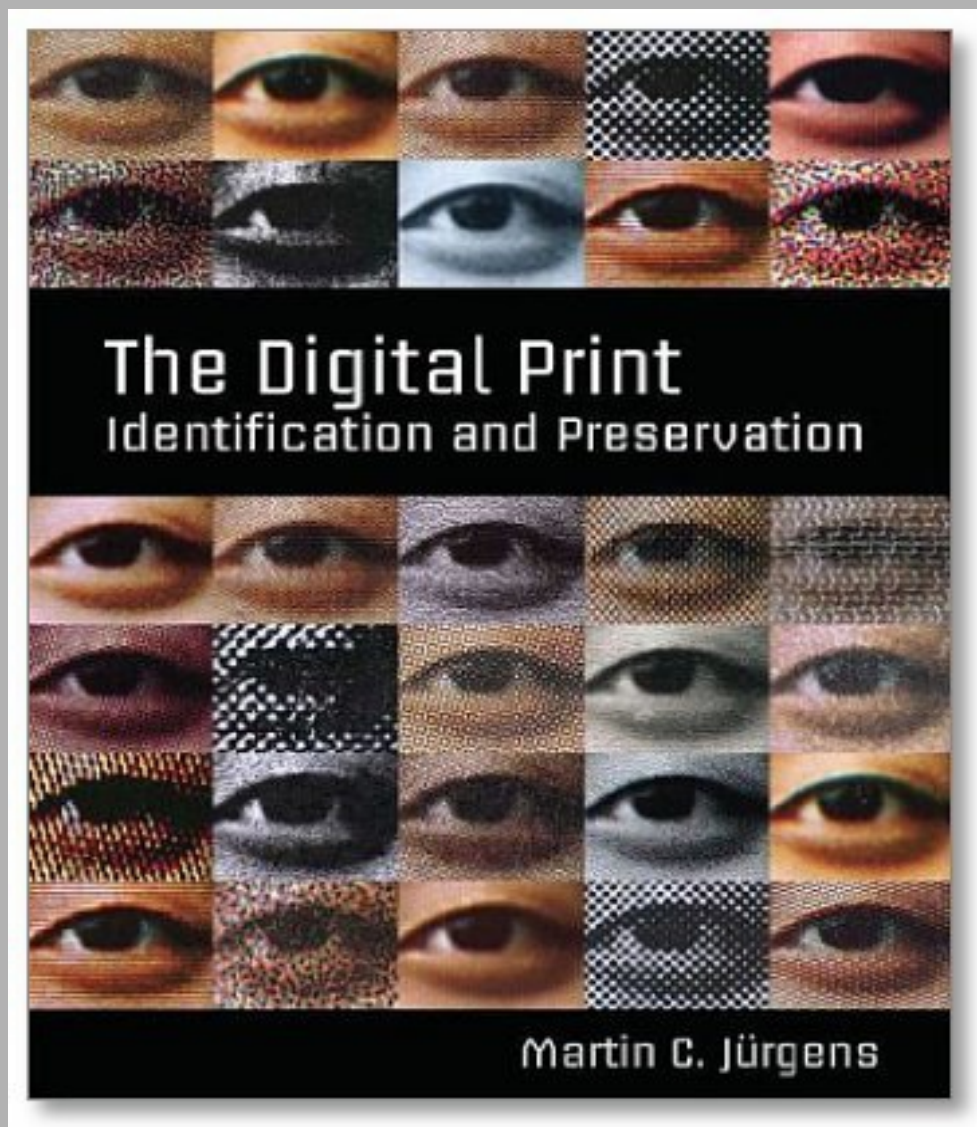
Infred A type of film base made from cellulose acetate. It is used for various purposes, including as a background for titles and as a color reference.

Kodachrome A type of film base made from cellulose acetate. It is used for various purposes, including as a background for titles and as a color reference.

Polluxion A type of film base made from cellulose acetate. It is used for various purposes, including as a background for titles and as a color reference.

Tinted Base A type of film base made from cellulose acetate. It is used for various purposes, including as a background for titles and as a color reference.

Toned A type of film base made from cellulose acetate. It is used for various purposes, including as a background for titles and as a color reference.



Uscito nell'agosto del 2009, il volume di Martin Jurgens affronta la conoscenza dei materiali da stampa dell'era digitale